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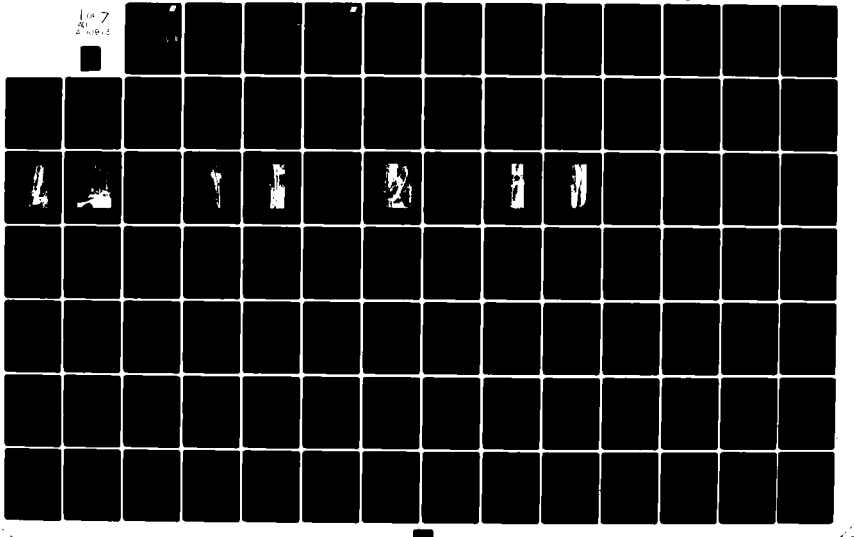

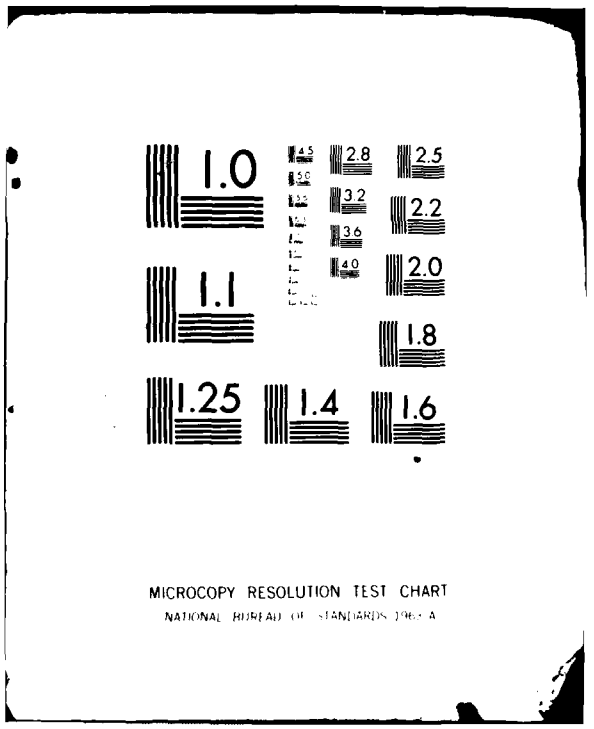
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Functional Job Analysis of Marine Personnel Employed on Offshore Supply Vessels

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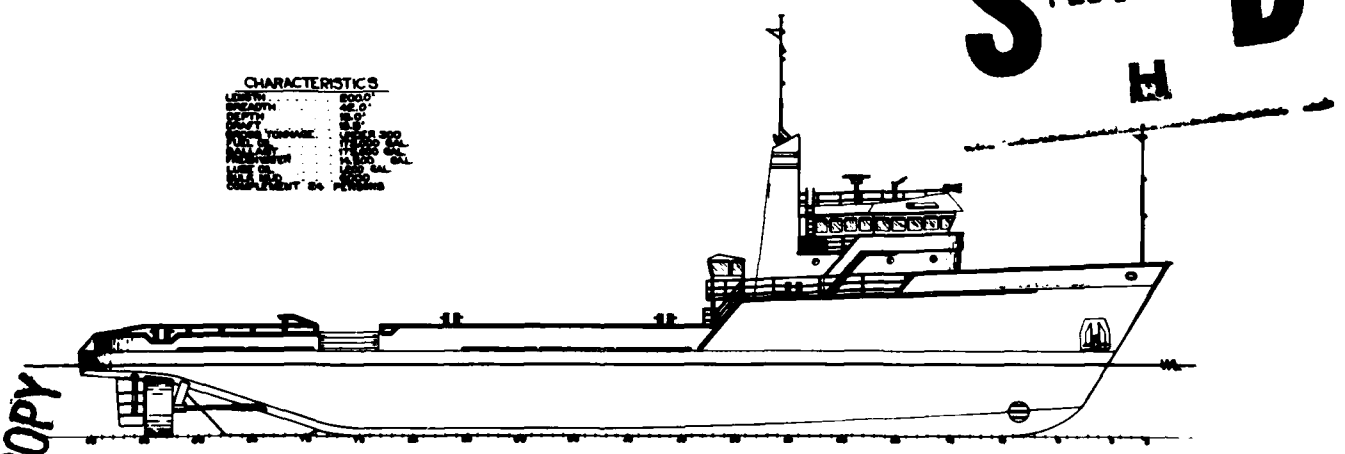

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16. Abstract

This report is the product of a 4 month study of offshore supply vessel (OSV) operations. The study was performed for the U.S. Coast Guard to provide the basis for establishing experience and training levels, career patterns, manning levels and examinations for personnel employed on OSV's.

Functional Job Analysis (FJA) was used to prepare detailed, standardized descriptions of the tasks required under routine and emergency conditions, taking into account OSV design and equipment, availability of personnel, and environmental variables. The functional area of onboard supervision and training was also addressed. Industry practices in the selection and training of personnel were reviewed for comparison with the experience and training needs indicated by the analysis.

The information and data developed during the study will also be of value to operating company personnel, training and safety managers in [illegible]oping training programs, operating instructions and policies, and selection [illegible]ia.

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**United States
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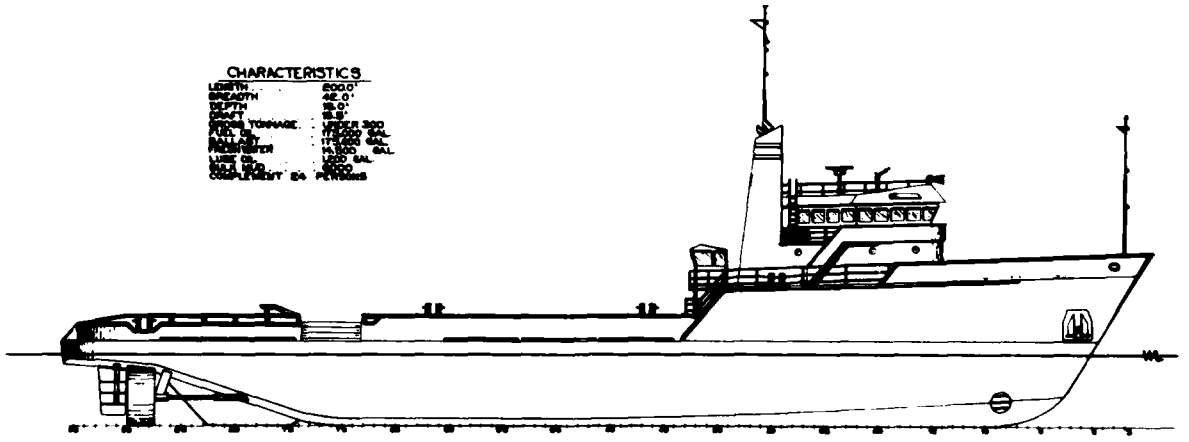
Functional Job Analysis of Marine Personnel Employed on Offshore Supply Vessels



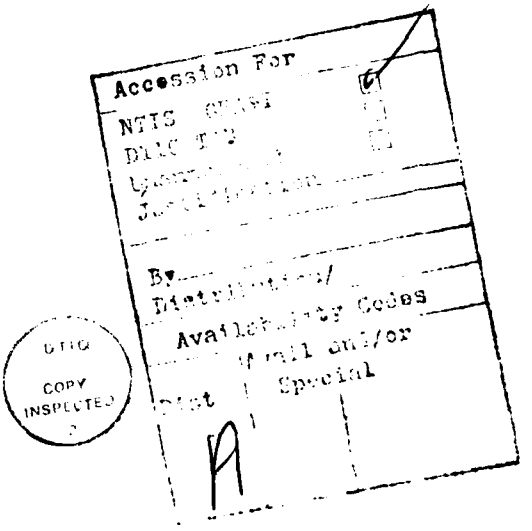
January 1982

PREFACE

The authors wish to thank those Coast Guard personnel listed below who assisted throughout the course of the study. They provided the initial guidance, direction, funding, clerical support for the study and lent their expertise throughout the study. This assistance was greatly appreciated.

Captain J. M. Duke, USCG
Commander D. J. Green, USCG
Commander C. R. Havnen, USCG
Lieutenant Commander W. W. Johns, USCG
BMC John A. Wadsworth, USCGR
SK2 Wendy S. Brown, USCGR
and all the clerical staff of the Marine Safety Division, Eight Coast Guard District

The opinions presented in this report are those solely of the authors and do not necessarily represent the official position of the U. S. Coast Guard.



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Dow Chemical, USA
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Golden Meadow, Louisiana

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New Orleans, Louisiana

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* Seahorse, Inc.
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* State Boat Corporation
Houston, Texas

* State Boat Corporation
Morgan City, Louisiana

* Southern Gulf Marine, Inc.
Lafayette, Louisiana

* Tidewater, Inc.
New Orleans, Louisiana

* Tidewater Marine Service, Inc.
Morgan City, Louisiana

* Zapata Marine Service, Inc.
Houston, Texas

The names of these companies are listed in recognition of the fact that they were willing to provide information; to lend their expertise in reviewing and commenting on the work done by the study team; and, in some cases, to permit the study team to observe operations and survey personnel on their OSVs. This cooperation drew upon company time and resources, particularly in the case of visits, and it is acknowledged with appreciation.

Cover illustration courtesy of Halter Marine, Inc.

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EXECUTIVE SUMMARY

Public law 96-378 (Small Vessel Inspection and Manning) mandated that the Coast Guard establish career patterns for maritime personnel. Further, that the experience and other qualifying requirements appropriate to the service or industry in which the officers are engaged shall be taken into consideration.

In order to lay the ground work for meaniful and appropriate regulations for the manning and licensing of personnel on OSVs, and to provide operating company personnel with the data to refine existing policies and training programs, we were directed by Commander, Eighth Coast Guard District to conduct a functional job analysis of the marine personnel positions employed on offshore supply vessels (OSV). The methodology of task analysis developed by Sidney A. Fine was utilized in conducting the analysis. We believe the information presented in this report will be the basis for recommending the following:

a. career patterns
b. experience and training levels
c. relevant and meaningful exams, and to
d. establish manning levels.

This document also provides industry with the background information needed to implement the additional training we recommend in the study.

Four basic issues were dealt with in conducting the study and drawing conclusions:

* What are the critical functions aboard OSV's with respect to to marine safety?

* Is the typical allocation of personnel and their responsibilities adequate for assuring that marine safety requirements will be met?

* Do the existing practices provide reasonable assurance that personnel have the skills and knowledge they need to meet the marine safety requirements in OSV operations?

* Does the existing licensing structure provide for adequately qualified personnel within the OSV organization?

Three kinds of information were sought in the course of the study. First information was sought on the work environment. For example, OSV design and equipment, operations, hazards, and workplace organization. Second, information about the tasks performed by the crew members was detailed along with the skill and knowledge required to perfrom them. Finally, the methods used by operating companies to assure themselves of competent personnel were explored.

CONCLUSIONS

The study team reached the following conclusions.

1. We identified four critical functions with respect to marine safety:

a. navigation between between the berth and the rig or platform,
b. maneuvering around rigs and berths,
c. emergency response, and
d. vessel loading and stability.

The critical functions were judged by the potential for deficiencies in task performance to result in the loss of the vessel, injury to personnel, damage to cargo or other structures, and by their sensitivity to variable weather conditions.

2. Critical tasks are the unseen decision making tasks were information is evaluated and courses of action are determined. Needles to say, this leads to a major problem when addressing the topic of safety, since it is difficult to make safer or test tasks which are not visible. There is a need to alter the way the Coast Guard examines applicants.

3. Four aspects of the operation were identified as critical to make minimal manning and skill levels viable. These are:

   a. The massive level of maintenance and repair support from shore based personnel,
   b. The transportation mechanism that moves this support to the vessel rapidly,
   c. Short trips that keep the vessels close to the support staging areas and minimize the detrimental effects of breakdowns, and
   d. An automation level that allows for unattended engine rooms.

   A reduction in any one of these areas will necessitate an increase in manning and experience levels.

4. There appears to be room for a shift in responsibilities from the engineer to the mate or additional help for the engineer.

5. There appears to be some deficiencies in in-house training. Training is provided on the job and on a tutorial basis to enable personnel to pass license exams. It can not be assumed that the necessary training is received in all cases, since the supervisors may not have been trained in all areas themselves.

6. Mates do not receive the necessary shiphandling experience to adequately train them for master. They serve little time as an officer of the deck and then only in non-restricted waters or in areas with low traffic density. They may not even be in the wheel house during other special maneuvers.

7. Ocean operators do not receive experience in stability and cargo loading as the mate does but they do receive boat handling experience.

8. Formal training is lacking in the interpretation of weather data, vessel seakeeping, and stability.

9. Due to the small crew sizes entry level personnel must be brought up to speed more quickly to maintain reasonable work levels for the other members of the crew.

10. Training in emergency response is severely lacking. This training is

currently provided on board by the officers during drills and by visiting safety managers. Such excercises are helpful, but are remote from what may be required during an actual emergency. Few personnel get practical experience in this area.

11. The addition of the mate has divided the organization into separate departments, small as they may be. The mate has relieved the engineer of his wheel house functions, and hence the engineer gains little exposure to vessel control. Our task analysis showed that there is crossover between the departments, but this crossover occurs with entry level tasks, especially labor intensive tasks such as mooring and loading supplies.

12. Paths into and out of the mineral & oil industries need to be better defined and set at more realistic levels. This will allow for a better utilization of skilled personnel in a fluctuating maritime economy.

13. The accelerated route to master (M&O) through ocean operator creates a shortage of mates. This has both favorable and unfavorable training consequences. Our study shows no reason why these two positions should not be equal in service time or why crossover should not be allowed both ways between the two positions.

14. The time to make chief engineer (M&O) is excessive for the tasks required of him. An even further reduction of time may be feasable when the four aspects stated earlier can be ensured by the nature of the operation. This is the case for OSV's in domestic operation off the continental United States.

15. The present licensing system requires that a man serve one year as an assistant engineer to be eligible for chief engineer. There needs to be a path to cheif engineer (M&O) without required time as an assistant engineer.

16. Crew boat licensing and inspection, because of similarities in the rigors of the service should be combined with OSV licensing and inspection.

RECOMMENDATIONS

The foregoing conclusions led the study team to make the following recommendations to the Coast Guard, operating companies, and other interested public and private organizations.

1. All companies should be engaged in developing independent study and on-the-job training aids and in promoting their use by OSV personnel. The task analysis data should be useful in rounding out on-the-job resources.

2. Give the mate the opportunity to gain additional experience in ship handling. This can be accomplished with more time on the wheel and by licensing changes allowing a more direct crossover to other operations where this experience can be gained.

3. Give all deck department personnel more formal training in the interpretation of weather, vessel seakeeping and stability.

4. Provide additional opportunities for the formal training of entry level personnel on a task and safety orientation basis.

5. Train dispatchers, terminal operators and tool pushers in vessel loading and stability. Masters should take a more active role in vessel loading.

6. Provide hands-on fire fighting and basic damage control training to all personnel, including the proper use of a breathing apparatus.

7. Provide hands-on training and instruction to all personnel in the operation and use of primary life saving equipment.

8. Companies need to provide more specific directions to vessel crews so they can adequately perform the tasks to desired standards.

9. Lines of authority in the deck department need to be clearer. Crews should make more efforts to include the mate in the chain-of-command.

10. Add an oiler to assist the chief engineer. We feel relief for the chief engineer is necessary in light of the work day laws and from the task analysis. This was chosen over a shift of his pumping responsibilities to the mate as such a shift would only cause more training problems for the mate.

11. Initial time on board is merely orientation to a sea going life. The work and experience gained in this orientation period is very similiar from department to department. This should be recognized by the licensing structure by allowing a certain amount of time at sea to be applied to any original license or document endorsement. We recommend that six months in any department be transferable from department to department. When required time is one year or less, at least 50% of the time must be in the applicable department.

12. Remove crew boat inspection and manning from CFR 46, Subchapter T, and place it in with the mineral and oil vessels. Those operations that do not contain the four aspects critical to manning identified during this study should not be placed within the purview of M&O inspection and manning.

13. Require equal service time for mates (M&O) and ocean operators. Either person should be able to serve in the capacity of the other without an endorsement to the license.

14. Clearly define the paths between segments of the marine industry and set crossover at more realistic levels.

15. Provide a path to chief engineer (M&O) without required time as an assistant engineer.

16. Create a limited route chief engineer (M&O) license with two years service time required.

17. Reduce the required service time for chief engineer (M&O) to three years.

I. INTRODUCTION

This report describes a study performed by LCDR Henry R. PRZELOMSKI, USCG and LT Arthur M. BONNEAU, USCG for Commander Eighth Coast Guard District. This study was completed in about 4 months, during calender year 1981.

STUDY PURPOSE

This study was designed to assist the U.S. Coast Guard in developing suitable experience and training levels, career patterns and manning levels on offshore supply vessels (OSVs), in response to Public Law 96-378, (Small Vessel Inspection and Manning). This study will also assist the offshore support industry in ensuring that personnel who work aboard OSVs are adequately trained and experienced in OSV operations.

NATURE AND SCOPE

The study involved the analysis and documentation of the tasks required in OSV operations for each position normally filled on an OSV. Personnel training and experience needs were drawn from task specifications. Personnel training, selection and advancement practices in the offshore support function of the mineral and oil industries were considered with the analysis results. Recommendations were made on manning levels, career patterns, training and experience requirements.

In general, the analysis documents only the tasks performed by crew members of OSVs and, specifically, those tasks performed by crew members on OSVs employed in domestic operations. It was realized that a large portion of those tasks performed by crew members in overseas operations will be as indentified for the domestic operation. Various specialists come aboard as needed, such as, anchor handling crews, cargo specialists, mechanics, electricians, special navigators, etc. The work of those personnel are not within the scope of the study, even if the work normally performed by these specialists is at times performed by the crew.

We defined the overall purpose of an OSV as one of moving between shore based sites and offshore sites carrying persons, goods, supplies or equipment, in support of exploration, exploitation, or production of offshore mineral or energy resources. Supporting this purpose we identified ten goals.

OSV Goals Indentified

I. Perform necessary routine maintenance, repairs and ship's business.

II. Prepare for the trip and safely load cargo aboard the OSV.

III. Berth/unberth the OSV.

IV. Navigate through (maneuver in) restricted waters as required in order to reach the destination safely and expeditiously.

V. Operate OSV in non-restricted waters as required to reach the destination safely and expeditiously.

VI. Conduct transfer operations between the OSV and drilling/production rigs/platforms.

VII. Handle anchors and buoys for rigs/platforms safely and expeditiously.

VIII. Tow vessels and rigs as required safely and expeditiously.

IX. Perform emergency response procedures.

X. Train/supervise OSV personnel in the safe conduct of OSV operations.

For the engineering positions goals III, IV and V were combined into a separate goal which is:

III/IV/V. Operate and monitor the machinery plant in order to ensure the continuous availability of power at required levels for all OSV operations.

LIMITATIONS

The analysis results are generalized to be applicable to different OSVs under different conditions. There are substantial similarities in the work done. However, differences in size, particular design features, equipment, the complement of personnel and their personalities, and individual company policies all affect the tasks performed and whom they are performed by, as does the nature of the wind-wave conditions, spare parts availability, quality of shoreside support and other factors. The study results are not presented as a definitive set of operating procedures. Rather, the results describe the types of tasks that are required, the types of conditions to which OSV personnel must respond, and the types of skills, knowledge, and experience required to work effectively under these various specific circumstances. Each OSV is unique in a number of respects. We have attempted to convey that in the analysis results.

II. METHOD

The method used is Functional Job Analysis (FJA), developed by Sidney A. Fine[1]. FJA is a method of task analysis that is designed to maintain a system perspective on work requirements.

1. In FJA, task analysis begins with delineation of the functional requirements--the purpose, goals and objectives of the work organization.

2. FJA requires identification of the resources and constraints (such as, equipment and materials, operating conditions, hazards and regulations) that affect how the system can fulfill its functional requirements.

3. FJA then describes the actions—tasks—through which the requirements are fulfilled in light of the resources and constraints.

4. Performance standards are established for each task, reflecting its complexity and its criticality in the sense of impact on system viability.

5. Training requirements are derived from the stated task requirements.

The task is the fundamental unit of work to which the analysis is directed. Tasks arise from the work system functions (stated as purpose, goals and objectives in FJA). Tasks are examined in relation to the resources and constraints of the work system. The capacities, skills and knowledge needed by personnel are deduced from and expressed in relation to the functional goals and objectives of the system, the resources available and constraints.

Figure 1 illustrates the task analysis structure for an example case. The figure includes the goals which are broken down into objectives and tasks. Each level of the functional taxonomy provides more detailed information about what is done.

Figure 2 is an example of the basic output form FJA, a complete task analysis sheet. As shown, it includes the goal and objective to which the task contributes and a description of the task that covers the following:

1. What specific action is performed,

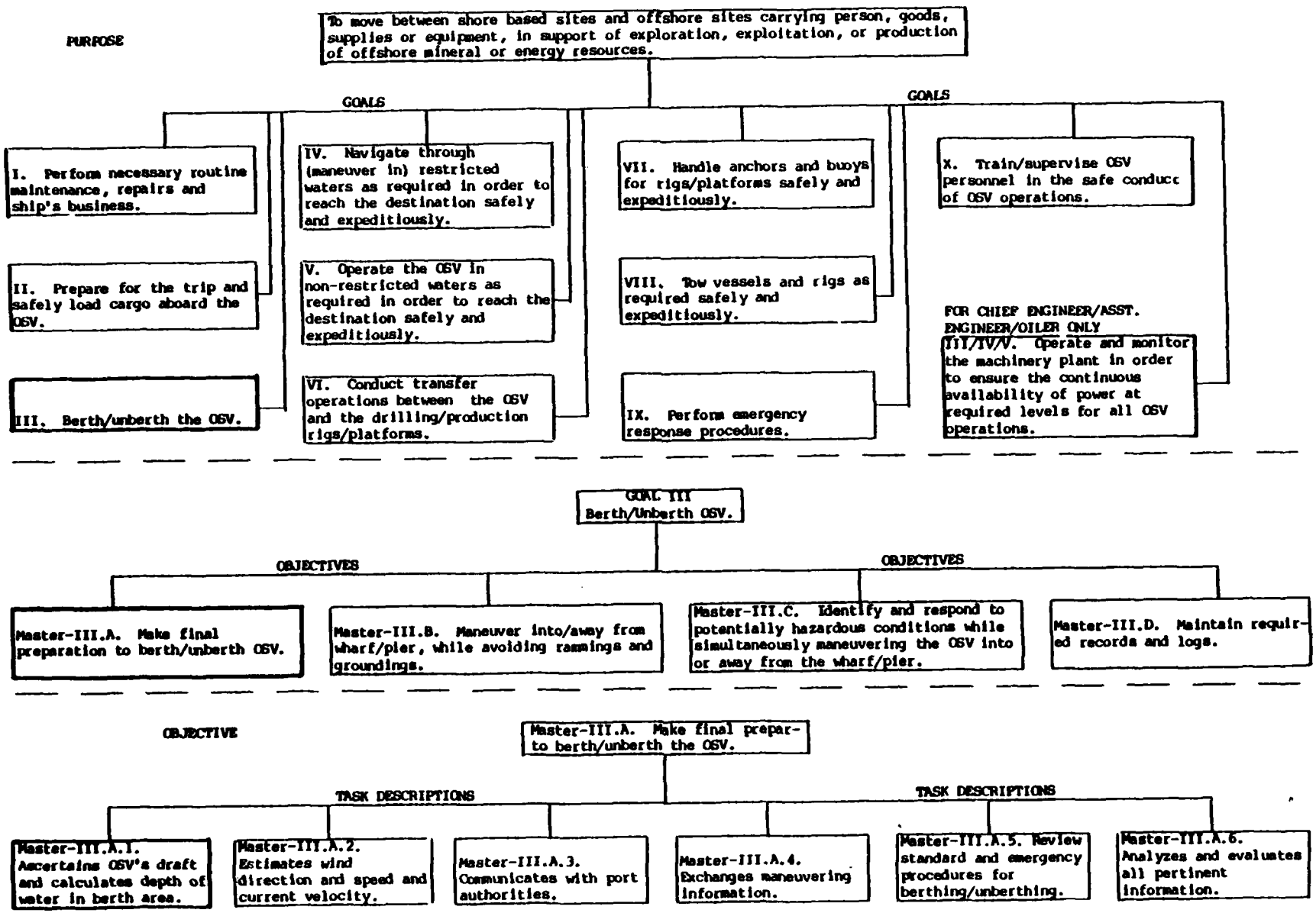
2. to accomplish what immediate result,

---

(1) See, for example, S. Fine, A. Holt, and M. Hutchinson, Functional Job Analysis: How to Standardize Task Statements, Methods for Manpower Analysis, No. 9, W. E. Upjohn Institute for Employment Research, Washington, D.C., October 1974; S. Fine, Functional Job Analysis: An Approach to a Technology for Manpower Planning, W. E. Upjohn Institute for Employment Research, Washington, D.C., February 1973; ORI, Inc., Functional Job Analysis of Mobile Offshore Drilling Unit Operations, Vol. IV: Appendix, Silver Spring, Md., October 1974; ORI, Inc., Handbook for the Development of Qualifications for Personnel in New Technology Systems, Silver Spring, Md., June 1976.

FIGURE 1

PARTIAL TAXONOMY OF GOALS, OBJECTIVES AND TASKS



TASK CODE: MASTER-III.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	75	1A	5	1B	20	2	3	3	1

GOAL: Berth/unberth OSV.

OBJECTIVE: Make final preparations to berth/unberth the OSV.

TASK: Ascertains the OSV's draft and calculates the minimum and maximum depth of water in berth area in order to determine the OSV's underkeel clearance at berth.

PERFORMANCE STANDARDS

Descriptive:
* Accurately determines drafts and water depth.
* Precisely calculates underkeel clearance from drafts and water depths.

Numerical:
* In 100% of the cases, water depth and draft determinations are made within 0.1 foot accuracy.

TRAINING CONTENT

Functional:
* How to read draft marks.
* How to determine water depths.
* Understands the rise and fall of the water level as a function of the season of the year and time of day at various locations.

Specific:
* Knowledge of the own OSV's draft under various loading conditions.
* Knowledge of bottom characteristics of a particular berth area.
* Knowledge of the water depths of a particular berthing area.

Figure 2

3. with what tools, equipment, or work aids, and

4. upon what instructions.

Performance standards and training content needed are also stated on the task analysis sheet. In addition, FJA provides scaled definitions that are used for ratings as shown at the top of Figure 2. The rating process helps make the analysis consistent from task to task and makes it possible to measure the reliability of the task statements (see Figure 3). The ratings can be used for other purposes (e.g., in estimation of training time, in developing training curricula and evaluation instruments) but these were not part of this study.

Finally, FJA requires that the task data be reviewed by workers and their supervisors in the field. The data are taken as valid when experienced personnel say these accurately depict their work.

A more detailed discussion of FJA can be found in Appendix (B) of this study.

PROCEDURES

The steps followed in performance of the task analysis of the personnel employed on offshore supply vessels are outlined in Figure 3. The figure shows that although the six activities are performed in sequence, there is a considerable amount of feedback during the analysis. For example, performing task analysis (step 4 in the figure) may point up a need for more information (step 1). Each step continues, is consulted, and is resumed as needed throughout the analysis. Details of each step are outlined below.

Collect Information

The information gathering step involved an extensive literature search, plus contact with operating companies to obtain existing task information and company operating procedures and manuals. The literature search focused on five basic areas:

1. General background information, including a review of licensing, qualifications, and other pertinent maritime/shipping rules and regulations.

2. Company operating and safety procedures.

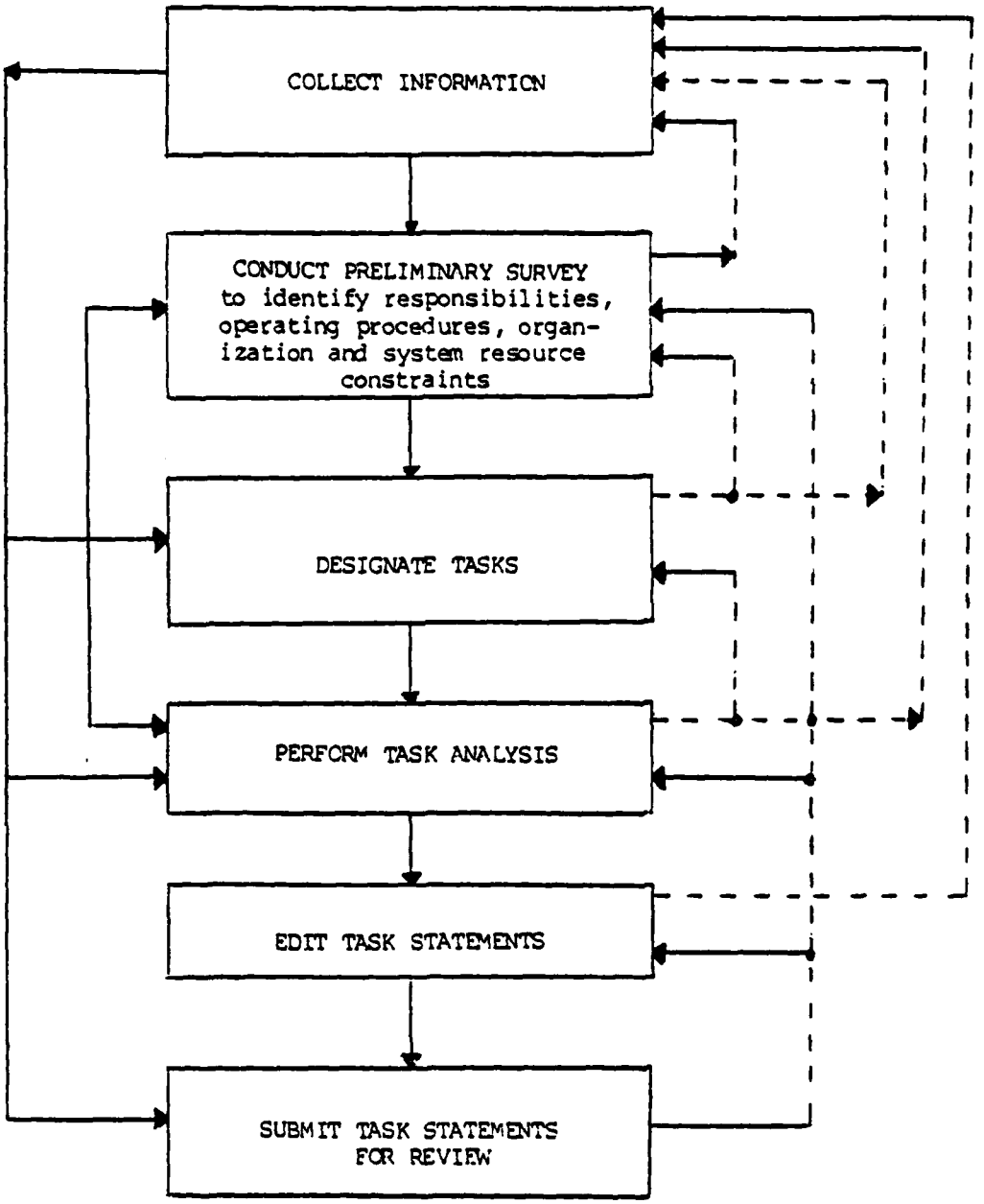
3. Previous job or task analysis and other kinds of information about the work performed on OSVs.

4. Information on existing analysis methods that could be of value during the task analysis.

5. A review of marine accident information and accident analyses that have been performed.

A detailed listing of the literature reviewed is contained in the bibliography, Appendix (A).

FIGURE 3: OVERVIEW OF STEPS IN A TASK ANALYSIS



It should be noted that the information-gathering done in this study was not a one-shot action. Clarification of task content, in particular, was sought throughout the analysis by both team members who have navigational experience and with representatives of organizations in the field. It was a feature of the methods of the study to make sure that operating experience was continually infused into the analysis.

Conduct Preliminary Survey

A preliminary survey was conducted to identify the organizational structure aboard OSVs and to indentify the major responsibilities of the different crew members, and to gain familiarity with operating procedures, system resources and constraints. This was accomplished through discussions with operating company personnel, members of the Licensing Committee of the Offshore Marine Support Association and trips on supply vessels. The preliminary survey formed the basis for the initial identification of the various goals and objectives of OSV operations.

Designate Tasks

The next step in preparing for the task analysis was to develop the tasks supporting the goals and the objectives. As far as the level of detail is concerned a great deal of leeway occurs at this step. A task may be narrow in its scope, in which case many are designed, or it may be as broad as the objective, in which case only one task would be designated for the objective. The only requirement is that it must be an action or action sequence that contributes to the accomplishment of an objective. However, tasks that are extremely and narrowly defined are difficult to work with for most purposes, and tend to reduce the actual complexity of the work. This approach may be desirable as, for example, when an organization wants to create jobs for workers who have little education, work experience and/or very limited skills. The work is delineated in very small units which are then combined to define jobs that put minimal requirements on the workers. There seems to be no point in doing such a detailed analysis of OSV operations, when the analysis is directed toward delineating personnel qualifications and conditions of OSV operations. For such a purpose it is best to call a "task" a whole action or closely integrated action sequence as performed in current operations.

An initial set of tasks were developed by drawing on the experience of the study team members and from the information gathered during the preliminary survey. This initial set of tasks was shown to and discussed with numerous operating company personnel (personnel managers, port captains, port engineers, masters, mates, chief engineers, oilers and deckhands) as their knowledge of actual operating procedures is immensely helpful in obtaining an accurate and realistic set of task statements.

In general, the process of designating system functional requirements in the form of purpose, goals and objectives, and associated tasks was an evolutionary process. Initial designations were revised as each lower level breakdown was made. The taxonomy had to have logical integrity and the needs for revision asserted themselves as the taxonomy was developed. During the process, the scope and content of each level was questioned to ensure that it was a logical outgrowth of the preceding level and that it was appropriate to the next level of input. The end product of this step in the study procedures are the lists of task designators, the tasks to be described and analyzed. The methodical

approach to task designation outlined above provided a means to verify that all important tasks were included in the proper sequence and that no inappropriate tasks were included.

Perform Task Analysis

The procedures for delineating a task in the FJA task statement form have been described in previous Coast Guard/ORI reports, including a handbook (Stoehr et al., 1976) and three demonstration studies (Porricelli et al., 1976; Hall et al., 1976; and Martino, 1976) and in the publications of Dr. Sidney A. Fine, the originator of FJA (Fine and Wiley, 1971; Fine, 1973; et al., 1974). Therefore, the detailed procedures will not be explained here; however, an overview (excerpted from the above mentioned reports) is provided in Appendix (B) for quick reference.

Once the task description is formulated and rated, sections on the performance standards and training content were completed. The performance standards establish the rigor with which a task must be performed to do it properly in a specific work environment or under particular work conditions. These standards provide the basis for evaluating the performance of candidates, either in a test or on-the-job situation. The standards are also important for the development of training and that training's outcome.

The FJA method calls for specification of numerical or categorical performance standards. Most OSV tasks are, at least potentially, safety critical, but it is difficult to describe the degree of criticality outside the context of specific conditions. Thus, it is difficult to set standard ranges of acceptable accuracy. The approach decided upon was to set a 100 percent criterion for evaluating the result in all cases in which a faulty task result could conceivably end in a collision, ramming, grounding, accident, or other undesirable outcome. It will be noted that all tasks have a 100 percent criterion which says a great deal about rigors of the work on OSVs. The tasks may be, and often are simple, but they must be done properly. That is not to say that the system cannot tolerate any task omission or faulty performance; but there is no guarantee of tolerance. There are few work systems in which it is so important to life, limb and the public welfare to do things right. The 100 percent criterion is therefore put forth as the rational goal for task performance, although it is recognized that people do not work with 100 percent accuracy and that the system usually will tolerate some degradation.

With regard to training, FJA involves the specification of two types. The first is general training which provides basic skills and knowledge applicable in any work setting in which the task is performed. This type of training is usually provided in schools and develops through experience over time. The second type is training needed to accomplish a task in a particular work setting. Specific training relates to particular machines, environments, people or systems with an organization. Since the analysis here is applicable to many different work settings (e.g., to different OSVs facilities) it is difficult to get very detailed about "specific training content." The procedure adopted was to reference the type of situation—specific information/skills that would be needed to do the task. By that means, a user of the task data may know what orientation in the work setting is required to provide a basis for satisfactory task performance.

The information needed to write the task description, to accurately rate the task according to the FJA scales, and to outline performance and training standards was obtained from:

1. available documentation in the form of navigational and engineering textbooks,

2. documentation in the form of company operating procedures,

3. the experience of study team members,

4. contact with people in industry and training schools who have knowledge of OSV operations, and

5. observation aboard vessels to obtain up-to-date information and any omitted details.

Edit Task Statements

After all task statements were written they were edited by members of the study team. The editing procedure ensured that all the content elements were included and clearly stated; that the assigned FJA scale ratings were representative of task requirements; that performance standards and training content were usable operationally and logically supportable by other parts of the task statement; and, that the whole task statement gave a sense of reality about the task action and its context. A complete summary of the steps in the editing process is included in the overview of FJA procedures in Appendix (B) mentioned earlier.

Submit Task Statements For Review

The task statements were reviewed with operating company managers and OSV crew members to attempt to ensure that the tasks are accurately depicted.

III. BACKGROUND INFORMATION

Although this study is directed towards offshore supply vessels, a brief overview of the offshore mineral and oil industries is in order. Any study that addresses personnel employed on offshore supply vessels must address the various types of specialized vessels involved in the small vessel segment of the offshore mineral and oil industries. Personnel traditionally transfer back and forth between the various types of vessels and in some cases the vessels themselves change categories, depending on the equipment installed and service.

The offshore mineral and oil industries' marine segment represent a significant departure from the traditional "deep-sea" merchant marine. The resemblance of any of the vessels which serve this industry to the berth line freighter or passenger vessels is remote.

The mineral and oil vessels differ in many ways. The significant ones are:

1. vessels receive a massive level of maintenance and repair support from shore based personnel,

2. vessel trips are of relatively short duration and close to the shore,

3. vessels are minimally manned,

4. cargo transfer operations are conducted in tight maneuvering situations in unprotected waters, and

5. the professional knowledge needed to safely operate these vessels.

The marine segment of the mineral and oil industries came into existence in the late 1940's as an adjunct to the oil exploration and exploitation activities on the U. S. Gulf Coast, more particularly in the South Louisiana and Southeast Texas coastal marshes. As the oil activities moved offshore so did the vessels. Changes in the evolution of the vessels were brought about by this move from the sheltered inland marshes and bays to the deeper waters of the continental shelf.

The first crew boats, supply boats and utility boats were the vessels which were available at the time. The crew boats were converted surplus air/sea rescue boats or party fishing vessels. The supply vessels were deck barges or surplus LCT's. The utility/standby boat might have been anything from a wooden hulled shrimper to a fishing boat.

As these industries grew and moved further offshore the vessels changed and grew into larger, very highly specialized water craft. Today's crew boat comes in all sizes, generally from steel hulled 50 footers to new all-aluminum 120 footers, to 3000 horsepower-craft capable of carrying 60 to 80 passengers long distances, in comfort, at speeds as high as 30 knots. Recent developments have seen the advent of surface effect ships as well.

The supply boat also changed from the open-foredeck type LCT, with its bow ramp; to its present high-bowed, forward-deckhouse configuration with its large unobstructed cargo-carrying after deck. The first of these vessels were 120 to 135 feet in length with a 20 to 30 foot beam and were built in the early 1950's. The newer vessels of this class have grown to lengths of 165 to 260 feet with a 46 to 50 foot beam. Horsepower has been increased as the vessels grew from 1000

horsepower to today's 4000 to 6000 horsepower. There are some specialized supply/tug vessels in excess of 8000 horsepower. Many of the larger U. S. built vessels operate in foreign waters. Some fly Panamanian, Liberian or other flags of convenience. Excluding those of foreign registry, the majority of this type of vessel now operates on the Gulf of Mexico Continental Shelf. However, due to the large disparity in day rates between domestic and foreign operations there appears to be a move afoot by the industry to shift boats overseas whenever possible.

There are other types and sizes of vessels employed in these industries. There are tugs, unmanned barges, research and seismographic vessels and highly complex pipe lay barges which can carry as many as 250 industrial workers and crew members.

"Passengers" carried in offshore industry crew boats are always industrial workers or other persons connected with, and in support of, some phase of the petroleum industry. These people consist of drilling and service crews, and engineers, as well as oil company and contractor personnel. Transfer of personnel is conducted by crew boat and helicopter, except during periods of inclement weather or restricted visibility wich would preclude the use of helicopters.

Cargo carried by the supply vessels is not cargo in the traditional sense. It is pipe, drilling mud, cement, oil field equipment, fuel, water and all kinds of chemicals and supplies consumed by the mineral and oil industries offshore.

With the exception of delivery voyages from the U. S. to foreign areas of oil drilling activity, the crew boats and supply vessels operate almost exclusively on the continental shelves of the world rather than on protracted point to point ocean voyages.

Today's U.S. fleet of mineral and oil vessels has grown to over 3000 strong.

DESCRIPTION OF MINERAL AND OIL VESSELS

Supply Boats

The supply boat is the workhorse of the mineral and oil industries. About 90% of all materials received by offshore rigs and platforms are delivered by supply boats. Cargoes consist of all the materials needed in support of the mineral and oil industries. These include groceries, pipe, fuel, liquid and dry mud (and other weighting materials), acids, drilling and potable water, and spare parts. Vessel design varies slightly depending on what services or cargoes are emphasized.

Figure 4 shows a supply boat. The distinctive features of this type vessel are the large cargo deck aft and the large tankage capacity below decks. Cargo capacities have grown to about 700 tons on deck and to about 1200 tons below deck. Of course, stability must be considered and not all of this cargo may be carried at the same time. Loads rarely consist of just deck cargo or just liquid cargo.

Deck cargoes are unloaded by crane while the supply boat maintains a position alongside the rig. Figure 5 shows a typical mooring arrangement. Roustabouts, supplied by the rig, unload all the cargo on the back deck once the vessel is tied up and they can come aboard. The normal voyages are short trips from a base operated by the charterer to a group of offshore rigs. Transit times vary according to the distance and conditions, but are generally less than 12 hours. On-site cargo operations, unless delayed by weather conditions, are generally completed within 24 hours. Time at the dock is limited by how fast the cargo and fuel can be loaded by the base to its various supply boats.

The frequency of the trips varies from charterer to charterer and from base to base. It is a direct reflection of scheduling by the charterer, base and OSV capabilities, for handling cargo, and length of the trip. In general, the shorter the runs the more frequent the trips, with less time at the docks in between.

With much the time being used by the crew in transiting and cargo operations, very little time is left for maintenance and repair beyond that which is routine and essential. Shoreside support of the vessels is mandatory to operationally maintain these vessels without increasing the crew size, on board tools and spares and crew expertise, none of which comes without cost. In areas where shoreside logistics are good, it is economically viable for a few centrally located mechanics to handle several vessels. Domestically, these mechanics are typically contracted for from various service companies.

Theoretically this shoreside philosophy should work overseas also, but, the logistics for this typically presents a problem as does the unavailability of shoreside mechanics. For these reasons when a boat is operating overseas, crew size is increased, more tools and spares are placed aboard, and the more experienced personnel are utilized. Another factor affecting manning overseas is that many times, as a condition of employment, the foreign government requires that local natives be employed on that vessel.

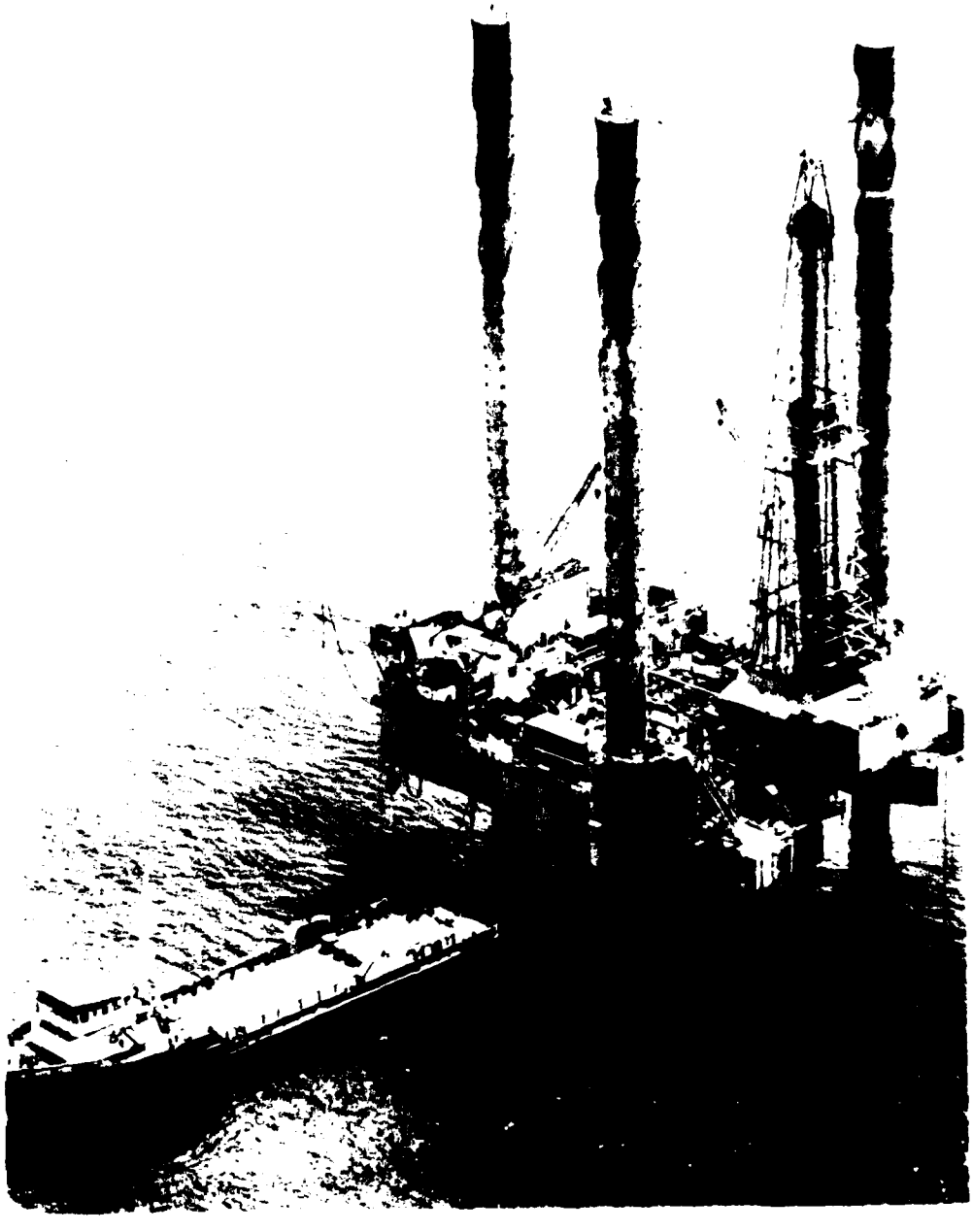
Present law allows grades "D" and "E" cargoes to be transferred from the vessel's own fuel tanks to offshore rigs and platforms without being considered a tank vessel. All other grades of fuel are supplied via packatized, portable

FIGURE 4

(Courtesy of Offshore Logistics, Inc.)

OFFSHORE SUPPLY BOAT

FIGURE 5



(Courtesy of Teledyne Movible Offshore, Inc.)

SUPPLY BOAT MOORED TO A RIG

tanks on deck. All ballast tanks, although exemptable under the present tonnage laws, are potentially cargo tanks as the drilling operation has a need for large quantites of fresh water. Ballast tanks are filled with fresh water from rivers and bays or shore connections and pumped off to the rig. Liquid mud is carried in specially designed tanks that take the place of ballast tanks. This increases the tonnage and changes the manning requirements. Generally liquid mud tanks are the only significant design difference between an OSV less than 200 gross tons and one over 200 gross tons. Dry bulk materials are carried in pressurized tanks (P-tanks) below decks. Powdered solids when sufficiently areated behave very similar to liquids and can be pumped via hoses to the rig.

Various packages or equipment may be added to supply vessels for specialized functions. The most common of these is an anchor handling/towing winch. Supply boats so equipped are utilized for handling rig anchors and for the shorter rig moves. For long distance tows, ocean going tugs are used, especially for jack-ups and submersibles. Anchor handling generally requires an additional five to seven man crew and an additional captain. Domestically, this crew is contracted for from an anchor handling company and a second anchor handling master is provided by the operating company. Overseas, some crews are experienced enough to handle anchors without outside contractors.

Other packages added to supply boats include but are not limited to:

1. service vessel packages, such as those typical of Halliburton or Dowell vessels (see figure 6); these vessels provide the necessary services for cementing, fracturing, acidizing, sand control, etc.

2. fire boat packages,

3. diving support packages,

4. four point mooring system packages, and

5. research/seismographic packages.

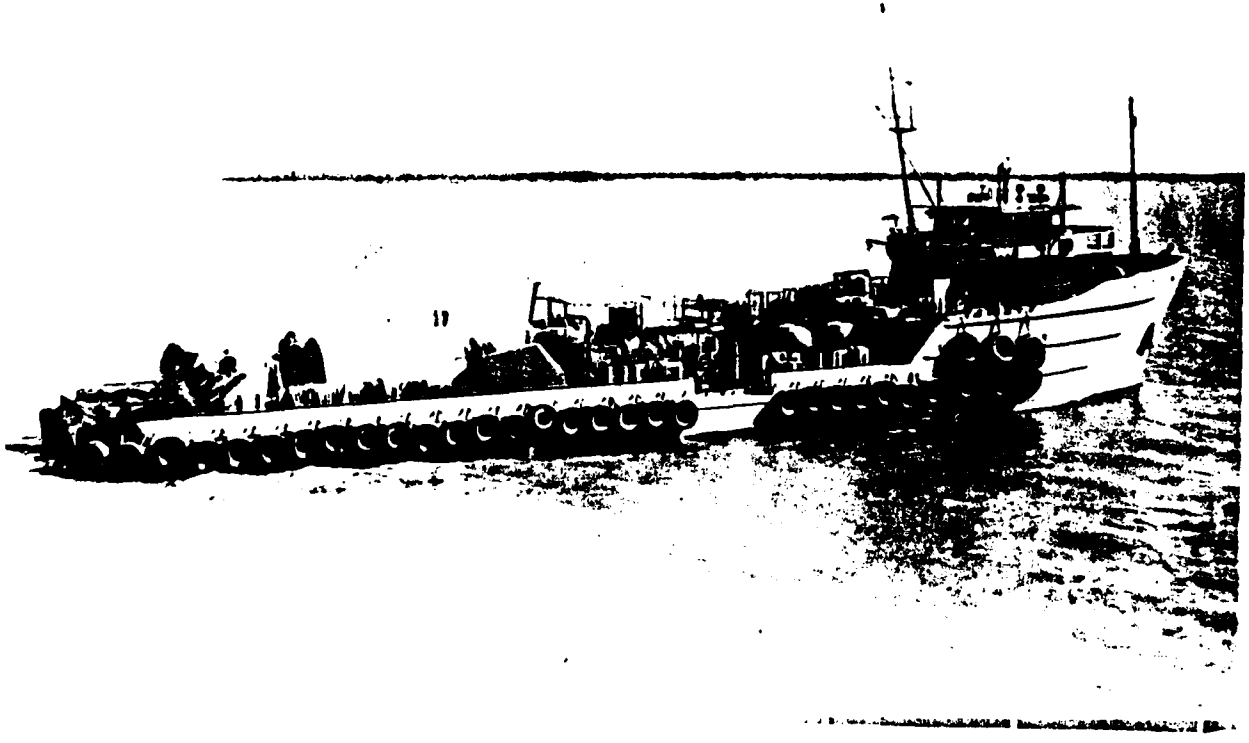
Most vessels, when fitted with these specialized packages, are provided with extra non-navigating personnel with the expertise to operate the equipment.

Versatility is the key word in supply boat operation. A supply boat should be able to carry any cargo required, be ready for any specialized function, or be readily adaptable to perform such functions in support of the offshore mineral and oil industries.

Crew Boats

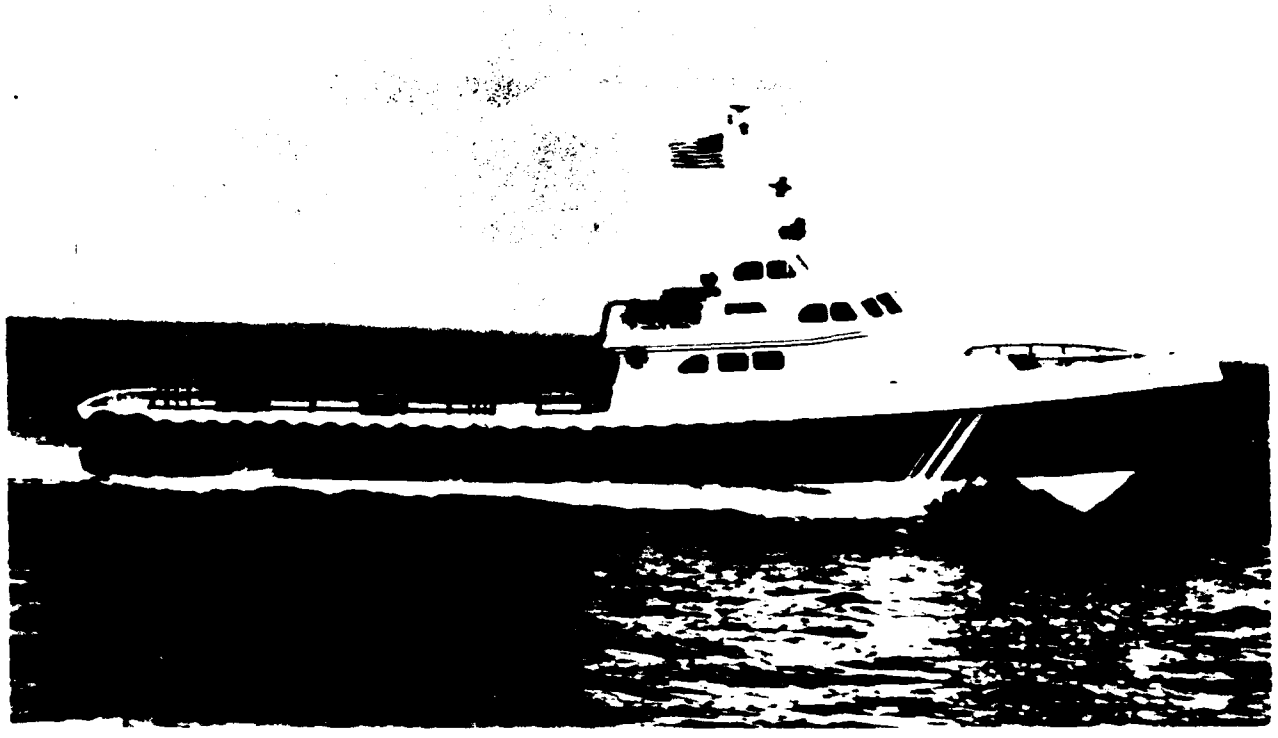
Figure 7 shows a crew boat. The distinctive features of this type vessel are its speed, up to 30 knots, and its passenger accommodations. Up to 80 passengers can be carried on the larger vessels. Typically crew boats are aluminum or steel planing hulls. Crew boats also have a clear deck aft with a limited cargo carrying capability (up to 50 tons). The most significant factor that limits how much cargo can be carried is stability. They have the capability of pumping limited amounts of fuel and ballast water to rigs.

FIGURE 6



SUPPLY BOAT WITH SERVICE PACKAGE ABOARD

FIGURE 7



(Courtesy of CAMCRAFT, Inc.)

CREW BOAT

Traditionally, crew boats handled the crew changes for the offshore rigs. This is still true to some extent today. With the increased use of helicopters, the crew boat has seen a marked reduction in its use for crew changes except when weather conditions preclude flying. The larger oil companies use the crew boat for crew changes when rigs are close enough to shore to keep transit times relatively short. As the oil industry moves further offshore the crew boat will be used less for crew changes. In between crew changes, crew boats are utilized as "hot shot" boats to deliver light or perishable cargoes quickly.

Crew boats are under 100 gross tons and are built, inspected and manned according to 46 CFR, Subchapter T. For this reason, required manning levels are lower and inspection standards are somewhat lower than for supply boats. Typically the larger crew boats are required to be manned with two ocean operators and two or three deckhands. Twelve hour clauses are written on certificates of inspection to reduce the required number of operators to one for short trips. This is the typical manning. No dedicated engineer is carried, but, the more experienced deckhand usually is assigned engineering duties. Trips are similiar to those made by supply boats, but are generally shorter because of the greater speed and the reduced amount of time spent under the rig, due to limited cargo capabilities.

Tugs

"With the expansion of the offshore oil industry into more severe and distant areas than the original Gulf of Mexico operations, new problems were presented to the towing industry. Not only were long ocean voyages some times required, but the towing vessel, in the case of a drilling vessel, also had to position the drilling unit very precisely on a particular location in the open sea at the end of the voyage. In order to do this successfully the tugs needed to be both powerful and maneuverable. The towing companies were faced also with a sudden increase in the demand as a result of the large drilling units moving from their place of construction to their sites of operation, perhaps half way around the world. This, with the advent of the ultra-large bulk carrier and its special salvage problems, and the large concrete deep-sea storage and production structures required, spurred the towing companies on to develop more powerful tugs" (2).

Figure 8 shows an offshore tug. Offshore tugs utilized by the mineral and oil industries are of standard ocean going tug design and perform conventional towing functions. Tugs are used for rig moves, barge moves, and moving other marine related equipment. In rare cases, tugs have been used in limited anchor handling functions.

Drilling rig tows are generally long voyages and may be performed with up to three tugs on the same rig. This places a premium on boat handling (while hawser towing), navigation, and the ability to tow large vessels under severe conditions. Inland tow boats are of standard design and perform normal towing functions, delivering a variety of materials in coastal and protected areas. Theoretically, any tow boat or tug can be used in support of the mineral and oil industries without modification but certain companies specialize in these support functions.

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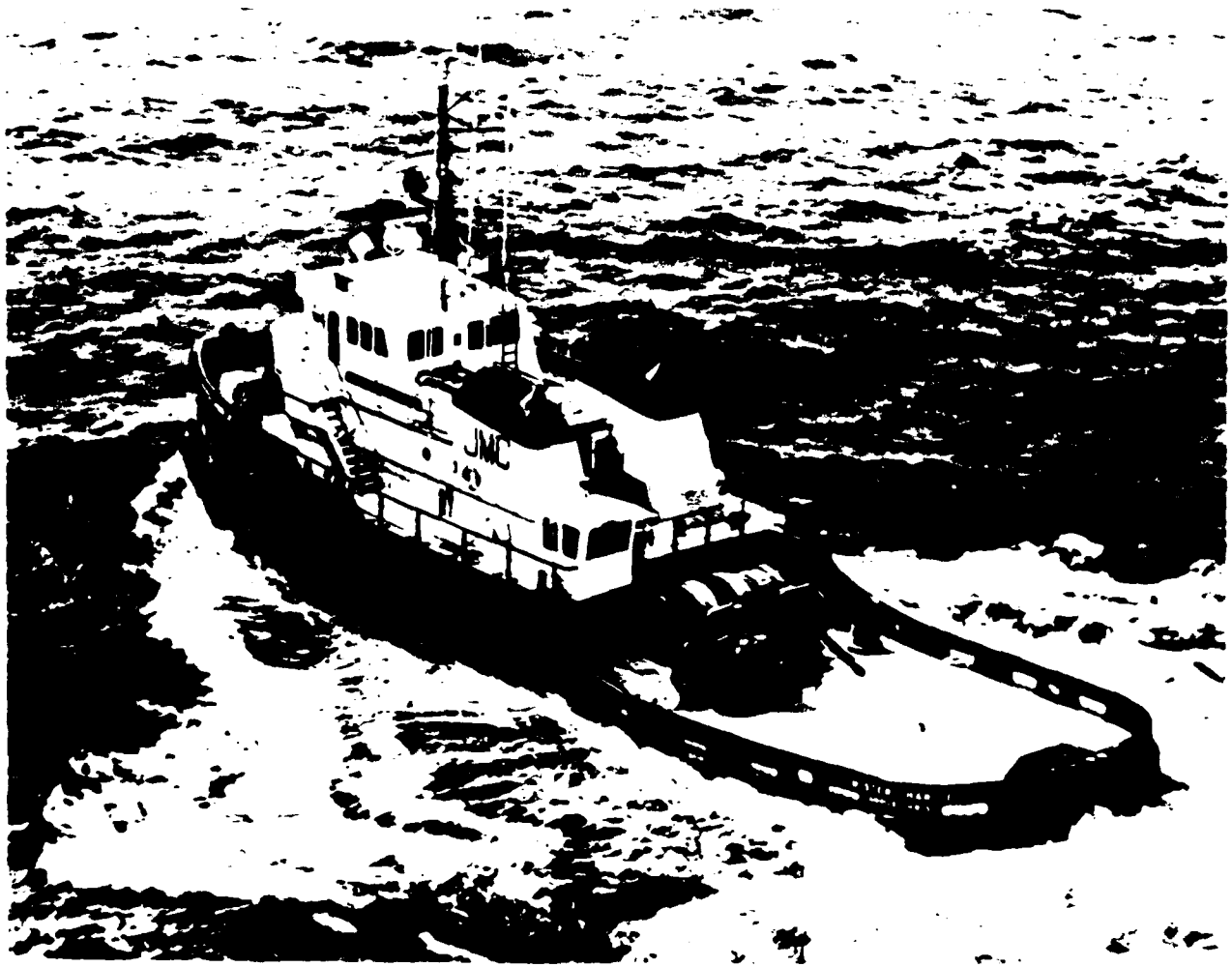
(2) G. L. HOFFMAN, Nautical Education For Offshore Extractive Industries, Support Operations & Seamanship 1979. 19

FIGURE 8



(Courtesy of Jackson Marine, Inc.)

OFFSHORE TUG

Utility Boats

Figure 9 shows a utility boat. Utility boats are small supply boats. They are constructed to be under 100 gross tons to take advantage of the reduced manning and inspection standards. They differ from crew boats in that they are displacement hulls, are slower and have a larger cargo and fuel capacity.

Standby boats remain in the oil field as a precaution in case of an emergency evacuation of the rig. While remaining on station, they serve as a platform for additional supplies for the rig and extra tankage for fuel and water. Although almost any boat can be used as a standby boat, utility boats are generally used because the fuel and personnel costs are lower. Many are fitted with fire monitors as this is the trend in most working mineral and oil support vessels available today.

Research Boats

Figure 10 shows a research boat. The significant feature of research boats is the seismographic and quarters package added to the back deck and the extra navigational equipment. Some packages include a helicopter landing deck. According to present regulations, most of these vessels are uninspected and less than 200 gross tons, however Coast Guard licensed personnel are used. Manning for the navigational crew remains essentially the same as for supply boats but a seismographic crew of up to 25 is carried. This specialized crew operates the seismographic equipment, does the specialized navigation, provides a helicopter landing officer (if applicable), provides extra mess hands and in some cases even the cook.

Trips are fairly extended, from 30 to 60 days, and crew hitches are extended to match. Although their operation does not take them far offshore, vessel equipment and auxiliaries are up-graded from the standard supply boats to handle the longer trips and carry the larger hotel load. Fuel and water capacities are increased, generating capabilities are increased, stores and spares are increased, and some have evaporators. Operationally, more repairs and maintenance are completed underway, and a set watch rotation is established. The watch officer must consider the seismographic cable that is being towed. This cable can be up to two miles long.

OPERATIONAL HAZARDS

An offshore marine environment can be an unforgiving adversary. In general the operational hazards encountered while working on an OSV are similar to those faced when employed on cargo vessels of equivalent or larger size and horsepower. The potential hazards range from fire and flooding to adverse weather.

Navigational Hazards

An OSV faces the usual hazards associated with controlling a vessel, including variable meteorological conditions, variable waterways, vessel traffic (collisions, rammings and groundings), towing, anchoring and berthing/unberthing maneuvers. The major differences are the hazards involved with maneuvering the OSV around the rigs and platforms to discharge cargo, transfer personnel, handle rig anchors, and to move and position a rig at a new location.

FIGURE 9

UTILITY BOAT

FIGURE 10

(Courtesy of Zapata Marine Service, Inc.)

RESEARCH BOAT

In other than ideal environmental conditions, the positioning of the OSV to discharge its cargo and passengers involves expert shiphandling skills on the part of the master to prevent personnel injuries, damage to the OSV and/or rig. The master, in almost 100% of the cases, will be at the throttle controls and helm when maneuvering around a rig/platform. A situation that is extremely hazardous is when the tool pusher on a rig or platform through intimidation cajoles the master of an OSV to attempt an approach during extreme environmental conditions. Most companies require that if an attempt is to be made under conditions that in the opinion of the master may endanger the safety and well being of the passengers, crew, cargo or OSV, a letter of protest be filed and log entries recorded. All companies recognize the final authority to take actions rests with the master and will support his decision to refuse to proceed. The companies are concerned with maintaining a good working relationship with the charterer. Company managers may transfer personnel to another vessel, while supporting his decision, in order to maintain this relationship.

A hazard exists when anchoring or dragging for an anchor in or near a developed field as a flowline or pipeline can easily be ruptured with the anchor or grapnel hook. It is critical that the master of an OSV consult pipeline, flowline and telephone line charts and check with the tool pusher or production foreman to determine if anchoring is possible and for the location of all underwater lines. To shift an oil rig to a new location requires the handling of rig anchors and towing. To safely handle anchors and tow a rig requires team work and experience for such evolutions. Weather conditions are the greatest limiting factor in a rig move. Hazards involved include common navigational hazards, and those hazards associated with wires and lines under tension, heavy anchors and buoys being shifted and lifted, maneuvering the OSV close to the rig when racking anchors, and dragging for an anchor with a grapnel hook.

Fire Hazard

A shipboard fire is the most feared casualty at sea. The most frequent cause of fires is carelessness on the part of the crew. Because of this, the master of an OSV must stress fire prevention and constant vigilance to the crew. Some of the causes of fires aboard OSVs have been the build up of waste (e.g., sacks, paper, used oil filters and oil rags aboard), oil soaked areas (bilges), improper welding procedures and practices, improper stowage of paints and thinner, electrical equipment failure, pressurized fuel and oil line failures and the improper discarding of lighted cigarettes. In addition, some of the cargoes supplied to the rigs/platforms are hazardous and flammable requiring extreme care. The master is responsible for ensuring that all crew members know the location of fire fighting equipment and how to use it. This is accomplished through the orientation of new crew members and the conducting of required fire drills.

Loading/Stability

The importance of proper loading and stability of an OSV is critical for the safe operation of the vessel. It is the duty and responsibility of the master to decide where cargo is placed and secured for the overall stability of the vessel. The master has to consider in his decision:

1. the particular OSV's stability letter or the Trim and Stability Book,

2. vessel trim,

3. the order of unloading for the rig/platform to be serviced,

4. additional jobs to be performed while carrying the cargo,

5. securing the vessel from shifting cargo,

6. protection of the cargo from water damage or loss overboard, and

7. the ability of the rig/platform crane(s) to reach specific deck areas.

The master should never knowingly take his vessel to sea with improperly stowed and/or secured cargo, and/or in violation of the OSV's stability requirements which might result in the loss of crew, cargo and/or the vessel through shifting cargo, unloading operations or adverse weather.

Adverse Weather

Adverse weather poses similiar threats to the OSV, as it does to traditional deep sea cargo vessels. However, where a deep sea cargo vessel can alter its course and avoid weather enroute to a protected harbor, the OSV by the very nature of its operation is not afforded this option. The OSV must service rigs offshore in unprotected waters. Rain, fog, snow and ice, thunderstorms and hurricanes with accompanying heavy seas pose serious threats to OSV operations. Hazards include, but are not limited to, reduced visibility, structural failure due to heavy seas and from the shifting of improperly secured cargo, flooding/stability hazards from unsecured/improperly maintained watertight doors, hatches and vents because of neglect or blockage by cargo, and ice build up topside resulting in a progressive loss of stability, and reduced vessel handling. Since all non-bulk cargo is carried on deck, the effects of weather on the cargo must also be considered. For example, pipe casing can fill up with water from wave action resulting in a increased deck load and the associated loss of stability. A serious flooding hazard in the past has been through unsecured watertight doors on the engine room stacks of Gulf designed OSVs. The variation in prevailing conditions and state of the vessel makes it difficult to lay down hard and fast rules for operating an OSV in adverse weather. The master must be the sole judge of what action is required in light of the circumstances as they appear to him at the time.

Equipment Failure

The most serious equipment failures on an OSV are: the loss of bridge throttle control, rudder failure, or an engine failure while maneuvering under or off a rig/platform; during anchor handling or towing a rig; or while transiting a restricted waterway. Such losses could endanger the crew, the vessel, other vessel traffic, and a rig or platform being serviced.

Most other equipment failures, due to the nature of OSV operations, will not tend to jeopordize the vessel under normal conditions. As discussed earlier, an OSV is usually operating within twelve hours of the charterer's base of operations and within an hour of a rig or platform. A standard OSV will tend to have duplication in all major systems or equipment such as:

1. two shafts,

2. at least two engines,

3. two generators,

4. two air compressors,

5. two steering pumps,

6. two sets of bridge throttle controls,

7. dual cargo pumps,

8. two radars,

9. two helms,

10. and multiple radio communications capability.

If the OSV can not complete the particular job it is being employed on because of an equipment failure the company will decide whether the vessel should return to port or wait for assistance. The availability of shore based mechanics and the capability to transport them by helicopter or crew boat within several hours to an OSV provides the company with flexibility. This flexibility has allowed the companies to transfer resources in the form of aboard spares and experienced personnel shoreside and still maintain adequate operations.

Work Place Hazards

Work place hazards on an OSV are for the most part similiar to those found aboard any large vessel or industrial work place. Hazards that could be found on OSVs include:

1. tripping hazards (deck cleats and fittings, open hatches, projections on the deck, loops of line, rope or chain),

2. slipping hazards (wet decks, oil on deck plates),

3. overhead hazards (hooks or blocks of cranes, derricks or booms, low clearance on ladders or through hatches),

4. machinery hazards (engine or winch moving gears, fly-wheels, rods and parts),

5. rope, line or cable hazards (strain/tension on rope, line or cable, stepping into the bight of a line, improper securing of a line),

6. welding hazards (welding or cutting near oily areas, welding on tanks, pumps or lines containing flammable fluids or vapors, improper handling of gas cylinders, harmful vapors from arc welding, welding or cutting containers that have held a flammable substance without testing for the presence of flammable vapors, welding or cutting without proper goggles, lack of a fire watch), and

7. engine room hazards (adjusting or repairing a machine in operation, wearing loose clothing around machinery, oily rags, electrical equipment not grounded, and missing machinery guards).

The stacking of anchor chain in the chain locker by hand is inherently hazardous to the man in the locker. Many of these hazards and the resulting injuries can be prevented through safety consciousness, proper procedures and practices, and the wearing of appropriate protective clothing (deck shoes, safety shoes or boots, protective glasses, goggles and shields, safety hats, dust paint or gas respirators, gloves, and safety belts) required for the specific job.

Casualty History

Casualty analysis is outside the scope of this study. However, available data from the Coast Guard's Marine Casualty Statistics computer files were reviewed as a way of evaluating the significance of operational hazards and identifying critical tasks. Data was reviewed for the fiscal years 1976 - 1979 and is presented in Table One.

TABLE ONE

CASUALTY HISTORY FOR U. S. DOCUMENTED SUPPLY VESSELS
(FY1976-1979)

NATURE OF CASUALTY	FISCAL YEAR 1976 Casualties	%	1977 Casualties	%	1978 Casualties	%	1979 Casualties	%	TOTAL Casualties	%
COLLISIONS WITH OTHER VESSELS	20	32	11	36	15	42	42	57	88	43
COLLISIONS WITH FIXED, SUBMERGED OBJECTS	9	14	9	30	3	8	5	7	26	13
COLLISIONS WITH RIGS	7	11	0	0	5	14	7	9	19	9
EXPLOSIONS/ FIRES	7	11	4	13	2	6	1	1	14	7
GROUNDINGS	6	10	2	7	3	8	5	7	16	8
FLOODINGS/ CAPSIZINGS/ FOUNDERINGS	4	6	2	7	4	11	6	8	16	8
FAILURES OF VESSEL STRUCTURE OR EQUIPMENT	10	16	2	7	4	11	8	11	24	12
TOTAL	63		30		36		74		203	

IV. OVERVIEW OF TASK ANALYSIS RESULTS

The Functional Job Analysis data sheets (task analysis sheets) are presented in Appendix C of this report. They contain detailed specifications of the tasks and the associated training needed to enable personnel to meet given standards for task performance. There is a sheet for each task, and the analysis was performed for each position on an OSV. In all, some 520 tasks were specified. A number of the tasks are applicable to more than one position. We have included some tasks relating to procedures or equipmen. that may not be included on all OSV's. In this study we attempted to use a 10% criterion, where, in order for a task to be included it should be applicable to at least 10% of the OSVs. There is a certain amount of crossover between the various positions on the OSV which are made necessary by the small crew size. This is sometimes not readily discernable from the task statements and will vary from individual to individual.

ORGANIZATION AND MANNING

Figure 11 shows the typical organization and manning of an OSV. This is the manning required for OSVs over 200 gross tons and on voyages of less than 600 miles (P.L. 96-378). The cook is not required, but is usually provided by the companies. A chief engineer is not required on a vessel of less than 200 gross tons, but is usually employed. Oilers are generally not required by the Coast Guard, but were found on about half of the vessels at the time of this study. The size of the required engineering crew varies according to the OSV's operation, machinery plant and the amount of vessel automation. This is determined by the local Officer In Charge of Marine Inspection (OCMI) on a case by case basis.

Figure 12 shows the typical manning and organization of an OSV in the past. This organization was prevalent on uninspected vessels until the passage of P.L. 96-378 and on most vessels until as recently as 1973.

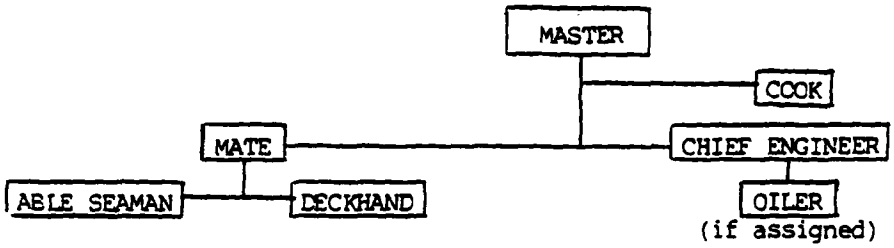
Some significant differences exist between the two OSV organizations. First a mate has been added to the organization, and second, licensed engineers are now required as more vessels are inspected. This has created a greater distinction between the deck and engineering departments than was present in the past. Many times in the past, the engineer was second in command because he was the most experienced person aboard outside of the master. Many of the duties of the mate have evolved from tasks formerly performed by the engineer/wheelman and/or the AB/wheelman. Because of this recent development, duties and responsibilities of the mate and engineer have not congealed into clearly definable roles. Although it is stated that there are two departments, one must keep in mind there are only six or seven personnel aboard. This necessitates a certain degree of crossover between the departments, especially in the labor intensive tasks, e.g., mooring, emergency responses, passing hoses to/from rigs and cleaning tanks.

Figure 13 shows the organization for a large crew boat.

Effects of Equipment and Service on Manning and Tasks

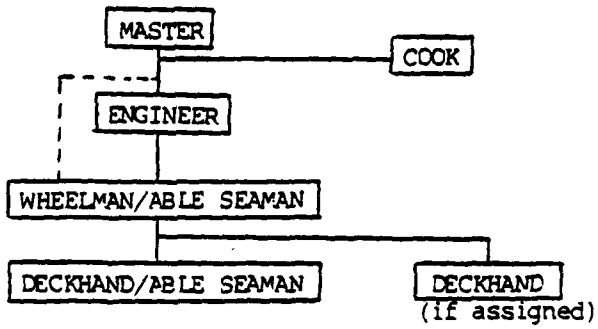
Some overseas and domestic operations necessitate more personnel. Organizations and responsibilities are appropriately adjusted. Examples of reasons for adding additional personnel are:

FIGURE 11



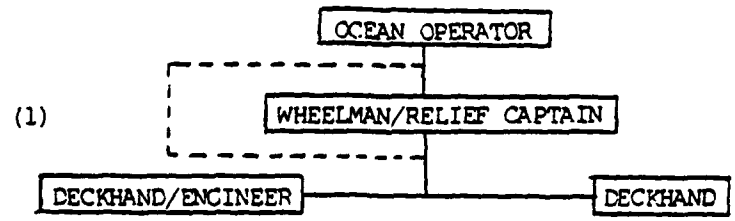
TYPICAL PRESENT OSV ORGANIZATION

FIGURE 12



HISTORICAL OSV ORGANIZATION (Pre 1973)

FIGURE 13



TYPICAL CREW BOAT ORGANIZATION

NOTE 1: The dotted line indicates that deckhands may work directly for the captain.

1. extended voyages,

2. lack of shore support,

3. local government policies and regulations,

4. labor intensive operations,

5. lack of engine room automation, and

6. the cost of personnel.

Vessel design, equipment and service can have a significant effect on the tasks performed by various personnel or on the pace of these tasks. Examples of the differences that can alter these tasks are:

1. addition of an anchor handling/towing winch,

2. addition of liquid mud tanks,

3. addition of special service packages,

4. addition of an auto pilot,

5. extended trips in restricted waterways,

6. the length of the voyage,

7. manning levels, and

8. charterers' facilities and the operations being supported by the OSV.

TYPICAL ACTIVITIES AND RESPONSIBILITIES OF OSV PERSONNEL

Activities and responsibilities of personnel are categorized as marine functions, cargo handling and special operations, supervisory functions, and emergency response functions. In terms of the task analysis structure (FJA Goals) the distinctions were made as follows:

Marine Functions

I. Perform necessary routine maintenance, repairs and ship's business.

II. Prepare for trip.

III. Berth/unberth the OSV.

IV. Navigate through (maneuver in) restricted waters.

V. Operate the OSV in non-restricted waters.

VI. Anchoring the OSV.

III/IV/V. Operate and monitor the machinery plant.

Cargo Handling and Special Operations

II. Safely load cargo aboard the OSV.

VI. Conduct transfer operations between the OSV and drilling/production rigs/platforms.

VII. Handle anchors and buoys for rigs/platforms safely and expeditiously.

VIII. Tow vessels and rigs as required safely and expeditiously.

Supervisory Functions

X. Train/supervise OSV personnel in the safe conduct of OSV operations.

Emergency Response Functions

IX. Perform emergency response procedures.

Master

The activites and responsibilities of the master of a United States documented vessel are governed by all pertinent and applicable law, regulations, governmental directions and accepted marine and legal precedents. The master has the overall responsibility for the management of his vessel. He is responsible to both the owner and the charterer for the operation of the vessel and the employment of the crew in a safe and efficient manner to carry out the assigned missions of the vessel. The master of an OSV must be thoroughly knowledgeable of all operations performed by the OSV and cognizant of the duties and responsibilities of all crew members.

Two of the responsibilities that were continually mentioned by company officials and the masters interviewed were: (1) safe navigation (ship handling) and (2) good customer relations. A company will not place a man as a master of an OSV just because he has the required Coast Guard license. The company has a large investment in the OSV and wants to be sure that a prospective master can handle the vessel without endangering the crew, the vessel, the cargo or the rigs/platforms serviced. This leads to the major emphasis placed on the master to foster good relations with the charterers and to gain their confidence. Confidence is not gained through trip delays, lost cargo and/or damaged rigs.

Table Two is an overview of the typical activities and responsibilities of a master for an OSV as detailed during the functional job analysis.

Mate

The mate is subject to the master's orders and instructions, and is immediately responsible to him for the proper upkeep of the OSV, fittings, and equipment except for engineering machinery and spaces. All unlicensed personnel are under his command in matters pertaining to the maintenance of the vessel, except insofar as such matters are the direct responsibilities of the chief engineer or the cook. The nature of supply vessel work and manning calls for the mate to be what has been described as a "working mate". He not only supervises and instructs the deckhands, but also works alongside them in order to maintain the vessel in a sanitary and operable condition. To accomplish this requires effective planning and his personal attention.

As instructed by the master, the mate assumes the duties of the Officer of the Deck when that function is not being performed by the master. In the Gulf, the standard practice seems to be that the mate will serve as the Officer of the Deck from the sea buoy to within a mile or two of the rig/platform to be serviced, at which time the master relieves him so that the mate can oversee the preparations for mooring. The master performs the actual maneuvers required. This will vary (expanding or reducing) depending on the master and the ship handling experience of the particular mate.

Table Three is an overview of the typical activites and responsibilities for the mate of an OSV, as detailed during the functional job analysis.

Chief Engineer

The chief engineer is responsible to the master for the good condition and the safe and efficient management of the entire machinery plant and engineering department. It is essential for the efficient operation of the vessel that the master be fully advised of the status of the machinery plant or potential problems.

He shall be guided by company and manufacturers' recommendations in the operation, maintenance and repair of the machinery and equipment, unless otherwise directed. He shall coordinate with the master and the port engineer to complete any maintenance or repair that is beyond the capabilities of the crew.

The chief engineer is responsible for the loading and discharging of all below deck cargo and liquid supplies. Since some 70% of all cargo received by the rig is pumped from supply boats, keeping all pumps, tanks and delivery lines in good working order is essential to the performance of the vessel and represents a sizable portion of his job.

Table Four is an overview of the typical activities and responsibilities for a chief engineer on an OSV, as detailed during the functional job analysis.

Assistant Engineer/Oiler (AE)

The oiler is responsible directly to the chief engineer for his directions and assignments. On an OSV the oiler is more likely an assistant engineer in that he performs many of the same functions as the chief engineer. He serves as a relief for the engineer in machinery operations and cargo pumping functions. It is essential that he be fully conversant with the pumping procedures and arrangements, and have a working knowledge of the machinery plant. He assists the chief engineer in the operation, maintenance, troubleshooting and repair of all engineering equipment and spaces.

Table Five is an overview of the typical activities and responsibilities of an oiler on an OSV, as detailed during the functional job analysis.

Deckhands

Deckhands are those members of the deck department of the OSV crew who serve in the grades Able Seaman or Ordinary Seaman. (Please note, no distinction was made between the tasks performed by an Able Seaman or an Ordinary Seaman. On an OSV they perform the same work with the Able Seaman being expected to be more

experienced.) The deckhands are responsible to the master and the mate for the performance of their duties and assignments.

Table Six is an overview of the typical activities and responsibilities of the deckhand on an OSV, as detailed during the functional job analysis.

TRAINING NEEDS

The analysis specified training content for each task performed by crew members. Thus the data created in this study compiles the training needed by personnel to perform the tasks they may be asked to do. It is believed that this compendium would be applied most appropriately by the operating companies, particularly their operations, personnel, training and safety managers.

For the study team, the development of the task specifications and corresponding training content was an educational process that enabled us to assess current training practices and to make recommendations that are general enough to be applicable industry-wide. The task analysis data also provides a reference for evaluation of the study recommendations.

EXPERIENCE NEEDS

Our analysis indicated that experience is required to become competent in most tasks performed on an OSV. To determine a specific time requirement for competency in a given assignment on an OSV was beyond the scope of this study. Determining the real experience needs is dependent on the ability of the individual to learn and the amount of help given to him on the job. A statistical analysis of the time required to learn individual tasks could be undertaken to provide empirical data on experience requirements. However, the learning curve for each individual and each situation will vary. To provide any absolute values for experience requirements would be highly questionable no matter how the information is obtained.

Within the present licensing system, absolute values must be set. Where we have suggested service/experience requirements they are a matter of judgment. Such judgments should be based on an understanding of the work requirements and knowledge of the typical amounts of time it has taken people to learn to perform given types of work in the past. Our task analysis provided the understanding of the work performed, while discussions with OSV crew members and operating company managers provided an insight into the length of time needed to become proficient in different work assignments.

EMERGENCY RESPONSE ACTIVITES

Emergency response potentially involves every individual on an OSV. In some of the preceeding tables, emergency activities and responsibilities were stated. Figure 14 is a summary of the duties and responsibilities of OSV personnel during various emergencies. The task analysis sheets provided in Appendix C provide a more complete description of each individual's emergency response functions.

TABLE TWO

TYPICAL ACTIVITES AND RESPONSIBILITIES OF THE MASTER

Marine Functions

1. When relieving as master he acquaints himself with the handling characteristics of the vessel, the cargo and the personnel capacity, equipment, operation of the navigational equipment, speed, fuel consumption, ballast arrangements, safety apparatus and other essential characteristics to determine whether the vessel is seaworthy and that the equipment is in satisfactory condition.
2. Ascertains the operating schedule and changes to the number and location of rigs/platforms to be serviced.
3. Remains fully informed and adheres to all United States and other relevant laws, regulations and directives affecting the operation of the vessel.
4. Identifies and priortizes maintenance and repair items in a work list.
5. Ensures that paperwork requirements are met (i.e., rough log, company log, charterer's log, reports, forms, engineering maintenance systems records, etc.).
6. Is responsible for the security of the vessel.
7. Determines the tracks and running times to the rigs/platforms to be serviced.
8. Ensures corrections are made to the navigational charts and publications.
9. Ensures the vessel is operationally ready to get underway by checking out the bridge/engine room interfacing equipment, internal and external communications equipment, electronic navigational aids, navigational lights and signals, and search lights.

Cargo Handling and Special Operations

1. Obtains information and instructions on cargo loading from the dispatcher.
2. Ensures the stability of the OSV is maintained as cargo is brought aboard and stowed using the stability letter or the Trim and Stability Book information.
3. Verifies and checks that all cargo brought aboard is in accordance with the manifest.
4. Is responsible for evaluating the prevailing environmental conditions, cargoes to be transferred, and the physical configuration of the rig and cranes to determine if a safe method exists for mooring the OSV without endangering personnel, the OSV, the rig/platform and the cargo.
5. Recognizes that it is the master's responsibility, and his alone, to ensure the safety of the crew and the vessel when maneuvering around or transferring cargo to a rig/platform.
6. Maintains the position of the OSV in relation to the rig/platform to safely transfer cargo.
7. Verifies with the mate that the anchor handling winch and all associated gear and tools are operable and available.
8. Is responsible for reaching an agreement between the anchor handling crew foreman, the rig captain, the barge master and the underwriter's surveyor (if it is a rig move) as to the procedures to be followed in setting out/running anchors and retrieving/lifting anchors for a rig.
9. Is responsible for the proper rigging of an anchor system and the maneuvering of the OSV to run anchors for a rig.

Emergency Response Functions

1. Has overall responsibility for the safety of the crew and the OSV during an emergency situation.
2. Maneuvers the OSV to remain in navigable waters and minimize the effects of an emergency situation.
3. Assesses the severity of all emergency situations and determines the most advantageous method to combat the emergency.
4. Is responsible for the establishment of any damage control and fire fighting procedures, and personnel assignments.
5. Summons additional assistance as required from other ships, rigs/platforms, or the Coast Guard as appropriate.
6. Is responsible for the ordering of the abandonment of the OSV in order to prevent serious personnel injuries.
7. Ensures that first aid is provided to victims and ascertains if additional medical assistance is required.
8. Is responsible for immediately notifying the company of a death aboard the OSV.
9. Records pertinent information or circumstances of an emergency, injury, accident, illness or death aboard the OSV to document and complete all required reports.

Supervisory Functions

1. Ensures that the OSV is properly manned in accordance with the Certificate of Inspection and applicable regulations.
2. Has the full authority over all officers and unlicensed personnel on the vessel.

TABLE TWO (Continued)

TYPICAL ACTIVITES AND RESPONSIBILITIES OF THE MASTER

Marine Functions	Cargo Handling and Special Operations	Supervisory Functions
10. Makes final preparations to berth/unberth the OSV, including determining the OSV's draft, the depth of the water in the berth area, estimating the wind and current, exchanging information with the port authorities and maneuvering information with persons-in-charge of other ships.	10. Is responsible for the safe lifting and positioning of the OSV to allow the rig to rack the anchor(s).	3. Follows up on assigned maintenance and repair work lists provided to the mate and the chief engineer.
11. Evaluates all pertinent information to decide how to, or whether to proceed with the berthing/unberthing.	11. Has the overall responsiblity for the safe dragging and chasing out of anchor cable.	4. Remains alert at all times for potential safety hazards.
12. Maneuvers the OSV into/away from the wharf/pier while avoiding rammings and groundings.	12. Prepares for taking a vessel barge, or rig in tow by co-ordinating with the master, the captain of the rig, barge captain, charterer's representative and the insurance surveyor to reach an agreement on the method of rigging the tow and the procedures to be followed.	5. Is responsible for the maintenance of proper watches on the OSV at all times.
13. Identifies and responds to potentially hazardous conditions while maneuvering the OSV.	13. Has overall responsiblity for the rigging of the tow, communications, the tow line, and the positioning of the rig at the new location.	6. Is responsible for imparting knowledge about the specific features, characteristics and procedures of the OSV's operations to crew members, and the orientation of all new personnel aboard the OSV.
14. Maintains a planned track and speed by scanning the water, and operating the radar, LORAN, fathometer, helm and bridge throttle controls, and reading the dials of the instrumentation aboard.		7. Is responsible for the posting and maintenance of a station bill, equipment and arrangement diagrams, standing orders, and company operations and safety manual(s) aboard the OSV.
15. Safely anchors the OSV only after verifying the positions of flowlines, pipelines and communications lines in the area, and that the proper types a amounts of ground tackle are aboard.		8. Provides on-the-job training (OJT) following standard operating procedures and company policy to develop personnel skills above minimum levels.
16. Is responsible for setting an anchor and radio watch to ensure the safety of the OSV and monitor the OSV's radios while anchored.		9. Is responsible for the training and evaulation of personnel in the performance of their specified duties.
		10. Is responsible for conducting an ongoing safety program aboard the OSV, including the planning and holding of emergency drills, and for emphasizing to the crew the need to wear protective clothing and their need to use common sense while carrying out their assignments.
		11. Ensures that the crew members report to him and then take prompt action to correct potential safety hazards.

TABLE THREE

TYPICAL ACTIVIES AND RESPONSIBILITIES OF A MATE

Marine Functions

1. Inspects, maintains and tests safety and lifesaving equipment, fire fighting equipment and systems, navigational lights, ship's whistle, fog horn, and search and signal lights.
2. Is responsible for the cleaning, painting and general housekeeping to provide sanitary conditions on the vessel.
3. Inspects and tests the internal communications system and the general alarm system.
4. Is responsible for the condition of all lines, hawsers, ground tackle and winch wires.
5. Inspects, maintains and operates, with the chief engineer, the deck machinery.
6. Assists the master in preparing the OSV for scheduled inspections and surveys.
7. Is responsible for keeping the master advised of changes in the materiel condition of the OSV.
8. Is responsible to the master for the safe navigation of the OSV while serving as the Officer of the Deck.
9. Is responsible for the assignment of crew members to handle lines for the mooring of the OSV.

Cargo Handling and Special Operations

1. Is responsible to the master for the safe and proper stowage and securing of deck cargo and ensuring all deck cargo brought aboard agrees with the provided manifest.
2. Is responsible for the safety of personnel and the procedures used on the work deck during anchor handling evolutions if an anchor handling crew and foreman have not been employed.
3. Is responsible to the master for the proper rigging of the OSV to tow a vessel, rig or barge.

Emergency Response Functions

1. Is responsible for taking the initiative to direct the actions of personnel at the scene of any emergency (in charge of the emergency squad).
2. Ensures that areas of responsiblity are secured for adverse weather.
3. Provides first aid to injured personnel according to his training or directives from the master.
4. Is in charge of the launching of the life raft(s).
5. Is in charge of the recovery effort in a man overboard situation.

Supervisory Functions

1. Assigns work to himself and the deckhands taking into account the weather, the OSV's schedule, the crew size and experience and supplies.
2. Supervises, instructs and assists the deckhands in the proper methods and procedures for completing maintenance and repair work.
3. Supervises the roustabouts, the stevadores, and the deckhands in the safe and proper stowage of deck cargo.
4. Trains and assigns personnel to sea watches and inport security watches.
5. Is responsible for implementing on-the-job (OJT) training of the deckhands under the directions of the masters and in such a manner so as not to interfere with any operations.
6. Is responsible for training the crew in emergency procedures during drills as directed by the master.
7. Is responsible for supporting the ongoing safety program aboard the OSV, by training members of the deck department in the wearing of protective clothing and by stressing the use of common sense and the need for alertness while carrying out assignments.

TABLE FOUR

TYPICAL ACTIVITIES AND RESPONSIBILITIES OF A CHIEF ENGINEER

Marine Functions

1. When relieving another chief engineer, he acquaints himself with the status of the machinery plant, its operations and the amounts of cargo, fuel and supplies aboard.
2. Is responsible for the identification of and prioritizing of engineering maintenance and repair items on the work list.
3. Is responsible for testing and troubleshooting equipment to isolate problems to the major sub-systems, so that the appropriate technician can be called in to repair the equipment, or so that he can complete the repair himself.
4. Is responsible for routine maintenance of the machinery and equipment, such as changing oil and filters, draining air from the air receivers and the fuel system, greasing and cleaning the machinery, performing electrical system maintenance, etc., for the preventive maintenance schedule and records, and takes lube oil samples for lab analysis.
5. Is responsible for keeping the batteries charged, the terminals cleaned and the acid levels up.
6. Is responsible for repairing equipment either personally or through the master and the port engineer. (Typically minor "bolt on type" repairs and minor electrical repairs are performed by the chief engineer.)
7. Is responsible for maintaining pumps, valves, lines, piping and repacking as necessary.
8. Is responsible for maintaining spare parts for all machinery.
9. Is responsible for maintaining engineering supplies.

Marine Functions (Continued)

10. Is responsible for operating and monitoring all machinery and engineering equipment. (This includes the prime movers, generators, steering equipment, service pumps, compressors, ventilation systems, alarms, air conditioning and refrigeration systems, etc.)
11. Is in charge of the upkeep and cleanliness of all engineering spaces.
12. Keeps the engineering log and tracks the number of engine hours.
13. Ensures the bilges are kept as dry as possible.
14. Stands engine room watch.

Cargo Handling & Special Operations Functions

1. Is responsible for the transferring of all bulk liquids and solids to/from the OSV.
2. Is in charge of passing the hoses to/from the rig, connecting the hoses to the manifolds and the stowage of these hoses at the completion of the transfer.
3. Assists in mooring the OSV to the rig.
4. Is in charge of two or three deckhands during the hook-up.
5. Is responsible for the lining up of the systems.
6. Is responsible for the loading and off-loading of liquids and dry bulk cargo in such a manner as to minimize the free-surface effect and to maximize the stability of the OSV.
7. Takes on or transfers liquid cargoes or ballast to compensate for deck cargo or to consolidate partially full tanks as directed by the master.
8. Is responsible for checking out the anchor handing and towing winch.

Emergency Response Functions

1. Is in charge of the engine room equipment and any engineering personnel.
2. Is responsible for securing the watertight or gas tight integrity of the OSV during an emergency.
3. Is responsible for starting the fire or bilge pumps.
4. Is in charge of shoring/emergency repairs.
5. Is in charge of securing engineering spaces/equipment for heavy weather and assisting mate in securing cargo and deck equipment.
6. Provides first aid to injured personnnel according to his training or at the direction of the master.
7. Operates the fixed fire fighting systems.
8. Assists on deck in a man overboard crisis.

Supervisory Functions

1. Is in charge of safety procedures ondeck during transfer of fuel or other combustibles.
2. Is in charge of the oiler or other engineering personnel when they are assigned.
3. Is responsible for training the crew in damage control procedures during drills as directed by the master.
4. Is responsible for training the oiler in watch standing procedures, and ensures he is competent and completely familiar with his duties and responsibilities.
5. Is responsible for supporting the ongoing safety program aboard the OSV by training members of the engineering department in the wearing of protective clothing and their duties during emergencies; and stresses the use of common sense and the need for alertness while carrying out their assignments.

TABLE FIVE

TYPICAL ACTIVITIES AND RESPONSIBILITIES OF AN OILER/ASSISTANT ENGINEER (AE)

Marine Functions

1. Stands engine room watches.
2. Operates and monitors machinery and engineering equipment. (This includes the prime movers, generators, steering equipment, ballasting/deballasting equipment, service pumps, compressors, ventilation systems, alarms, air conditioning, etc.)
3. Assists the chief engineer in performing routine and preventive maintenance.
4. Assists the chief engineer in troubleshooting equipment.
5. Assists the chief engineer in repairing equipment.
6. Is responsible for the cleaning and maintenance of the engineering spaces as directed.
7. Makes himself available to the chief engineer to perform additional duties as assigned.
8. Is responsible for promptly reporting the existence of potentially hazardous conditions and to cause or effect the commencement of the proper remedial actions to correct the situation.

Cargo Handling and Special Operations Functions

1. Assumes the duties and responsibilities of the chief engineer when relieving him of bulk liquid or solid transfer operations.
2. Assists in mooring the OSV to the rig.
3. Assists in passing hoses to/from the rigs, connecting hoses to the manifolds and in stowing the hoses at the completion of the transfer.
4. Assists the chief engineer in loading fuel, water and other cargoes as assigned. (This includes, but is not limited to, sounding tanks, cleaning up spills, setting up portable containment, reading meters, lining up systems, etc.)

Emergency Response Functions

1. Performs all assigned duties as a member of the emergency squad.
2. Is responsible for being thoroughly familiar with the assigned duties for drills and emergencies, in accordance with the station bill.
3. Provides first aid to injured personnel using own experience and directions from the master.
4. Promptly reports to the master or mate the existence of any personal medical problem or injury.

Supervisory Functions

1. Is responsible for obtaining the training and experience necessary to fill the billet he is employed for.
2. Is responsible for maintaining his personal hygiene, including clothing and keeping his quarters in a clean and sanitary condition.
3. Assists in the maintenance of proper order and discipline of the OSV.

TABLE SIX

TYPICAL ACTIVITIES AND RESPONSIBILITIES OF A DECKHAND

Marine Functions

1. Performs maintenance and repair work as assigned in a seamanlike manner.
2. Is responsible for carrying out vessel and equipment cleaning, maintenance and painting duties as directed.
3. Performs mooring and anchoring assignments in a safe manner.
4. Stands assigned watches (i.e., lookout, security, radio, anchor, etc.) in an alert manner.
5. Is responsible for promptly reporting the existence of all potentially hazardous conditions and to cause or effect the commencement of the proper remedial actions to correct the situation.
6. Makes himself available to the master and the mate to perform any additional duties assigned.

Cargo Handling and Special Operations Functions

1. Assists in the loading, unloading, discharging or receipt of any and all equipment, supplies and cargo as directed by the mate.
2. Rigs the vessel towing gear under the direct supervision of the mate.
3. Performs anchor handling duties if an anchoring handling crew is not aboard.
4. Handles the hoses for the chief engineer as directed by the master or the mate.

Emergency Response Functions

1. Performs all assigned duties as a member of the emergency squad.
2. Is responsible for being thoroughly familiar with his assigned duties for drills and emergencies in accordance with the station bill.
3. Provides first aid to injured personnel using his own experience and directions from the master.
4. Promptly reports to the master or the mate the existence of any personal medical problem or injury.

Supervisory Functions

1. Is responsible for obtaining the training and experience necessary to fill the billet in which he is employed.
2. Is responsible for maintaining his personal hygiene, including clothing and keeping his quarters in a clean and sanitary condition.
3. Assists in the maintenance of proper order and discipline on the OSV.

FIGURE 14

SUMMARY OF DUTIES AND RESPONSIBILITIES DURING EMERGENCIES

EVOLUTION / POSITION	FIRE	COLLISION, GROUNDING AND FLOODING	ABANDON SHIP	MAN OVERBOARD	HEAVY WEATHER
MASTER	On Bridge Sound Alarm Maneuver Vessel Direct Operations Request Additional Assistance	On Bridge Sound Alarm Maneuver Vessel Direct Operations Request Additional Assistance	On Bridge Don Life Jacket Sound Alarm Maneuver Vessel Direct Operations Send A "Mayday" Man Raft Number 1	On Bridge Sound Alarm Maneuver Vessel Direct Operations	On Bridge Pass The Word Direct Operations
MATE	At The Scene In Charge Of Emergency Squad Provide Fire Extinguisher	At The Scene In Charge Of Emergency Squad	Don Life Jacket Muster Crew Direct Launching Of Life Ratts Provide Logs Man Raft Number 2	In Charge Of Recovery Maneuver Vessel If On Watch	Supervise Securing Of Vessel, Gear & Cargo On Deck
CHIEF ENGINEER	In The Engineer Room Start Fire & Bilg Pumps Close Watertight Doors, Hatches, & Vents Secure Blowers Operate Fixed CO2 Secure Power	Start Pumps Close Watertight Doors, Hatches & Vents Direct Emergency Repairs	Don Life Jacket Secure Engine Room Provide Engineering Logs Man Life Raft Number 2	Assist Mate On Work Deck	Supervise Securing Of Engineering Spaces. Secure Watertight Doors, Hatches & Vents
OILER	Assist In Closing Watertight Doors, Hatches, And Vents Member Of The Emergency Squad Assist With The Hoses Don SCBA (if applicable)	Assist In Closing Watertight Doors, Hatches, And Vents Assist Chief Engineer	Don Life Jacket Secure Engine Room Provide Engineering Logs Man Life Raft Number 1	Assist Mate On Work Deck Act As Lookout, Keeping Man In Sight	Assist Chief Engineer
ABLE SEAMAN	Member Of The Emergency Squad Don SCBA (if applicable)	Member Of The Emergency Squad	Don Life Jacket Assist In Launching Rafts Assist As Directed Man Life Raft Number 1	Assist Mate On Work Deck Act As Lookout, Keeping Man In Sight	Assist Mate
ORDINARY SEAMAN	Member Of The Emergency Squad Lead Out Fire Hose Provide Fire Extinguisher	Member Of The Emergency Squad	Don Life Jacket Assist In Launching Life Rafts Assist As Directed Man Life Raft Number 2	Assist Mate On Work Deck Act As A Lookout, Keeping Man In Sight	Assist Mate
COOK	Arouse Crew And Assemble Passengers Secure Galley And Air Conditioners	Arouse The Crew Assist As Directed	Don Life Jacket Arouse The Crew Provide Food, Water & Blankets Assemble Passengers At The Life Raft Stations Assist As Directed Man Life Raft Number 1	Provide Coffee, Blankets & First Aid Kit Arouse The Crew Act As A Lookout Assist As Directed	Secure Galley And Crew Quarters Assist As Directed

V. CURRENT PRACTICES IN PERSONNEL SELECTION AND TRAINING

This study was in part designed to assist the Coast Guard in developing experience and training levels necessary to avoid casualties. It is not within the scope of this study to determine the experience and training levels necessary for efficient OSV operation, although the information provided in the task analysis may be used to this end. Three kinds of information were sought in the course of the study. First, information was sought on the work environment, i.e., OSV design and equipment, organization and operations. Second, information about the tasks performed by OSV crew members was detailed, along with the skills and knowledge required to complete these tasks. And finally, the methods used by operating companies to assure themselves of competent personnel were explored. This section of the report presents the information obtained in the last of these categories.

An informal survey of the current practices and trends in selection and training of OSV personnel was performed to determine (a) whether the present system appears to attend adequately to marine safety standards and (b) how any gaps might be closed effectively and as conveniently as possible for all concerned. It was believed that, should new personnel qualification requirements be needed, they should be designed to fit within the existing system of selection and training of personnel as smoothly as possible, so as not to cause disruption and place unnecessary barriers between competent personnel in their present jobs or job opportunities. In addition, any requirements should be designed so as to avoid an unworkable oversight and enforcement burden.

We could not within the scope of this study, take a statistical approach to personnel selection and training. For example, we could not document the years of work in various positions and the training experiences of samples of personnel. Information was obtained more informally, in the following ways:

1. Discussions with operations and personnel managers during field visits and by telephone.

2. Questions asked of on board personnel working in all positions during the visits to OSVs.

3. A review of the training materials and operations manuals of individual companies.

4. A review of Marad's "Workforce Supply and Demand Study, 1979-1988 For The Oil And Gas Exploration Support Craft Industry".

5. A review of current licensing requirements.

The information from those sources is brought together here in a generally applicable description of personnel practices. It is believed that this material represents the typical with good fidelity. However, it should be noted that personnel practices are not standardized industry wide. Undoubtedly, each company, if asked to detail their personnel selection and training practices, would qualify some of the statements made here.

SELECTION PRACTICES

A review of the task analysis results in Appendix (C) demonstrates that experience in other segments of the marine industry may not in and of itself prepare people for work on an OSV. A person who has had extensive boat handling experience will be preferred over those from other areas of the marine industry. The industry has attempted to recruit personnel from all segments of the maritime industry but has had until recently only limited success in this area. Recent downturns in other segments of the marine industry have reversed this trend of limited success to some degree. How long this situation will exist is uncertain. Engineers attracted from outside the mineral and oil industries, although qualified, do not generally remain in the industry due to the rigors of the work and the low wages. For these reasons, the mineral and oil industries have historically been one in which people work up from the bottom.

This is not however, just a historical circumstance, but a necessity. Experience at sea is required to obtain the knowledge and skills necessary to perform the tasks a person will be required to do. This has been recognized throughout the years and is reflected in the licensing structure. Not only is the job experience and training necessary for effective task performance, it is necessary for the individual and the company to determine whether he can adapt to the working conditions, which include strenuous physical exertion, exposure to the environment, confinement within relatively small, isolated quarters, separation from family and outside friends, and a society that is preoccupied with the mission and does not easily accommodate the pursuit of other interests while aboard, or due to rotation schedules. It would appear difficult for people who do not want to invest a great deal of themselves in their work to remain in a seagoing industry. It takes a special kind of person to fit in; and on an OSV where personnel are often dependent on each other for their physical safety, fitting in is even more important than in other small, closed work systems.

In general, the selection and promotion system is highly informal and personal, yet structured, because of licensing requirements. Operating companies are small or their operations management is decentralized. Port captains and port engineers, who do not remain aboard, work closely with the masters, the mates and the engineers, and typically know every crew member aboard. On board supervision is personal and close. Supervisors work side by side with their subordinates. There are no jobs on the OSV, except for the cook, in which personnel remain removed from operations. Thus on board supervisors are intimately familiar with personnel capabilities and are in a position to provide personal instruction in task performance.

Hiring and promotions are handled by the home office. Port captains, port engineers and masters have strong input into promotions, but no crew member can be upgraded without the appropriate license. The promotions are very closely linked to the license requirements.

This is not an industry that receives an abundance of job applicants. Thus, one of the primary purposes of hiring prerequisites, to provide impartial criteria for turning away applicants is irrelevant, and nothing is usually required beyond holding the applicable licenses. The companies must compete in the same workforce pool as the offshore oil and the construction industries. Most potential applicants are attracted to these other industies or leave after

serving one or two hitches aboard an OSV. Reasons for this were documented in 1979 by Marad's work force study and confirmed again by our own observations and in discussions with personnel managers and OSV crew members. For these reasons the industry is faced with a continuous need for personnel above their ability to recruit and those confirmed by this study are listed below:

1. A lack of interest in a seafaring career.

2. The time requirements to upgrade and the exam which the Coast Guard administers relates more to traditional deep sea knowledge than those required for mineral and oil vessels.

3. The long hours and the sometimes hazardous working conditions found aboard OSVs.

4. The absence of, in most cases, a formal training program for entry level workers, and the almost total reliance upon on-the-job training.

5. The high rate of turnover and the skilled workforce shortage which keeps much of the workforce inexperienced, since proper training and supervision of new unskilled entrants is often lacking.

6. The relatively low wages (somewhere between $45 and $60 per day for entry level personnel for a twelve hour or more workday) and the inconvenience of being aboard a vessel for two weeks.

7. The availability of shoreside construction and shipyard positions with similiar wage structures, but which require less on-the-job time.

8. The lack of esteem which the regional coastwise populace has toward jobs and the people aboard these vessels.

9. The educational and/or language handicaps of many of the new entrants (and skilled workers) prevent them from taking or passing U. S. Coast Guard exams.

Tasks are, by and large, tangible and their outcomes immediately observable. Each position involves a well-structured set of tasks, so that the competency can be determined by direct observation and questioning. No person is given responsibility without a trial period for orientation and observation. It appears that in most cases, written testing alone is not an adequate means of assessing competency, since most of the tasks involve performance of physical actions. The task analysis data make this evident. Written tests are used to measure certain kinds of job knowledge during the licensing exams. However, it should be remembered that many OSV personnel do not have an academic orientation and may not do well on written tests despite excellent competency in the performance of their work.

The offshore support industry is a relatively small one with substantial contact between companies, so that when personnel make inter-company moves their job performance capabilities may be checked out on a personal basis and the observation period may be dispensed with.

EXAMPLES OF OSV PERSONNEL ADVANCEMENT

Typical advancement paths, both historical and those of the present day, are depicted in Figures 15 and 16. Some items are of particular note. These include:

1. The amount of time to make master takes one year less when the able seaman switches to ocean operator after two years, bypassing the mate's position. This has two effects. First, ocean operators are licensed without assured time behind the wheel, i.e., less experience in boat handling. Or more likely, the person will not be hired as a captain without an observation period. Second, this accelerated path to master (M&O), creates economic pressures that result in insufficient mates to man the vessels.

2. The cook can enter into a vessel control position without ever having served in the deck department or in the wheelhouse. It is realized that the cook, at times, assists on deck, in mooring the OSV and has some emergency response functions. This exposure is limited, and the cook spends most of his time in the galley. There are cooks that are an integral part of the deck department who make a concerted effort to get on deck and into the wheelhouse, but this is the exception rather than the rule.

3. It takes one more year to make chief engineer than it does to make master via the ocean operator route.

4. One year as a licensed assistant engineer is required for a chief engineer's license. OSVs do not have this position except in a few isolated cases or during delivery trips. This forces individuals to serve in an unlicensed chief engineer position or to lie about their service to the Coast Guard.

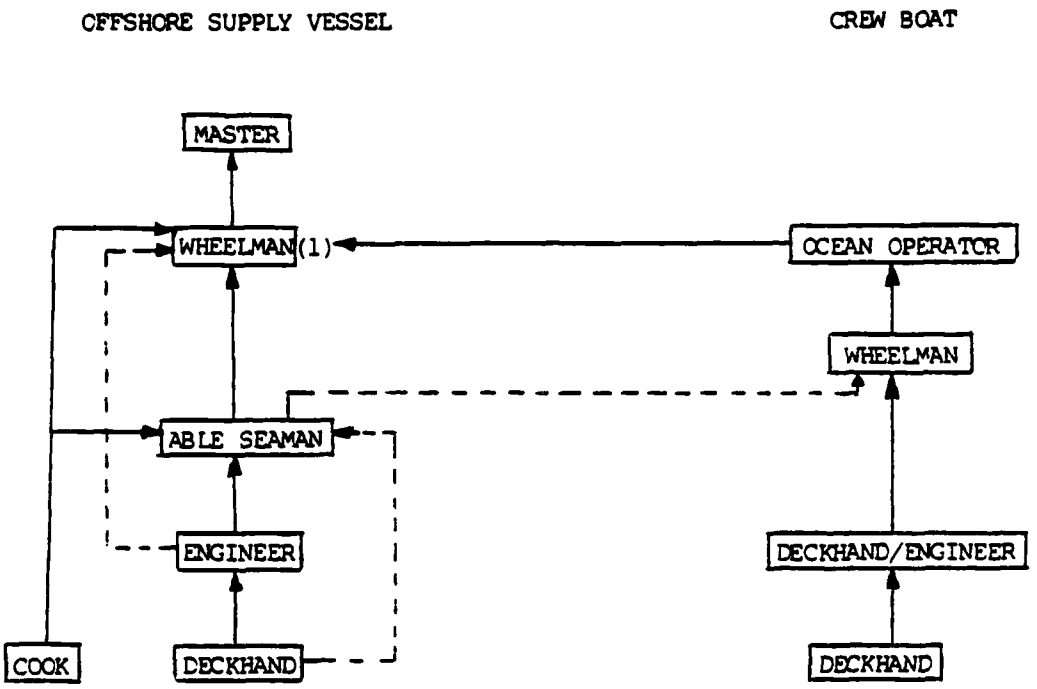
5. The master need not progress through the engineer's position any more, as the companies would prefer. The time spent in the engine room just extends the time needed to make master.

CURRENT PRACTICES IN PERSONNEL TRAINING

Companies have begun to admit their inability to recruit trained personnel and have realized that there is a need for in-house training. Training and experience are highly interrelated in the vessel operations portion of the offshore support industry (actually all seagoing trades) and training is largely provided on-the-job. The offshore support industry does not have, with very few exceptions, academies or other formalized vocational courses to provide skilled personnel.

The training system might be characterized as an informal apprenticeship system, but the imposed licensing system creates a certain amount of formality. We say informal, because no one is called, or at times, even considered, an apprentice. There are no set time periods beyond the minimums imposed by the licensing system. Personnel are not generally placed in a training type position until the required license is obtained. This is especially true of the mate position. Most mates do not receive ship handling experience beyond serving as the Officer

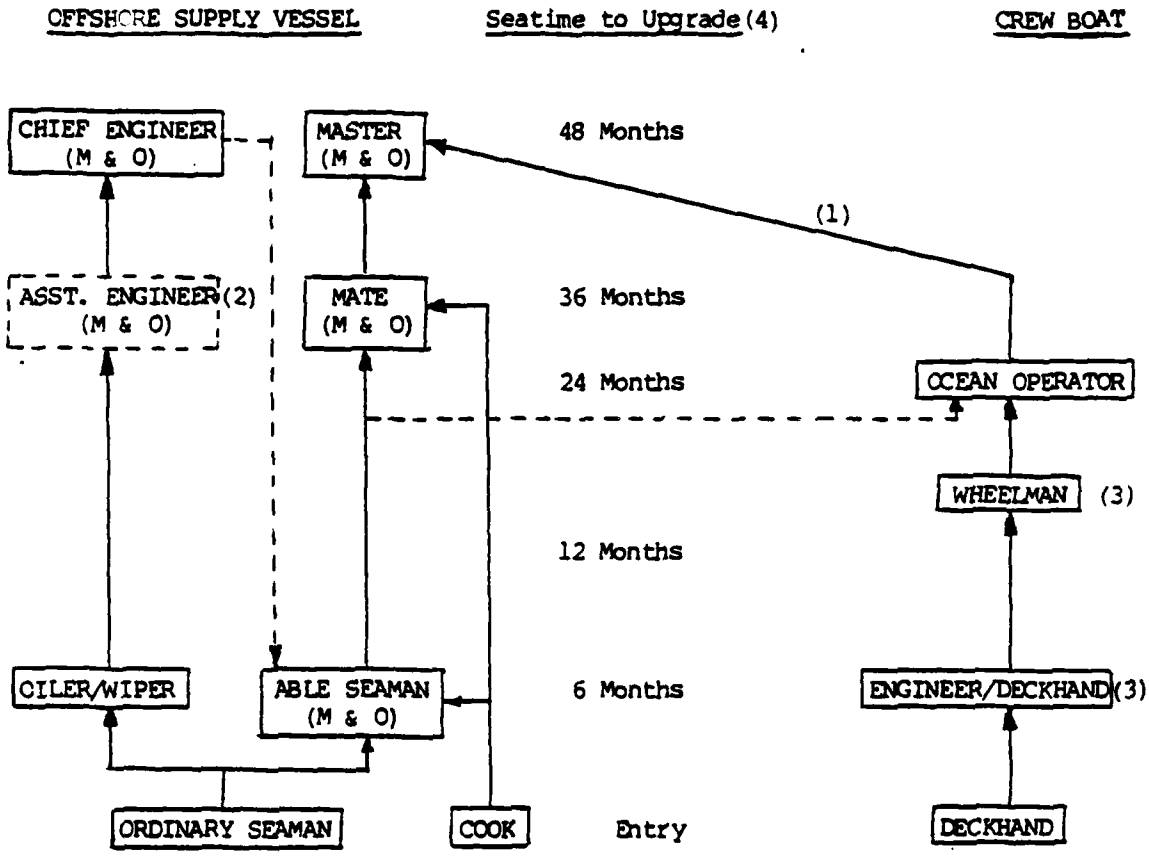
FIGURE 15



Note 1: Any step may be by-passed except wheelman. Arrows to the side denote alternatives.

HISTORICAL PATH OF ADVANCEMENT
(Pre 1973)

FIGURE 16



Note 1: In 12 additional months an Ocean Operator is eligible for Master (M & O). Total time to Master (M & O) by this path is 36 months.

Note 2: A license is required, but a very limited number of positions within the industry are available.

Note 3: The time will vary depending on the individual and the company.

Note 4: If a person works a 12 hour shift, that person receives 1 1/2 days of seatime credit for each day aboard. If a person works an 8 hour shift, that person receives 1 day of seatime credit. Since most M & O mariners work a 7 day on and 7 day off schedule with a 12 hour day, actual calendar time to earn the required seatime, may be 1.33 times the amounts shown on the diagram.

TYPICAL PRESENT PATH OF ADVANCEMENT

of the Deck in non-restricted waters and in areas with a low traffic density. Generally, mates do not handle the vessel when berthing/unberthing, in restricted waterways, alongside rigs, or during special operations. Many times they may not even be in the wheelhouse during these maneuvers. Masters seem to be reluctant to provide ship handling experience to the mate. A reason for this is that the master may be unsure of the mate's ability and due to his (the master's) overall responsibility for the OSV, the master will not allow the mate to maneuver the vessel except in open waters. During discussions with masters other reasons were usually given. The younger, often better educated, mate is perceived as a threat to the master's job, once the mate develops the necessary ship handling skills. Some companies seem to be working with their masters to increase their sensitivity to the training needs of the crews. The masters may be unsure of their own ship handling ability and to allow the mate to control the vessel might put them in an uncomfortable position.

Licensing exams are designed to test knowledge requirements, but do not, in and of themselves, guarantee skill mastery. Conversely, experience and skill mastery, does not always provide the knowledge the applicant needs to pass the exam because of educational and/or language barriers. The industry recognizes this and changes in status (advancement) do not coincide directly with an upgrade in the license. In cases were the company feels an individual has the necessary skills, they will assist him in obtaining the required license. In most cases, this consists of sending the man to a license exam preparation course at the company's expense.

Table 7 gives a brief overview of the courses and/or schools used by OSV personnel for professional advancement.

TABLE SEVEN

OVERVIEW OF COURSES/SCHOOLS USED BY OSV PERSONNEL

BRIDGE CONTROL	Radar Observer Loran License Exam Preparation Marine Votech Programs Maritime Acadamies Gyro Compass
ENGINEER	Diesel Engine Repair And Maintenance License Exam Preparation Marine Votech Programs Engine Manufacturers' Schools
EMERGENCY	Liboatman Training Fire Fighting School
ABLE SEAMAN	AB Exam Preparation Marine Votech Programs

VI. CONCLUSIONS

There were four basic issues to be dealt with in drawing conclusions from the mass of information compiled during this study:

1. What are the critical functions aboard OSVs with respect to marine safety?

2. Is the typical allocation of personnel and their responsibilities adequate for assuring that marine safety requirements will be met?

3. Do the existing practices provide reasonable assurance that personnel have the skills and knowledge they need to meet the marine safety requirements in OSV operations?

4. Does the existing licensing structure provide for adequately qualified personnel within the OSV organization?

The conclusions reached and the reasons for them are presented below. These conclusions shaped the recommendations made in this report.

CRITICAL FUNCTIONS WITH RESPECT TO MARINE SAFETY

The critical functions were judged by the potential for deficiencies in task performance to result in the loss of the vessel and damage to the cargo, and sensitivity to the effects of the variable environmental conditions. Critical functions were identified as:

1. navigation between the berth and the rig/platform,

2. maneuvering around rigs and berths,

3. emergency response, and

4. vessel loading.

The casualty history underlies these choices of critical functions. Table One shows that approximately 50% of all reported casualties that occurred from FY1976-1979 resulted from errors in navigation or equipment failures that affected the safe navigation of the OSV. Although not presented in the casualty data in Table One, most of these casualties were caused by errors in navigation. Approximately 25% of the reported casualties occurred in maneuvering situations. Approximately 25% of the casualties clearly called for emergency response by the crew. This does not mean that only 25% of the reported casualties required emergency response, but that the serious nature of these casualties demanded it. All casualties have a potential for requiring emergency response.

The casulty data does not clearly indicate that vessel loading is critical to vessel safety. This function was chosen because it was routinely identified by vessel personnel and port captains (and confirmed by the analysis) as being critical to the safety of the OSV. Vessel loading is generally not understood by shore-based personnel who, ironically, have the most control over vessel loading, ie., dispatchers, terminal operators and tool pushers.

Critical Tasks

As the task analysis proceeded, a pattern among the statements related to the type of action being performed emerged. The statements appear to fall into three categories. The first category deals with actions involving information gathering, such as monitoring communications, reading dials, etc. The second category is related to mental, decision-making tasks. The third category covers output-oriented tasks in which actions are executed, e.g., turns helm, adjusts speed, etc. This flow continuously repeats itself as additional information becomes available (either from new data inputs or as a result of feedback from "output" actions). Also, under actual operating conditions, many of these functions occur simultaneously. The task analysis indicated that many of the input and output tasks are simple. They must, however, be done to 100% accuracy. The rigors of such a work environment raises issues of task overload (underload) and ultimately touches on the issues of stress, boredom, fatigue, overload, etc. This all serves to reduce the effectiveness of those tasks that will have the most effect on the critical functions, e.g., the decision making, data synthesis tasks, etc.

With the critical tasks being unseen, it is difficult to write any kind of operating procedures or to train personnel in the important aspects of the job. The best one can do is write procedures at a trivial level, e.g., take a fix every five minutes, and/or train people in the relatively simple, highly visible tasks. After that, one must hope that the man gains "experience," "know-how," or a "feel" for the job, i.e., learns the invisible, mental tasks, that will make him a good mariner. Needless to say, this leads to a major problem when addressing the topic of safety, since it is difficult to "make safer" or test tasks which are not visible.

ALLOCATION OF PERSONNEL AND THEIR RESPONSIBILITIES

Manning Levels

From the task analysis, we have concluded that, in general, the allocation of personnel aboard OSVs ensure that a safe operation can be conducted. The nature of the operation allows for minimal manning levels. There are four critical aspects of the operation that must be present to make minimal manning and skill levels viable. These are:

1. the massive level of maintenance and repair support from shore based personnel,

2. the transportation mechanism that moves this support to the vessel rapidly,

3. short trips that keep the vessels close to the support staging areas and minimize the detrimental effects of breakdowns, and

4. an automation level that allows for unattended engine rooms.

A reduction in any one of these areas will necessitate an increase in manning and experience levels. Operating companies recognize this. When the nature of their operations does not include all of the above aspects, they assign additional and more experienced personnel to their vessels.

During special operations the crew is supplemented with contract personnel such as during anchor handling operations. The industry is able to provide this additional manpower and expertise when required.

The use of specialists is fine, but they are on the OSV for relatively short periods of time and may never have been on the particular OSV before. Thus they may need both information and leadership assistance from an individual who knows the unique characteristics of the OSV and the capabilities of the regular personnel who may be called upon to assist in their specialized functions. Present manning levels reflect this need.

Allocation of Responsibilities

Responsiblities appear to be misallocated in two positions. The engineer in many cases is burdened with more tasks than can be performed. This is especially true when his cargo transfer duties increase because of frequent, very short trips which typically entail more pumping duties. The mate on the other hand is underutilized. He serves very little time on watch while underway. Maintenance of the vessel is his main responsibility at the dock, but this is limited by the vessel's schedule. Unlike the engineer, the mate's work increases when the trips are longer and less frequent. Since most of the trips are short and frequent, there appears to be room for a shift in responsibilities or additional help for the engineer.

PERSONNEL PRACTICES WITH RESPECT TO MARINE SAFETY

As stated in preceeding sections, the industry must train their own personnel. There appears to be some large deficiencies in this in-house training. It should be noted that training is provided largely on the job and on a tutorial basis to enable personnel to pass the license exams required by the Coast Guard. It cannot be assumed that training in seamanship, stability, navigation, seakeeping, interpretation of weather data and collision avoidance will be received on the job since the mentors may not have been trained in those areas. License exams attempt to ensure minimal knowledge levels, but some aspects of the job are not readily testable.

Mates do not receive the necessary ship handling experience to adequately train them for master. On the other hand, ocean operators do not receive the necessary knowledge of stability, cargo loading (especially liquid loading), or special operations. Licensed personnel from other industries are in the same situation. They will either have good ship handling skills, as in the case of personnel from the towing industry, or good knowledge of stability and cargo loading, such as a deep sea mate.

In general, interpretation of weather data and seakeeping and stability characteristics of an OSV are areas in which formal training appears to be insufficient and opportunities for on-the-job training uncertain, except perhaps when a master or a mate with deep sea experience is on board. Even in that case, depending on the degree to which the man has an active role in passing on this knowledge, there may be a need for additional training for other personnel to ensure an adequate on board capability to respond to emergency or potential emergency conditions that may affect the stability of the OSV.

Most entry level personnel have little or no sea experience. This presents a larger problem to the industry than it does to other segments of the maritime industry due to the small crew size. Entry level personnel must be brought up to speed quickly to maintain reasonable work levels for other members of the crew. The industry appears to be doing an adequate job of this. Some companies are even developing in-house training programs to bring new applicants up to a minimally acceptable level before assigning them to a vessel.

Training for emergency response is another area in which gaps were identified. These are in the areas of fire fighting, stability maintenance and damage control. Training for these and other types of emergencies could be improved by the creation of opportunities for hands-on response to these relatively rare events. Training in emergency response procedures is currently provided on board. This training includes presentations by on board supervisors and visiting safety officers, discussion and drills in which personnel go to their duty stations. Such exercises are helpful, but remote from what may be required in a real emergency. Few personnel get practice in combating a fire, in launching and boarding primary lifesaving equipment (e.g., a life raft or life float), in dealing with equipment failures, or in damage control procedures.

There are fire fighting schools available but according to the information gathered in this study, few if any operating companies make a practice of sending even the on board supervisors (masters, mates, engineers) to them. Also, companies do not send personnel to maritime damage control schools. The only people in the industry with hands-on training are those few who have crossed over from deep sea or former military service personnel.

Schools are used to prepare OSV personnel for the able seaman or lifeboatman exams. These schools are generally geared to teach the Coast Guard exams. The new M&O able seaman exam more closely relates to OSV operation than it has in the past and in time these schools will provide some of the necessary training to deckhands.

There has been a cry from the industry to allow engineering department time to be credited toward deck licenses. With the master having overall responsibility for the OSV, including the engine room, management feels that the master needs engine room experience to properly carry out this responsibility. Management would like the master to progress through the engine room to the bridge, without extending the required time to make the grade of master. Management preceives OSV organization as shown in Figure 12, as it was when they were at sea ten or fifteen years ago. In this organization the engineer served as relief for the master when the OSV was in open waters. Our analysis did not show this to be true today. The addition of the mate has divided the organization into two separate departments, small as they may be.

There is crossover between the departments, but this occurs with entry level tasks, e.g., deckhand/wiper level. The engineer rarely gets on the bridge and hence gains very little exposure to vessel control. Likewise, members of the deck department do little more in the engine room than provide a security watch and brute manpower.

Present practice with some companies is to record cook time on discharges as service on deck. Our analysis showed that, with rare exceptions, the cook does not get out of the galley and help on deck or on the bridge. This allows for

the time as cook on an OSV to be credited toward deck licenses and endorsements. There are cases where cooks have received licenses without ever serving on deck or in the wheelhouse. This is not acceptable from a marine safety standpoint.

CURRENT LICENSING PROBLEMS

Since OSVs must be manned with licensed and documented personnel, the licensing system is an integral part of the overall operation. In general, the licensing system provides qualified individuals for the mineral and oil industries. However, some fine tuning of the system could be accomplished. The following are some problems that were identified by our analysis.

As stated earlier, the critical tasks are largely unseen, decision making, mental tasks. The same problem that exists for the training of personnel and the writing of operating procedures exists for testing. The present license exams do not test these critical tasks, because it is difficult to test for tasks which are not visible. This assumes that the man has the "know-how" or "feel" for the job to make the correct decisions because of his experience, but it is not assured by the testing procedure. There is a need to alter the way the Coast Guard examines applicants.

Paths into and out of the mineral and oil industries need to be better defined and at a more realistic level. The mineral and oil industries, at the present time, are the only segment of the maritime industry that continue to expand. This has created job openings for skilled, licensed personnel beyond the industries' abilities to fill. Conversely, the declining nature of the rest of the maritime industry has produced a surplus of personnel whose training and experience are readily adaptable to the M&O segment. Changes in the future could reverse this situation. There needs to be a clearer crossover in regulation between the various segments of the maritime industry to allow skilled personnel to take advantage of employment opportunities without undue loss of service time. Crossover should be commensurate with the requirements of the jobs. This will allow for better utilization of skilled merchant mariners in a fluctuating maritime economy.

The present licensing system favors the ocean operator route to master causing a shortage of mates. This has both favorable and unfavorable training consequences. These were discussed earlier. Our study shows no reason why these two positions should not be equal in service time or why crossover should not be allowed both ways without endorsement of the license.

Although not specifically addressed in this study, crew boat licensing should be an integral portion of M&O licensing and be separated from 46 CFR, Subchapter T. The crew boat is a "vital" portion of M&O advancement and provides valuable experience not available elsewhere in the industry. The rigors of the service of crew boats is closer to the rigors of OSVs than they are to what 46 CFR, Subchapter T was written to meet, i.e., party fishing boats, small ferries, and day trippers.

Our analysis showed that the time to make chief engineer is excessive for the tasks required of him. Present industry pay scales, the volume of work and the time required to make chief engineer create pressures that discourage individuals from becoming engineers. There is a need to reduce engineers' experience time to be at least equal to that for the master. A further reduction of time may be feasable when the four critical aspects of minimal OSV manning stated above can be ensured by the nature of the operation. This is the case for OSVs in domestic operation off the contiguous United States.

One other problem was identified for the engineer. The present licensing system requires that a man serve one year as an assistant engineer to be eligible for chief engineer. This position rarely exists in the present manning structure for OSVs. Their needs to be a path to chief engineer without going through assistant engineer.

VII. RECOMMENDATIONS

It should be noted that some of the operating companies already fulfill the intent of some recommendations through existing policies. Unfortunately, it is not possible to acknowledge exemplary cases and propose requirements on a company-by company basis. In general, it is believed that the recommendations made should be recognized as pertinent and useful industry-wide.

There is a balance between pay scales, workload, training and the licensing structure. Many of the manning problems in this industry are caused by an imbalance of these four factors. All need to be altered to ease manning shortages. Changes to any one of the four will not solve the problems.

Our recommended changes are detailed below.

Training Recommendations

1. All companies should be engaged in developing independent study and on-the-job training aids and in promoting their use by OSV personnel. The task analysis data should be useful in rounding out on-the-job resources. A task-oriented presentation would appear to make the material easier for personnel to assimilate. The use of training videotapes and corresponding programmed instruction manuals would appear to be the best combination. Increased effort to educate supervisory personnel in how to help people learn and to create on board training opportunities without disrupting operations appears to be warranted.

2. Give the mate the opportunity to gain additional experience in ship handling. This can be accomplished with more time behind the wheel and by allowing a more direct crossover to other operations where this experience can be gained, e.g., crew boats and tug boats.

3. Give all deck department personnel more formal training in the interpretation of weather, seakeeping and stability.

4. Provide additional opportunities for the formal training of entry level personnel on a task and safety orientation basis.

5. Train dispatchers, terminal operators and tool pushers in vessel loading and stability. Masters need to take a more active role in cargo operations.

6. Provide hands-on fire fighting and damage control training to <u>all</u> personnel, including the proper use of a breathing apparatus.

7. Provide hands-on training and instruction to <u>all</u> personnel in the operation and use of primary life saving equipment, i.e., life rafts.

Organization Recommendations

8. Many of the task statements call for the performance to company standards or policies. These standards and policies do not exist in all companies. Companies need to provide more specific directions to vessel crews.

9. Lines of authority in the deck department are not clear. Crews should make more efforts to include the mate in the chain-of-command.

Manning Recommendations

10. Add an oiler to assist the chief engineer. We feel additional help for the chief engineer is necessary in light of the work day laws and from the task analysis. This was chosen over a shift of his pumping responsibilities to the mate. Such a shift would only cause more training problems for the mate.

Licensing Recommendations

11. Initial time on board is merely orientation to a sea going life. The work and experience gained in this orientation period is very similiar from department to department. This should be recognized by the licensing structure by allowing a certain amount of time at sea to be applied to any original license or document endorsement. We recommend that six months in any department be transferable from department to department. When required time is one year or less, at least 50% of the time must be in the applicable department.

12. Time served as a cook should not be allowed to apply toward deck licenses. Masters and companies should accurately reflect service in records and on discharges. However, we feel it would be appropriate to accept time as a cook for the able seaman or oiler endorsement as stated in recommendation 11.

13. Remove crew boat inspection and licensing from CFR 46, Subchapter T, and place it in with the mineral and oil vessels. Those operations that do not contain the four critical functions identified during this study should not be placed within the purview of M&O inspection and manning.

14. Require equal service time for mates (M&O) and ocean operators. Either person should be able to serve in the capacity of the other without an endorsement to the license.

15. Clearly define the paths between segments of the marine industry and set crossover at more realistic levels.

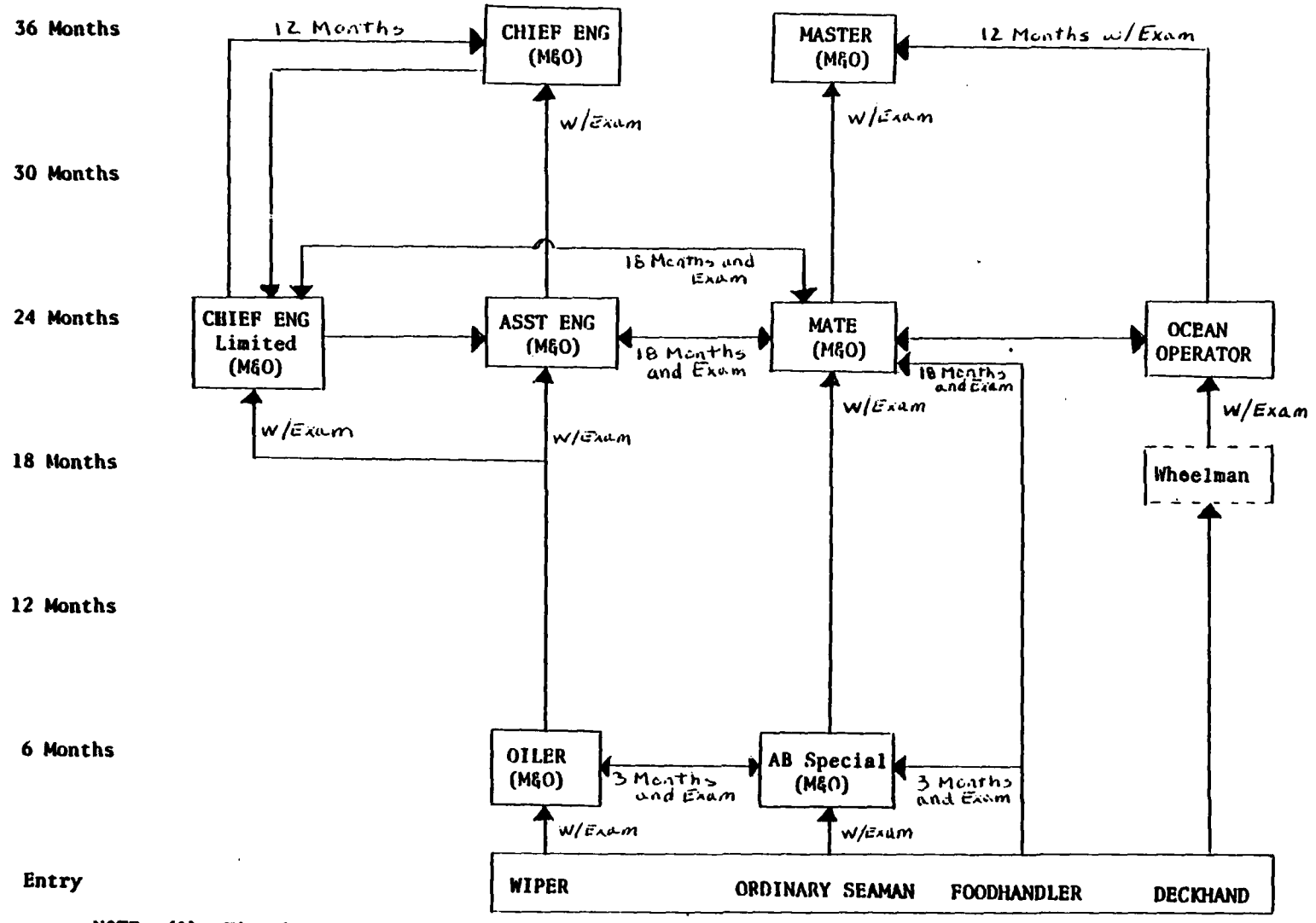
16. Provide a path to chief engineer (M&O) without required time as a licensed assistant engineer.

17. As stated in the conclusions, time to make chief engineer (M&O) is excessive for the tasks required. Create a chief engineer (M&O) license with two years required service time limited such that the four critical aspects of minimal OSV manning can be reasonably assured.

18. To provide equity between the deck and engineering licenses and to make the service time commensurate with the tasks required, reduce the service time to chief engineer (M&O) to three years.

Recommended licensing changes and career paths are displayed in Figures 17-19.

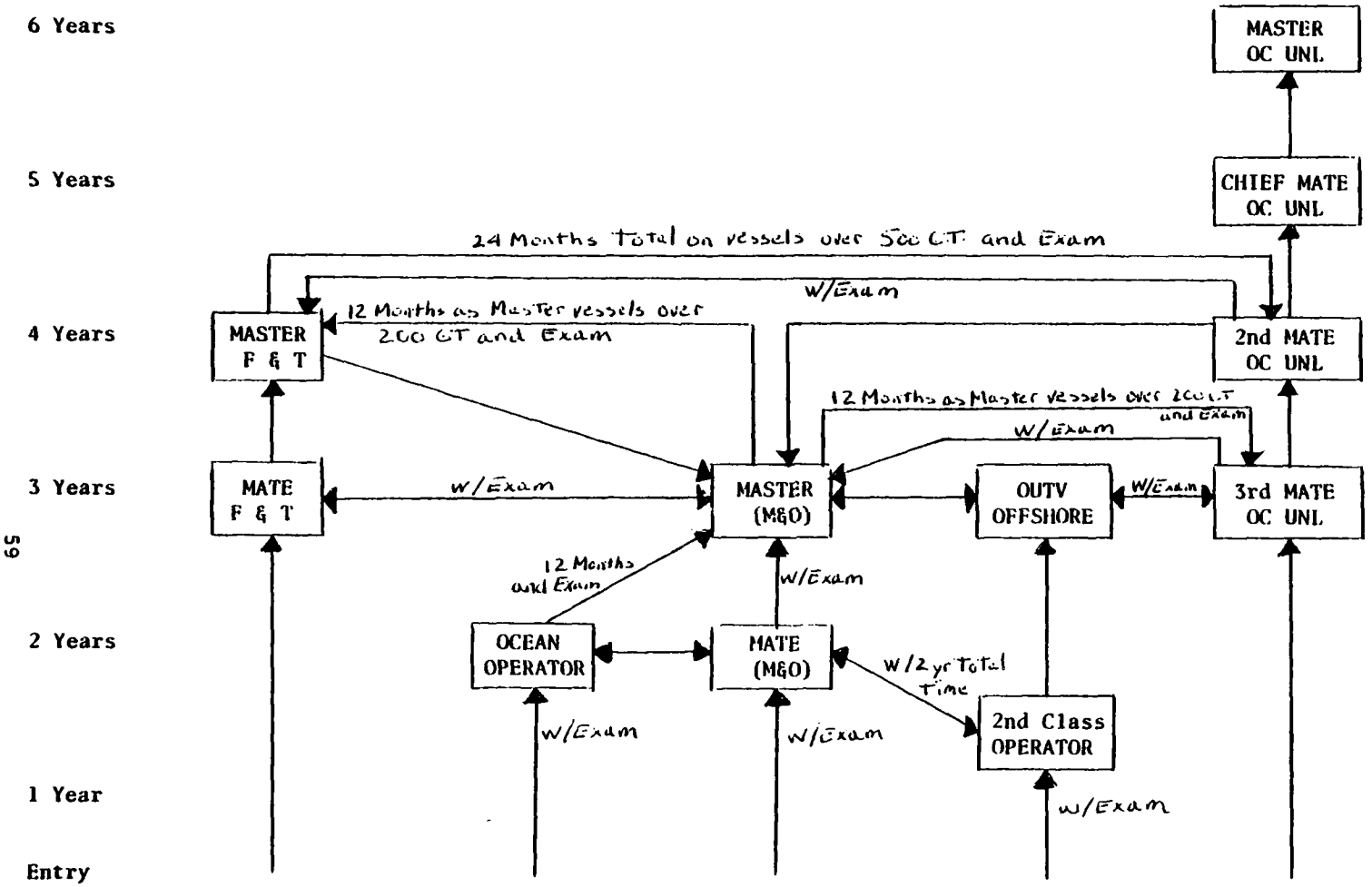
FIGURE 17



NOTE: (1) Time below line indicates time in department of license/endorsement applied for.
(2) Time above line indicates time at present level.

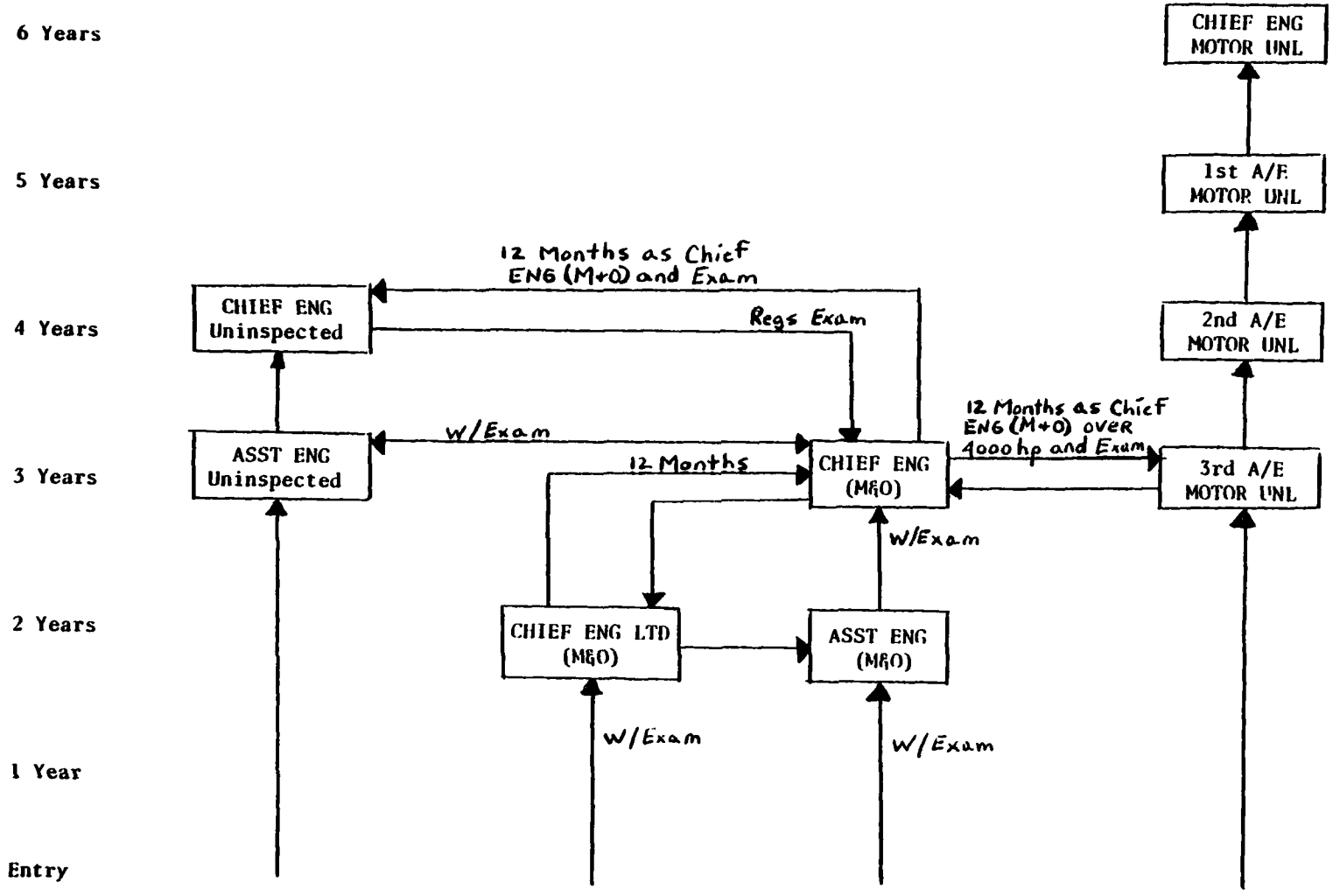
RECOMMENDED M & O LICENSE STRUCTURE

FIGURE 18



RECOMMENDED DECK LICENSE STRUCTURE

FIGURE 19



RECOMMENDED ENGINEER LICENSES

APPENDIX A

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BIBLIOGRAPHY

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APPENDIX B

FUNCTIONAL JOB ANALYSIS (FJA) METHOD

FUNCTIONAL JOB ANALYSIS (FJA) SCALES

* EXCERPTED AND MODIFIED FROM THE ORI/COAST GUARD MODU STUDY

FUNCTIONAL JOB ANALYSIS (FJA)

BACKGROUND

This section on FJA procedures is excerpted from ORI Technical Report 1012, Handbook for the Development of Qualifications for Personnel in New Technology Systems, February 1976. It describes the methods and guidelines used to construct FJA task statements. The content of the material used in some of the example statements relates to functions of cargo handling personnel on Liquid Natural Gas (LNG) tankers.

FJA TASK STATEMENT

The FJA task statement format is illustrated in Figure D.1. As shown in this figure through the means of circled numbers, a complete task statement has nine parts:

1. Goal to which the task contributes.

2. Objective to which the task contributes.

3. A description of the task, written according to a prescribed format to include a standard set of content elements.

4. Measures of the level of the involvement with data, people, and things, i.e., the complexity of the worker's action with respect to data, people, and things. Complexity is determined from scaled descriptions that have numerical ratings assigned to them. (See scales).

5. Measures of the orientation of the worker's function in the task, i.e., extent to which it involves the worker with data, people, and things. The extent of involvement of each kind is expressed as a percentage.

TASK CODE: CO-II.A.1									
WORKER FUNCTION LEVEL AND ORIENTATION						⑥ WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
④ DATA	⑤ %	④ PEOPLE	⑤ %	④ THINGS	⑤ %		⑦ REASONING	⑦ MATH	⑦ LANGUAGE
3B	65	2	5	1A	30	3	3	1	2

TASK CODE: CO-II.A.1	GOAL: To discharge LNG safely. ①
OBJECTIVE: ② To place the vessel in a condition suitable for the discharging of LNG.	
TASK: ③ Periodically, visually inspect and check the mooring system in order to ensure that the vessel is moored in accordance with the mooring arrangement diagrams for the specific loading terminal, using your own judgment as to anticipated wind and sea conditions and known strength and conditions of the mooring lines.	

⑧ PERFORMANCE STANDARDS	⑨ TRAINING CONTENT
Descriptive: • Mooring lines are taut without any line being over-stressed. • "Badly worn" mooring lines are not used. • Safety considerations are maximized. Numerical: • In 100% of the cases, the vessel is moored in accordance with the mooring arrangement diagram. • The mooring lines are inspected at least once every three (3) hours. • In 100% of the cases, the vessel's mooring system withstands forces caused by sudden and/or extreme changes in wind/sea conditions.	Functional: • How to evaluate by experience, weather report, or barometric pressure, the forces on a moored ship with respect to wind/sea conditions. • How to compensate for "aged" or "slightly worn" mooring lines. • How to recognize the different types of mooring lines as well as their individual capabilities and limitations. • How to read mooring arrangement diagrams. Specific: • Knowledge of the vessel's mooring lines. • Knowledge of the specific mooring arrangement diagram for specific loading terminal.

FIGURE D.1. EXAMPLE OF AN FJA TASK STATEMENT

6. An indicator of the level of complexity of the instructions the worker must follow. Level of instructions is also given a numerical rating according to a complexity scale. (See scales).

7. Indicators of the general education development (GED) required to do the task, i.e., the level of language, math, and reasoning skills. These levels are also given numerical ratings according to complexity scales. (See scales).

8. Performance standards-the criteria by which performance will be evaluated.

9. Training content-what the worker has to know and be trained to do to perform the task to the standards indicated.

The terms "task statement" and "task statement form" refer to all nine parts or their documentation. "Task description" is the verbal statement of the task only. Figure D.1 shows how a completed task statement looks.

The development of each part is initiated in the order in which it has been listed. However, feedback is a basic part of the FJA process. As the analyst considers task orientation, he may realize that his writeup of the task description emphasizes the wrong orientation. The task may be primarily an interaction with people but, because filling out a form is involved, the analyst may have written the task so that it sounds like a data oriented task. The scale ratings for the complexity of task content, instructions, and language/reasoning/math skills similarly provide checks on the accuracy of the task description.

The goals and objectives will have already been defined in the process of delineating system functions. Those goals and objectives are recorded on the task statement forms as appropriate.

Tasks are identified for each objective. The analyst now uses the structure and language prescribed by FJA to write a complete description of each task. The analysis goes on to complete the other parts of the task statement in turn, using each as a check on the veracity of the preceding parts. When a task statement is well done, the parts complement each other-they make a sensible and logical whole.

It is recommended that task statements be prepared in sets by objective. It is also recommended that a complete statement be prepared for each task before another statement is begun.

The processes of describing the tasks and completing the remainder of the task statement form are explained individually in the following paragraphs. It should be remembered that in the actual performance of this process, the analyst will freely look back to check and adjust preceding parts.

Task Description

The quality of the task statement as a whole flows from the quality of the task description. Consistency, clarity and comparability of task descriptions result from:

- Controlled content elements
- Controlled language to describe content elements.

The FJA procedure provides for both. The developers of FJA have this to say about required content elements: "The two most important elements of a task statement are:

1. The action the worker is expected to perform.
   Example: Asks questions, listens to responses, and writes answers on standard forms.

2. The result expected of the worker action.
   Example: To record basic identifying information such as name, address, etc."

"The worker action(s) phrase in the task description represents the worker's activity as concretely as possible. The result phrase describes explicitly what his action is expected to produce or what gets done, which identifies the worker's concrete contribution to a process or work system objective. Although action and result are the two most critical elements in a task description, and can be thought of as the skeleton of a task, the description must include additional items of information to communicate clearly and consistently." (Fine and Wiley, 1971)

Figure D.2 is a checklist excerpted from Fine and Wiley (1971) that states all of the information needed in a task description.

Use of a model sentence such as that shown in Figure D.3 will ensure that all necessary items of information are included.

The use of language is also important in FJA. Writing task descriptions requires practice in the precise use of terms. The reader of a task should be able to visualize the task clearly.

The choice of action words in a task description affects its clarity the most. There is a tendency to use end result verbs instead of explicit action verbs. Whenever an end result verb is used, the worker action is obscured. For example:

- (Worker), <u>trim</u> the vessel in order to position it in the trim condition for LNG cargo loading operations...

1. Who? (Subject)

   The subject of a task description is understood to be simply "worker." The description contains no subject since it is always assumed to be "worker."

2. Performs what action? (Action Verb and Object)

   A task description requires a concrete, explicit action verb. Verbs which point to a process (such as develops, prepares, interviews counsels, evaluates and assesses) should be avoided or used only to designate broad processes, methods, or techniques which are then broken down into explicit, discrete action verbs.

3. To accomplish what immediate results?

   The purpose of the action performed must be explicit so that (1) its relation to a system objective is clear and (2) performance standards for the worker can be set.

   Result: To determine whether they have been securely joined, for transfer of LNG from terminal to ship tanks. The objective to which this result is directed is: Safe loading of LNG within scheduled time.

4. With what tools, equipment, or work aids?

   A task description should identify the tangible instrumentation a worker uses as he performs a task: for example, telephone, pencil/paper, checklists, written guides, wrench, etc.

   Tools: In this example, the worker uses no tools.

5. Upon what instructions?

   A task description should reflect the nature and source of instructions the worker receives. It should indicate what in the task is prescribed by a superior and what is left to the worker's discretion or choice.

   Prescribed content: According to equipment specifications for transfer line connections.

   Discretionary content: Exercising some leeway as to sequence and timing of inspection.

FIGURE D.2. FJA CHECKLIST FOR WRITING TASK DESCRIPTIONS

Worker, please _____, _____, and _____ (action)

In order to _____ (result)

Using _____ (tools, equipment, work aids)

Following _____ (prescribed instructions)

Using your own judgment as to _____ (what is left to worker's discretion)

FIGURE D.3. MODEL SENTENCE FOR TASK DESCRIPTIONS

Trim condition is the desired result of the worker action. The result was turned into a verb for the task description. It might just as well read "Do whatever is necessary in order to put the vessel in trim condition..."

The task description can be rewritten to clarify the worker's action (and result as well) as follows:

- (Worker), operate controls of the saltwater ballast system from the cargo control room, discharging ballast in order to maintain a prescribed mean draft and position the vessel in trim condition for LNG cargo loading operations...

FJA provides guidelines for an action vocabulary in the worker functional orientation scales, shown in this section.

Technical terminology is permissible as long as the terminology will be meaningful to anyone working in the field. This is the main criterion:

- If a worker read or heard the task description would he identify with it and recognize the task as his own? When the worker reads or hears the task description his thoughts should be, "Yes, that's what I do," not "Is that what I do?"

Analysts who have experience in the field have a great advantage in being familiar with the terminology. It helps them identify and use source information more readily for task writing and helps them write tasks that ring

true. However, the terminology can be a trap because it is assumed to have greater precision than common language. Specialized terminology can mean different things to different people and in different contexts. For example, anyone involved with ships is probably going to know what "trim condition" means (in the last example task description). That is a good use of the term; it evokes immediately an image that might be lost in verbiage if the analyst tried to explain it in common language. However, "trim" as a verb is not so clear. The action of trimming is different for different types of vessels. The error, however, was not in the use of specialized language; it was in the confusion of action with result. Experience indicates that awareness of this action/result distinction tends to eliminate problems concerning the use of terminology of the field. Most special terms originate as nouns; they are names given to results, products, processes. When those are turned into verbs, essential differences in the actions may be obscured.

Figure D.4 shows the development of a task description written by a new task analyst and critiqued by peers. The third draft provides significantly more information about what the worker does. The first draft focused on the expected result too much. In the third draft it is clear that the task is very simple--just turn dials and push buttons as directed by a short, step-by step procedure that does not have to be remembered, observe whether panel lights respond as they should, and record the completion of the task in a log. Figure D.4 also demonstrates that there is some leeway in using the model sentence. In the example task the tools/equipment/materials are not specified in a distinct "using what" clause. The work aids are the vapor detection console, the procedure mounted on it, the worker's own hands and eyes, the log, and a pen or pencil. Those are all clearly indicated in other elements of the task description. The primary purpose of the model sentence is to help the analyst make sure he considers all the elements of a task.

Summary of Task Description Process.

1. Select subsystem, goal, and objective.

2. Select task.

3. Use model sentence to write description of task in the most precise language possible.

4. Get someone to read the task description. Determine whether all elements are clear to the reader. Revise as indicated. (Feedback from a reader is very helpful when beginning to write task descriptions. As the analyst gains experience, he can omit this step since FJA includes two editing processes in which feedback will be obtained.)

5. When the task description seems adequate, write it in the task space on the task statement form and go to the next process.

MODEL SENTENCE FOR TASK DESCRIPTIONS

Worker, please _____, _____, and _____ (action)

In order to _____ (result)

Using _____ (tools, equipment, work aids)

Following _____ (prescribed instructions)

Using your own judgment as to _____ (what is left to worker's discretion)

TASK DESCRIPTION

(First Draft) Test the salinity detection system in order to ascertain that audio-visual alarms are functioning, using the test panel on the evaporator control console, following the procedure outlined thereon, using your own judgment as to testing more sample points than required thereon.

(Second Draft) Test the salinity detection system in order to visually check and record in log that the audio-visual alarms are functioning, using the test panel on the evaporation control console, following the 5-step sequential procedure mounted on the console and using your own judgment as to testing more sample points than required thereon.

(Third Draft) Turn dials, push buttons, observe and sign off in log as to response of audio and visual signals on the salinity detection test panel in the engineroom, in order to verify that audio and visual alarms are working, following 5-step sequential procedure mounted on the test panel and using your own judgment as to whether to test more than the required sample of test points.

FIGURE D.4. EXAMPLE OF THE DEVELOPMENT OF A TASK DESCRIPTION

Assessment of Task Functional Level and Orientation

After writing the task description, the analyst is then faced with assessment of the functional level and orientation of the task. The following explanation of this step is adapted from Fine and Wiley's Functional Job Analysis (1971), referenced previously.

What workers do as they perform the tasks that make up their jobs, they do in relation to Data, People, and Things. All jobs involve the workers, to some extent, with information or ideas (Data), with clients or co-workers, (People), and with machines or equipment (Things). Workers function in unique ways in each of these areas. For example, when a worker's task involves him with machines or equipment (Things), the worker draws upon his physical resources (strength, dexterity, motor coordination, etc.). When a worker's task involves him with information or ideas (Data), the worker calls his mental resources into play (knowledge, thought, intuition, insight, etc.). When a worker's task involves him with clients, customers, and co-workers (People), the worker draws upon his interpersonal resources (empathy, courtesy, warmth, openness, guile, etc.). All jobs require the worker to relate to each of these areas and in doing so require him to draw upon his resources in each of these areas to some degree.

The concrete and specific actions which workers perform in relation to Data, People, and Things as they execute different tasks can probably be described in an infinite number of ways; that is, there are as many specific ways of expressing what workers do in relation to Data, People, and Things as there are specific tasks to be performed or unique content conditions to which there is only a handful of significant patterns of behavior (functions) which describe how workers use themselves in relation to Data, People and Things. Those patterns of behavior which can be articulated reliably have been defined in Worker Function Scales, among the primary tools of FJA, which provide a standardized, controlled language to describe what workers do in the entire universe of work. For example:

- In relation to information and ideas, a worker functions to compare, compile, compute, or analyze data.
- In interacting with clients, customers, and co-workers, workers serve, exchange information, coach, or consult with people.
- In using equipment, workers feed, tend, operate or set up machines and drive/control vehicles. Although each of these worker functions is performed under widely varying conditions, occurs over a range of difficulty, and involves different specific content, each, within its scope, calls for similar kinds and degrees of worker characteristics to achieve effective performance.

The functions in each of the three areas of Data, People, and Things, are defined by a Worker Function Scale, in which the performance requirements range from the simple to the complex. The scale is ordinal (that is, one in which any point on the scale includes lower levels and excludes higher levels). Thus the selection of a specific function to reflect the requirements of a particular task indicates that the task includes the lower functions and excludes the higher ones. Figure D.5 illustrates this concept. The complete Worker Function Scales are included. When scanning the Worker Function Scale for Data (for example), if the analyst selects the compiling function as the appropriate worker behavior to describe the way a worker must relate to information in a given task, he is deciding two things: (1) that the worker's performance is more complex than copying and less complex than analyzing; and (2) that the worker must be able to perform all or at least comprehend all the data functions below compiling, but does not have to be able to perform or comprehend higher functions such as analyzing or coordinating.

OVERVIEW OF WORKER FUNCTION SCALES

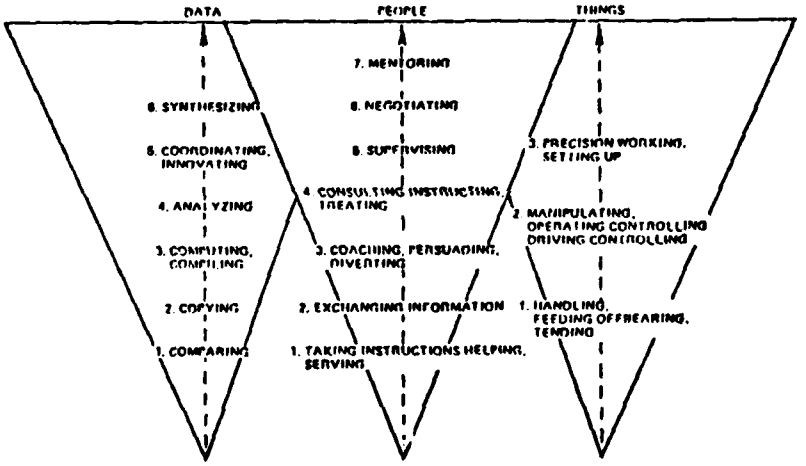


FIGURE D.5. SUMMARY CHART OF WORKER FUNCTION SCALES

The three hierarchies of Data, People, and Things functions provide two measures for systematically comparing and measuring the requirements of any task in any job. These two measures are level and orientation.

The level measure indicates the relative complexity or simplicity of a task when it compared to other tasks. It is expressed by selecting the function that best describes the pattern of behavior in which the worker engages to perform a given task effectively. The ordinal position of the function is the level measure. For example, to say that a worker in dealing with the Data content of a task is compiling, one has indicated that he is functioning at level 38 on the Data scale as shown in the scales. This requires a

higher level of functioning than is required in copying information (level 2) but is a lower level function than is required for analyzing data (level 4).

The orientation measure provided by FJA indicates the relative involvement of the worker with Data, People, and Things as he perform a given task. (Emphasis supplied.) The worker is not equally involved with all three in any task and his relative involvement with any of the three may change from task to task. For example, in performing one task in his job, a worker may be involved almost exclusively with Data; that is, something like 75 percent of his involvement and the resources he draws upon to perform a task are related to Data at the compiling level; but in order to accomplish the task, he must also be involved interpersonally in exchanging information with co-workers (perhaps 15 percent) as well as in calling upon physical resources in handling various documents, paper, and pen (10 percent). The worker's total functional involvement with Data (75 percent), People (15 percent) and Things (10) percent) adds up to 100 percent.

The orientation measure, then, is expressed by assigning a percentage in units of 5 or 10 to each of the three functions so that the total adds up to 100 percent. Note that these percentages are estimates. The reliability sought is in the pattern and proportion of the three estimates, not in the absolute amount of the estimates. (Emphasis supplied.)

The orientation measure is a reflection of the performance requirements of a task. In the example above, the estimates assigned must be in accord with the independent judgment that this task will be evaluated overwhelmingly on its data standards and quite lightly with regard to its people and things standards. The training the worker must have to perform the task should emphasize and build the mental skill required. The supervisor's instructions to the worker should emphasize and reflect the nature of the mental performance expected and the data standards by which the worker's results will be judged.

From the application of FJA to new technology ship occupations, some additional guidelines have been developed to assit in clarifying the FJA orientation measure.

The measure is seen as an indicator of the degree of worker concentration that is appropriate for the Data, People, and Things functions, relative to each other. The predominant function of a task, which should be foremost in the worker's awareness, is indicated by the desired result of the task. The relative prominence of the subordinate functions is suggested by the resources used to accomplish the task, how much they are used, and the care/precision with which they must be used in order to achieve the result. Task results can be categorized as data-, people-, or things-oriented. Task resources consist of data, people, and things.

The task described in Figure D.4 may be used as an example. The intended result of the task is verification of whether a system works. That is a data-oriented result. Thus the worker should focus on the data function in this task and the percentage which expresses the degree of the worker's

orientation toward data should be greater than the percentage expressing his orientation toward people or things.

Continuing with the example task, the worker must use things directly and deliberately, to accomplish the task result. He manipulates switches/ buttons on a control panel according to a procedure. Thus he needs to concentrate on things to a substantial degree, although to a lesser degree than on the data function. The people function in this task should require minimal concentration. It consists of following instructions that in this case would be standing instructions. No personal interaction need occur.

The measure of the appropriate orientation to people in this task would be the least allowable percentage of the hypothetical total orientation -- i.e., 5%. That leaves 95% to be allocated to data and things. The data orientation receives the greater portion because the task is being performed to obtain data. Thus (given the rule of increments of 5%), the data orientation must be at least 50%. A things orientation of at least one-third is warranted, since the worker has to use things in a direct and premeditated way in order to generate the data by which the task result can be accomplished. With those boundaries, the data orientation should be in the range from 50% to 60%, and the things orientation in the range from 35% to 45%.

Hopefully, the foregoing will not suggest that determining orientation measure need involve an arduous and time-consuming thinking process. These measures typically are decided quickly, and equivalent measures (± 10%) are typically selected by different people, provided that the task is described clearly. The process is in essence intuitive.

It is stressed that the orientation measures are intended to establish the appropriate relative weights of the Data, People, and Things Functions in a task. The orientation measures indicate where emphasis should be placed in training, task performance, and performance evaluation.

Steps in Assessing Task Level and Orientation.

1. Scan the appropriate Worker Function Scale. A new analyst should read the scale completely through.

2. Compare the level definitions to the worker action phrase in the task description. (It may be necessary to revise the task description at this point.)

3. Select the level definition that best fits the worker's actions in relation to the function under consideration.

4. Record the level rating in the space for it on the Task Statement Form.

   (Do steps 1-4 for each functional area -- Data, People, and Things.)

5. Assign a percentage for orientation to Data, to People and to Things. Record the percentages in the spaces for them on the Task Statement Form.

When beginning to write task statements it is helpful to get one or more independent assessments of the level and orientation of the task. The independent readers should make their assessments and then discuss them. The task should be then reworded if necessary and reassessed until an agreement is reached (difference no more than one level on scale and no more than 5 percent in oridentation). Agreement tends to indicate the accuracy of the task description.

Assessment of Instructional Level

The next step toward the completion of the task statement deals with worker instructions. All work is a mix of precription and discretion; whatever is not prescribed is discretionary. High level tasks have a greater proportion of discretion in relation to the prescription.

The prescribed and discretionary mix of work is described in FJA by an ordinal scale called the Worker Instructions Scale. It will be found following the Worker Function Scales following this section. The new analyst should read this Worker Instructions Scale fully to become familiar with its categories before trying to use it.

Each task description contains information about the instructions the worker received (the prescription) and what is left to the worker to decide (discretion). This information should be adequate to permit the analyst to determine the level of instructions on the Worker Instructions Scale. To illustrate, the instructions part of the sample task description (Figure D.4) reads as follows:

> ... following the 5-step sequential procedure mounted on the test panel and using your own judgment as to whether to test more than the required sample of test points.

Referring to the scales these would be level 2 instructions. As stated in the scale definition for level 2, the "inputs and outputs are all specified, but the worker has some leeway about the procedures and methods he can use to get the job done." (Worker decides whether there is a need, and time, to test more than the required sample, and no time for testing is prescribed -- the worker usually decides at what time to do this daily task.) "Almost all the information he needs is in his assignment." (The information needed to decide whether to do more testing comes from the worker's experience; also, when to test may be determined by other conditions.)

The instructions rating should be compared to the data rating selected from the Worker Function Scale for Data. If there is a difference of more than one level between those two ratings, the two ratings should be rechecked. High-level instructions are not appropriate for a low-level data task, and vice versa.

Summary of Steps in Assessing Worker Instructions.

1. Scan the Worker Instructions Scale of this report. (A new analyst should read the scale completely through.)

2. Compare the level definitions to the phrase describing instructions in the task description.

3. Select the level definition that best fits the mix of prescription and discretion indicated by the task description.

4. Compare instructions level to data function level; reassess one or both if there is more than one level of difference between the ratings.

5. Revise task description if that is called for, and reassess.

6. Record the level of instructions (and the new data function level, if it has been revised) on the task statement form.

As with the Worker Function Scales, it is helpful in learning to use the Worker Instructions Scale to get an independent reader or readers to apply the scale to the task description. If the independent assessment does not agree with the analyst's (same rating or one level higher or lower), then both assessments and the wording of the task description should be discussed until a resolution of the difference is achieved.

Assessment of Basic Educational Skill Requirements

The Scales of General Educational Development (GED) presented in this Section provide a tool for determining the basic educational skill requirements necessary to perform a job at specified Things, Data, and People functional levels. Basic educational skills refer to reasoning, math, and language skills.

The level of skill the task requires in each of these basic areas is critical information to anyone setting qualification standards. The general education requirement for a job can best be set based on the actual requirements of the tasks assigned to workers in the job. Requirements set in this way have a much firmer foundation that those based on academic credentials. For example, "high school diploma" is a meaningless requirement unless it guarantees possession of certain skills (which it often does not), and only then if those skills are actually the ones needed for successful task performance. Arbitrary diploma and degree requirements are no guarantee to an employer and they may screen out capable, motivated people.

The GED Scales are ordinal, like the Worker Function and Worker Instructions Scales, and they are used similarly. The analyst

must consider the whole task description, but particularly the worker action and the instructions. He also considers the worker function levels and orientation. Those data should lead him naturally to the appropriate GED levels.

Summary of Steps in Assessing GED Requirements.

1. Scan one scale and identify the level of that skill that seems appropriate (A new analyst should read the scale completely through.)

2. Compare skill level definition with the definitions for the worker function levels of the task.

3. Compare skill level definition with the definition of the instructions level.

4. Does the skill level make sense in relation to others?

5. Does the skill level seem reasonable in relation to the task description wording?

6a. If the answers to 4 and 5 are yes, record the skill level on the task statement form and repeat steps 1-6 for the other two skill areas in turn.

6b. If the answer to 4 or 5 or both is no, evaluate scale levels and/or task description as appropriate, correct, and proceed to assess the other skill areas.

Again, it is helpful for a new analyst to get independent assessments of the GED Scale rating to compare to his own.

Determination of Performance Standards

The next step in completing an FJA task statement is to determine appropriate performance standards. These standards establish the rigor of any qualification testing that may be required. They provide a basis for evaluating the performance of candidates on such tests. The standards also will be important information for the development of training and measures of training outcomes.

Two types of performance standards are defined in FJA: descriptive and numerical. The developers of FJA explain the difference as follows.

Descriptive standards are performance criteria which are generally nonspecific and subjective; e.g., "please type this letter as quickly as possible;" be reasonably accurate in checking these figures;" "don't spend too much time in compiling this report;" "be as complete as possible in collecting the information." They tell in general terms what is expected; but they are wide open to interpretation.

Numerical standards are objective performance criteria which require no interpretation. They usually take the form of numerical or categorical statements; e.g., "please have this letter typed by 5:00 p.m.," "please double-check these figures to ensure that there are no errors." Since they are objective, they explicitly communicate the standards by which performance will be assessed.

In a given work situation, most workers learn through experience (which may be quite frustrating), how to interpret descriptive standards correctly and produce acceptable results. However, descriptive standards are inadequate by themselves for use in setting personnel qualifications. There are some tasks for which it is very difficult to specify numerical or categorical standards. However, if it is not possible or appropriate to be explicit about how the worker's action and the results are to be evaluated, then the task should not affect qualifications. In some cases, it might appear that there are no appropriate numerical or categorical standards at first, but they tend to become evident to the analyst as he writes descriptive standards. In other words writing descriptive standards may be like priming a pump.

Performance standards are determined according to common sense informed by the task description and the worker function scale levels. The worker orientation measure also must be considered. If a task is 80% thing-oriented, then the standard(s) should be set for the worker's functional level in relation to things. In that case, it is not necessary to set a standard for the results of the involvement with, say people, unless that involvement, though relatively minor as a percentage of total involvement, is critical and is not measured by the standard(s) set for things results. Such a situation is unlikely, and if it appears, the analyst should consider whether the task is actually two tasks that ought to be separated.

There is a rule of thumb that may be helpful in writing performance standards:

- If you were a new worker, what information would you need in order to know whether you did the task right?

Using this rule of thumb, and common sense, the analyst usually finds that performance standards flow from the other information in the task statement almost automatically.

Figure D.6. shows performance standards for the example task. Only one descriptive standard is recorded in Figure D.6. Since the example task is highly prescribed, it is easy to identify numerical/categorical standards. The one descriptive standard--"good judgment about when additional testing is needed"--led to an addition to the last categorical standard--"all anomalies of signal response noticed and checked out." This is an example of the pump-priming effect of writing descriptive standards mentioned earlier.

Determination of Training Requirements

This is the final step in completing a task statement and answers the following questions:

Performance standards should evaluate both the worker action (behavior) and the result (output), as exemplified below.

Task: Turn dials, push buttons, observe and sign off in log as to response of light signals on the salinity detection test panel in the engineroom, in order to verify that audio-visual alarms are working, following the 5-step sequential procedure mounted on the test panel console and using own judgment whether to test more than the required sample of test point. Data level, 50%; People Level 1A, 5%; Things Level 1C, 45%.

Performance Standards		What is Being Evaluated?	
Descriptive	Numerical/Categorical		
	Procedure followed exactly in 100% of tests	Action:	Executing all steps in prescribed sequence
	All test actions signed immediately on completion 100% of time	Action:	Keeping log up to date
	100% of required sample of test points checked daily	Action:	Checking all required test points daily
Good judgment about when additional testing is needed	All anomalies of signal response noticed and checked out	Result:	No failure of alarm system goes undetected because of inadequate testing

FIGURE D.6. EXAMPLE OF TASK PERFORMANCE STANDARDS

- What does a worker have to know and be trained to do in order to perform (the task) according to the standards indicated?

- How and where will he acquire this knowledge?

The FJA task statement is designed to provide answers to these questions in all the previous steps following the task description, in its functional and instructional level measures, its basic skill (GED) requirements measures and its performance standards.

Two types of skills are distinguished--functional and specific content skills:

Functional Skills refer to those competencies that enable an individual to relate to Things, Data, and People (orientation) in some combintation according to his personal preferences and to some degree of complexity appropriate to his abilities (level). They include skills like tending or operating machines; comparing, compiling, or analyzing data; and exchanging information with or consulting and supervising people. These skills are normally acquired in educational, training, and avocational pursuits and are reinforced in specific job situations.

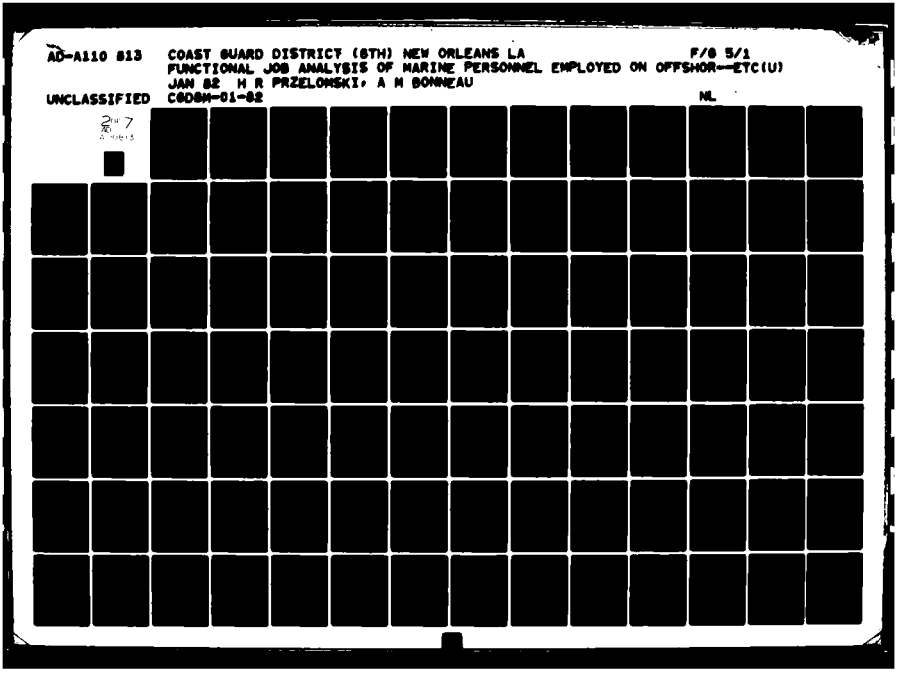
Specific Content Skills refer to those competencies that enable an individual to perform a specific job according to the standards required. These skills are normally acquired in an advanced technical training school or institute, or by extensive on-the-job experience. These skills are as numerous as the specific products or services which they produce or the standards and conditions established by employers under which they are exercised.

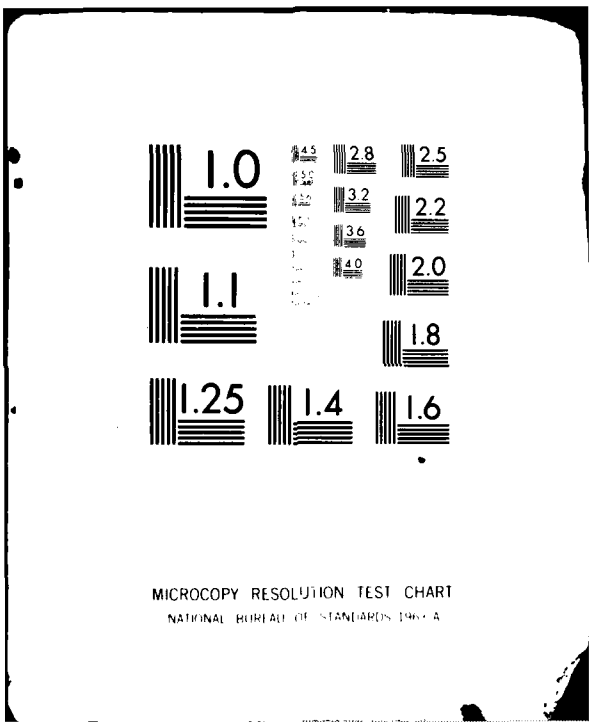
The reason for the distincition between these two types of skills becomes apparent from their definitions. They are acquired at different times and under different conditions, and too often the appropriate time and place for providing one is confused with the other. The confusion begins from the simple fact that functional skill training in schools must have some specific content. There is however, no reason to assume that the specific content of a specific job situation is accounted for in this type of training.

Sidney A. Fine has delineated the concept of three types of skills in order to comprehend better the nature of human performance. In addition to Functional and Specific Content Skills, he has proposed need for defining and comprehending Adaptive Skills. Adaptive Skills being those which permit a worker to respond correctly to a changing environement. However, since Adaptive Skills do not have a direct relationship to task statements formulated using the FJA technique, they are not dealt with here. It should be noted, however, that Adaptive Skills are regarded as crucial to a worker's job satisfaction and individual growth in a specific job.

Figure D.7. is a chart (from Fine and Bernotavicz, 1973) that provides examples of the three kinds of skills and summarizes some important concepts about them.

AD-A110 813 COAST GUARD DISTRICT (8TH) NEW ORLEANS LA F/G 5/1
FUNCTIONAL JOB ANALYSIS OF MARINE PERSONNEL EMPLOYED ON OFFSHOR--ETC(U)
JAN 82 H R PRZELOMSKI, A M BONNEAU
UNCLASSIFIED CGDSM-01-82 NL




1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

Kinds of skills	Examples	Where learned	Appropriate training situation and method
Functional Skills Competencies which enable people to relate to Data, People, and Things. They are expressed in terms of orientation and level.	Tending or operating machines; comparing, compiling, or analyzing data; exchanging information; consulting and supervising people.	School, training institutes, hobbies. Reinforced and developed on the job.	School situation--focus on principles, theories, and range of methods available to achieve desires result. Specific examples used with emphasis on transfer of principles.
Specific Content Skills Competencies which enable people to perform a specific job, using specific equipment, technology, and procedures. They are expressed in the specifics of a task statement.	As numerous as specific products, services, and employers who establish the standards and conditions under which those products and services are produced.	Advanced technical training school or institute, extensive on-the-job experience, or on-the-job training in a specific job.	Specialized schools or institutes. Orientation sessions for on-the-job procedures. On-the-job training either in training shop or through close supervision by supervisor or assistance from other workers.
Adaptive Skills Competencies which enable people to manage themselves in relation to the demands for conformity and/or change in response to the physical, interpersonal, and organizational conditions of a job.	Management of oneself in relation to authority; to impulse control; to moving towards, away from, or against others; to space (sense of direction and routing); to time (punctuality and self-pacing); to care of property; to dress (style and grooming).	In early childhood experiences, through family and peers; reinforced in school and work situations.	Informal situations, either in school or on the job. Group sensitivity sessions; one-to-one counseling; role-playing; simulation; problem- or crisis-centered techniques. Sensitivity sessions where management and workers come to agreement on accommodations which both can make.

FIGURE D.7. HUMAN PERFORMANCE: A COMPLEX OF THREE INTERRELATED KINDS OF SKILLS

As the chart indicates, the analyst gets functional skills directly from the levels and orientation measures for the task. Specific content skills come directly out of the specifics of the task description.

EDIT OF TASK STATEMENTS

Following completion of the task statements, the editing process begins. The purposes of the edit are:

- To assure that all content elements are included and that their wording in the task description is clear.
- To check whether the task description accurately represents the functional level and orientation, the instructional level and the basic skill requirements of the task.
- To check whether the performance standards and training content appear to be usable operationally (by workers, supervisors, and trainers) and are logically supportable in view of the other parts of the task statement.
- To determine whether the whole task statement gives a sense of reality about the task action and its context.

The edit is done by individual editors. The analysts who initially write the task statement may exchange them for this activity, or other people may perform the edit. The editors must be versed in the use of FJA, and it is helpful if they are knowledgeable about the field of the work system. (When the editor is not familiar with the field, he has to question the writer of the task statement more to clarify a task.)

Summary of Editing Steps

1. Editor reads task description and checks for completeness (all relevant content elements present) and clarity of wording.
2. Editor independently rates worker function level and orientation, worker instructions level, and basic skills (GED) levels, using FJA scales.
3. Editor evaluates performance standards and training content for (a) reasonableness in relation to task description and scale

ratings and (b) practicality (are the standards usable - can worker performance be assessed consistently against those standards; would the training content statements be useful in the development and evaluation of a training program).

The following is a checklist of specific questions to ask when editing task statements:

EDITING CHECKLIST

1. Does the end result of the task make a contribution to the organizational objective?

2. Are the worker action phrase and the result phrase of the task statement in reasonable relation to one another?

3. Does the task description, particularly the worker action phrase, adequately express the context of the task?

4. Does the language in the worker action phrase of the task statement support the worker function levels?

5. Do the worker action and the result phrases of the task statement support the orientation percentages assigned?

6. Is there more than a one-level spread between data, worker instructions, and reasoning scale ratings?

7. Is the result identified in the task a verifiable result?

8. Are the performance standards specified useful to a supervisor and to a worker?

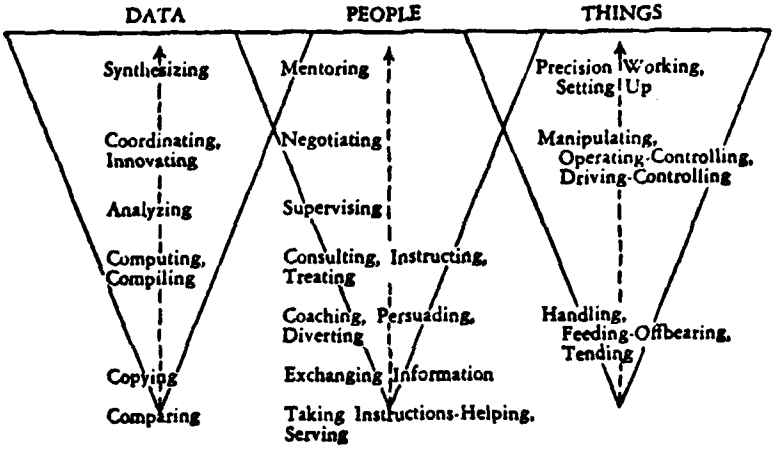
9. Does the training content reflect the knowledge and abilities required to perform the task?

It has been found most useful if a small group of task statements is edited very shortly after the analyst begins writing them. He can benefit from editing feedback before going on. Subsequent editing is best done on complete sets of task statements for an objective. Then the editor can check the completeness with which the objective is covered.

It is also most helpful if the editor and writer meet personally to discuss the editor's observations about the first set of task statements that is edited. They may reach a level of understanding at which they can communicate adequately in writing or by telephone if that is more convenient.

Scales for Controlling the Language of Task Statements

Summary Chart of Worker Function Scales



Note: Each successive function reading down usually or typically involves all those that follow it. The functions separated by a comma are separate functions on the same level separately defined. They are on the same level because empirical evidence does not make a hierarchical distinction clear.

The hyphenated functions: *Taking Instructions-Helping, Operating-Controlling, Driving-Controlling,* and *Feeding-Offbearing* are single functions.

Setting Up, Operating-Controlling, Driving-Controlling, Feeding-Offbearing, and *Tending* are special cases involving machines and equipment of *Precision Working, Manipulating,* and *Handling,* respectively, and hence are indented under them.

Complete Version of Worker Function Scales

Data Function Scale

Data should be understood to mean information, ideas, facts, and statistics. Involvement with Data is inherent in the simplest job instruction in the form of recognizing the relationship of a tool to its function or the significance of a pointing instruction. Data are always present in a task even though the major emphasis of the task might be dealing with Things and/or People. Where Things are primarily involved, Data tend to show up as specifications. Where

People are primarily involved, Data tend to show up as information about objective events or conditions, information about feelings, or ideas that could be tinged with objective information and/or feeling. The Data Scale measures the degree to which a worker might be expected to become involved with Data in the tasks he is asked to perform from simple recognition through degrees of arranging, executing, and modifying to reconceptualizing the Data.

It is important to distinguish these functions in a work situation from those occurring in a learning situation. In a sense, every new learning involves synthesizing and hence all subsidiary functions — slowly or in a flash.

Data Function Scale

The arabic numbers assigned to definitions represent the successive levels of this ordinal scale. The *A*, *B*, and *C* definitions are variations on the same level. There is no ordinal difference between *A*, *B*, and *C* definitions on a given level.

LEVEL	DEFINITION
1	COMPARING Selects, sorts, or arranges data, people, or things, judging whether their readily observable functional, structural, or compositional characteristics are similar to or different from prescribed standards.
2	COPYING Transcribes, enters, and/or posts data, following a schema or plan to assemble or make things and using a variety of work aids.
3A	COMPUTING Performs arithmetic operations and makes reports and/or carries out a prescribed action in relation to them.
3B	COMPILING Gathers, collates, or classifies information about data, people, or things, following a schema or system but using discretion in application.

LEVEL	DEFINITION
4	ANALYZING Examines and evaluates data (about things, data, or people) with reference to the criteria, standards, and/or requirements of a particular discipline, art, technique, or craft to determine interaction effects (consequences) and to consider alternatives.
5A	INNOVATING Modifies, alters, and/or adapts existing designs, procedures, or methods to meet unique specifications, unusual conditions, or specific standards of effectiveness within the overall framework of operating theories, principles, and/or organizational contexts.
5B	COORDINATING Decides time, place, and sequence of operations of a process, system, or organization, and/or the need for revision of goals, policies (boundary conditions), or procedures on the basis of analysis of data and of performance review of pertinent objectives and requirements. Includes overseeing and/or executing decisions and/or reporting on events.
6	SYNTHESIZING *Takes off in new directions* on the basis of personal intuitions, feelings, and ideas (with or without regard for tradition, experience, and existing parameters) *to conceive new approaches* to or statements of problems and the development of system, operational, or aesthetic "solutions" or "resolutions" of them, typically outside of existing theoretical, stylistic, or organizational context.

People Function Scale

The substance of the live interaction between People (and animals) is communication. In the broadest sense the communication can be verbal or nonverbal. What gives communication its complexity is the heavy load that messages carry; e.g., Data in their objective and subjective forms — the way in which they are delivered (volume, tone, accompanying gesture, and the formal rules and informal customs that govern the context of the communication). Since there is a large subjective element on the part of both the sender and the receiver of a communication, it is very difficult to measure or to assign absolute values or primary importance to one or another type of information in the interaction.

What further complicates pinning down the nature of specific interpersonal behavior is that *affect* can serve as a *tool* for managing oneself in the interaction as well as the informational *substance* of the interaction. Affect, as information and as tool, can occur in the simplest as well as the most complex interactions. For example, affect expressed as a sulky manner, perhaps to gain attention or perhaps to express resentment on the part of an entry worker, can quickly become the informational substance of the interaction, when the supervisor asks nonreactively, "Don't you feel well?" and gets a positive answer, "No, I don't. My child is ill. I should be home!"

The functions in the People Scale deal with these complex questions only indirectly. The assumption of ordinality is somewhat more tenuous than in the Data and Things Scales and depends more heavily on role, status, and authority which are often associated with, but not necessarily a part of, skill. In effect, the functions try to capture the variety of interpersonal behavior *assigned* in various work situations and are more or less arranged, as in the other scales, according to the need, in general, to deal with increasing numbers of variables and with greater degrees of discretion. (The function least likely to fit this pattern is Supervising, which probably could have a scale of its own.)

Skill in dealing with People is undoubtedly as much an art as a methodology, and on every level it is especially necessary to delineate

the descriptive and numerical standards by which a function can be appraised in the task in which it occurs. This is true for the simplest function as well as the most complex. Admittedly, measurement in this area is in a primitive state, but significant beginnings have been made.

In delineating standards for People functions on different levels, one should especially note the cultural boundary conditions and how they moderate the expression of affect on all levels. We have in mind here the rules of courtesy in such a matter as Taking Instructions-Helping, diplomatic protocol in various types of Negotiating, and "rules" of behavior in patient-doctor Mentoring. These cultural boundaries undoubtedly have a very definite effect on the prescription and discretion mix of a particular functional level.

People Function Scale

The arabic numbers assigned to definitions represent the successive levels of this ordinal scale. The *A*, *B*, and *C* definitions are variations on the same level. There is no ordinal difference between *A*, *B*, and *C* definitions on a given level.

LEVEL	DEFINITION
	TAKING INSTRUCTIONS-HELPING
1A	Attends to the work assignment, instructions, or orders of supervisor. No immediate response or verbal exchange is required unless clarification of instruction is needed.
	SERVING
1B	Attends to the needs or requests of people or animals, or to the expressed or implicit wishes of people. Immediate response is involved.
	EXCHANGING INFORMATION
2	Talks to, converses with, and/or signals people to convey or obtain information, or to clarify and work out details of an assignment within the framework of well-established procedures.
	COACHING
3A	Befriends and encourages individuals on a personal, caring basis by approximating a peer or family-type relationship either in a one-to-one or small group situation; gives instruction, advice, and personal assistance concerning activities of daily living, the use of various institutional services, and participation in groups.
	PERSUADING
3B	Influences others in favor of a product, service, or point of view by talks or demonstrations.
	DIVERTING
3C	Amuses to entertain or distract individuals and/or audiences or to lighten a situation.
	CONSULTING
4A	Serves as a source of technical information and gives such information or provides ideas to define, clarify, enlarge upon, or

LEVEL	DEFINITION
	sharpen procedures, capabilities, or product specifications (e.g., informs individuals/families about details of working out objectives such as adoption, school selection, and vocational rehabilitation; assists them in working out plans and guides implementation of plans).
4B	INSTRUCTING Teaches subject matter to others or trains others, including animals, through explanation, demonstration, and test.
4C	TREATING Acts on or interacts with individuals or small groups of people or animals who need help (as in sickness) to carry out specialized therapeutic or adjustment procedures. Systematically observes results of treatment within the framework of total personal behavior because unique individual reactions to prescriptions (chemical, physical, or behavioral) may not fall within the range of prediction. Motivates, supports, and instructs individuals to accept or cooperate with therapeutic adjustment procedures when necessary.
5	SUPERVISING Determines and/or interprets work procedure for a group of workers; assigns specific duties to them (delineating prescribed and discretionary content); maintains harmonious relations among them; evaluates performance (both prescribed and discretionary) and promotes efficiency and other organizational values; makes decisions on procedural and technical levels.
6	NEGOTIATING Bargains and discusses on a formal basis as a representative of one side of a transaction for advantages in resources, rights, privileges, and/or contractual obligations, "giving and taking" within the limits provided by authority or within the framework of the perceived requirements and integrity of a program.
7	MENTORING Works with individuals having problems affecting their life adjustment in order to advise, counsel, and/or guide them according to legal, scientific, clinical, spiritual, and/or other professional principles. Advises clients on implications of analyses or diagnoses made of problems, courses of action open to deal with them, and merits of one strategy over another.

Things Function Scale

Working with Things means literally the physical interaction with tangibles, including taken-for-granted items such as desktop equipment (pencils, paper clips, telephone, handstamps, etc.); blackboards and chalk; and cars. Physical involvement with tangibles such as desktop equipment, etc., may not seem very important in tasks primarily concerned with Data or People, but it is quickly apparent when handicap or ineptness occurs. An involvement with Things can be manifested in requirements for the neatness, arrangement, and/or security of the workplace. Workers who make decisions or take actions concerning the disposition of Things (tools, materials, or machines) are considered to be working mainly with Data, although they physically handle Things (e.g., records, telephone, and catalogs).

Things Function Scale

The arabic numbers assigned to definitions represent the successive levels of this ordinal scale. The *A*, *B*, and *C* definitions are variations on the same level. There is no ordinal difference between *A*, *B*, and *C* definitions on a given level.

LEVEL	DEFINITION
	HANDLING
1A	Works (cuts, shapes, assembles, etc.), digs, moves, or carries objects or materials where objects, materials, tools, etc., are one or few in number and are the primary involvement of the worker. Precision requirements are relatively gross. Includes the use of dollies, handtrucks, and the like. (Use this rating for situations involving casual use of tangibles.)
	FEEDING-OFFBEARING
1B	Inserts, throws, dumps, or places materials into, or removes them from, machines or equipment which are automatic or tended / operated by other workers. Precision requirements are built in, largely out of control of worker.
	TENDING
1C	Starts, stops, and monitors the functioning of machines and equipment set up by other workers where the precision of output depends on keeping one to several controls in adjustment, in response to automatic signals according to specifications. Includes all machine situations where there is no significant setup or change of setup, where cycles are very short, alternatives to nonstandard performance are few, and adjustments are highly prescribed. (Includes electrostatic and wet-copying machines and PBX switchboards.)
	MANIPULATING
2A	Works (cuts, shapes, assembles, etc.), digs, moves, guides, or places objects or materials where objects, tools, controls, etc., are *several* in number. Precision requirements range from gross to fine. Includes waiting on tables and the use of ordinary portable power tools with interchangeable parts and ordinary tools around the home, such as kitchen and garden tools.

LEVEL	DEFINITION
	OPERATING-CONTROLLING
2B	Starts, stops, controls, and adjusts a machine or equipment designed to fabricate and/or process data, people, or things. The worker may be involved in activating the machine, as in typing or turning wood, or the involvement may occur primarily at startup and stop as with a semiautomatic machine. *Operating a machine* involves readying and adjusting the machine and/or material as work progresses. *Controlling equipment* involves monitoring gauges, dials, etc., and turning valves and other devices to control such items as temperature, pressure, flow of liquids, speed of pumps, and reactions of materials. *Includes the operation of typewriters, mimeograph machines, and other office equipment where readying or adjusting the machine requires more than cursory demonstration and checkout.* (This rating is to be used only for operations of one machine or one unit of equipment.)
	DRIVING-CONTROLLING
2C 2D*	Starts, stops, and controls the actions of machines for which a course must be steered or guided in order to fabricate, process, and/or move things or people. Actions regulating controls require continuous attention and readiness of response. (Use this rating *if use of vehicle is required in job, even if job is concerned with* people or data primarily.)
	PRECISION WORKING
3A	Works, moves, guides, or places objects or materials according to standard practical procedures where the number of objects, materials, tools, etc., embraces an entire craft and accuracy expected is within final finished tolerances established for the craft. (Use this rating where work primarily involves manual or power handtools.)
	SETTING UP
3B	Installs machines or equipment; inserts tools; alters jigs, fixtures, and attachments; and/or repairs machines or equipment to ready and/or restore them to their proper functioning according to job order or blueprint specifications. Involves primary responsibility for accuracy. May involve one or a number of machines for other workers or for worker's own operation.

* 2D OPERATING-CONTROLLING

Starts, stops, controls, adjusts equipment designed to hoise and move materials, reshape and/or pave the earth's surface. Manipulation of controls requires continuous attention and readiness of response to activate the equipment in lateral and vertical operations. (S.A. Fine, 1976.)

Scale of Worker Instructions

LEVEL	DEFINITION
1	Inputs, outputs, tools, equipment, and procedures are all specified. Almost everything the worker needs to know is contained in his assignment. He is supposed to turn out a specified amount of work or a standard number of units per hour or day.
2	Inputs, outputs, tools, and equipment are all specified, but the worker has some leeway in the procedures and methods he can use to get the job done. Almost all the information he needs is in his assignment. His production is measured on a daily or weekly basis.
3	Inputs and outputs are specified, but the worker has considerable freedom as to procedures and timing, including the use of tools and equipment. He has to refer to several standard sources for information (handbooks, catalogs, wall charts). Time to complete a particular product or service is specified, but this varies up to several hours.
4	Output (product or service) is specified in the assignment, which may be in the form of a memorandum or of a schematic (sketch or blueprint). The worker must work out his own ways of getting the job done, including selection of tools and equipment, sequence of operations (tasks), and obtaining important information (handbooks, etc.). He may either carry out work himself or set up standards and procedures for others.
5	Same as (4) above, but in addition the worker is expected to know and employ theory so that he understands the whys and wherefores of the various options that are available for dealing with a problem and can independently select from among them. He may have to do some reading in the professional and/or trade literature in order to gain this understanding.

LEVEL	DEFINITION
6	Various possible outputs are described that can meet stated technical or administrative needs. The worker must investigate the various possible outputs and evaluate them in regard to performance characteristics and input demands. This usually requires his creative use of theory well beyond referring to standard sources. There is no specification of inputs, methods, sequences, sources, or the like.
7	There is some question as to what the need or problem really is or what directions should be pursued in dealing with it. In order to define it, to control and explore the behavior of the variables, and to formulate possible outputs and their performance characteristics, the worker must consult largely unspecified sources of information and devise investigations, surveys, or data analysis studies.
8	Information and/or direction comes to the worker in terms of needs (tactical, organizational, strategic, financial). He must call for staff reports and recommendations concerning methods of dealing with them. He coordinates both organizational and technical data in order to make decisions and determinations regarding courses of action (outputs) for major sections (divisions, groups) of his organization.

Scales of General Educational Development*

Reasoning Development Scale

The Reasoning Development Scale is concerned with knowledge and ability to deal with theory versus practice, abstract versus concrete, and many versus few variables.

LEVEL	DEFINITION
1	• Have the common sense understanding to carry out simple one- or two-step instructions in the context of highly standardized situations. • Recognize unacceptable variations from the standard and take emergency action to reject inputs or stop operations.
2	• Have the common sense understanding to carry out detailed but uninvolved written or oral instructions. • Deal with problems involving a few concrete variables in or from standardized situations.
3	• Have the common sense understanding to carry out instructions furnished in written, oral, or diagrammatic form. • Deal with problems involving several concrete variables in or from standardized situations.
4	• Have knowledge of a system or interrelated procedures, such as bookkeeping, internal combustion engines, electric wiring systems, nursing, farm management, ship sailing, or machining. • Apply principles to solve practical, everyday problems and deal with a variety of concrete variables in situations where only limited standardization exists. • Interpret a variety of instructions furnished in written, oral, diagrammatic, or schedule form.
5	• Have knowledge of a field of study (engineering, literature, history, business administration) having immediate applicability to the affairs of the world. • Define problems, collect data, establish facts, and draw valid conclusions. • Interpret an extensive variety of technical material in books, manuals, texts, etc. • Deal with some abstract but mostly concrete variables.
6	• Have knowledge of a field of study of the highest abstractive order (e.g., mathematics, physics, chemistry, logic, philosophy, art criticism). • Deal with nonverbal symbols in formulas, equations, or graphs. • Understand the most difficult classes of concepts. • Deal with a large number of variables and determine a specific course of action (e.g., research, production) on the basis of need.

*These scales have been modified and adapted by Sidney A. Fine from a table of "General Educational Development" in third edition, *Dictionary of Occupational Titles*, Vol. II (Washington: 1965), p. 652.

Mathematical Development Scale

The Mathematical Development Scale is concerned with knowledge and ability to deal with mathematical problems and operations from counting and simple addition to higher mathematics.

LEVEL	DEFINITION
1	• Counting to simple addition and subtraction; reading, copying, and or recording of figures.
2	• Use arithmetic to add, subtract, multiply, and divide whole numbers.
3	• Make arithmetic calculations involving fractions, decimals, and percentages.
4	• Perform ordinary arithmetic, algebraic, and geometric procedures in standard practical applications.
5-6	• Have knowledge of advanced mathematical and statistical techniques such as differential and integral calculus, factor analysis, and probability determination. • Work with a wide variety of theoretical mathematical concepts. • Make original applications of mathematical procedures, as in empirical and differential equations.

Language Development Scale

The Language Development Scale is concerned with knowledge and ability to deal with oral or written language materials from simple instructions to complex sources of information and ideas.

LEVEL	DEFINITION
1	• Cannot read or write but can follow simple oral, "pointing-out" instructions. • Sign name and understand ordinary, routine agreements when explained, such as those relevant to leasing a house; employment (hours, wages, etc.); procuring a driver's license. • Read lists, addresses, safety warnings.
2	• Read comic books, "true confession" or "mystery" type magazines (short sentences; simple, concrete vocabulary; words that avoid complex Latin derivations). • Converse with service personnel (waiters, ushers, cashiers). • Copy verbal records precisely without error. • Keep taxi driver's trip record.
3	• Read material on level of the *Reader's Digest* and straight news reporting in popular "mass" newspapers. • Comprehend ordinary newscasting (uninvolved sentences and vocabulary with focus on events rather than on their analysis). • Copy verbal material from one record to another, catching gross errors in grammar. • Fill in report forms, such as Medicare forms, employment applications, and card form for income tax. • Conduct house-to-house surveys to obtain common census-type information or market data, such as preferences for commercial products in everyday use.

- Comprehend orally expressed trade terminology (jargon) of a specific technical nature. (S.A. Fine, 1976)

LEVEL	DEFINITION
4	• Have language ability to take and transcribe dictation, make appointments, and sort, route, and file the mail according to subject. • Write routine business correspondence reflecting standard procedures. • Interview job applicants to determine work best suited for their abilities and experience; contact employers to interest them in services of agency. • Understand technical manuals and verbal instructions, as well as drawings and specifications, associated with practicing a craft. • Guide people on tours through historical or public buildings, tell relevant anecdotes, etc. • Conduct opinion research surveys involving stratified samples of the population.
5	• Write instructions for assembly of prefabricated parts into units. • Write instructions and specifications concerning proper use of machinery. • Write copy for advertising. • Report news for the newspapers, radio, or TV. • Prepare and deliver lectures for audiences that seek information about the arts, sciences, and humanities in an informal way. • Report, write, or edit articles for magazines which, while popular, are of a highly literate nature (e.g., *New Yorker, Saturday Review, Scientific American*).
6	• Report, write, or edit articles for technical and scientific journals or journals of advanced literary criticism (e.g., *Journal of Educational Sociology, Science, Physical Review, Daedalus*). • Prepare and draw up deeds, leases, wills, mortgages, and contracts. • Prepare and deliver lectures on politics, economics, education, or science to specialized students and/or professional societies. • Comprehend and apply technical engineering data for designing buildings and bridges. • Comprehend and discuss literary works of a highly symbolic nature, such as works in logic and philosophy (e.g., Kant, Whitehead, Russell).

APPENDIX C

FJA TASK SHEETS

TASK CODE: MASTER-I.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	65	2	30	1A	5	3	4	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Relieve/be relieved of master of an OSV.

TASK: Ascertains and evaluates the condition of the OSV (fuel, water and oil aboard, vessel's materiel condition and problems, down equipment/machinery, ship's stores, groceries, etc.) by talking with the off-going master and taking a tour of the OSV in order to determine required maintenance and appraise himself of problems which could develop during hitch.

PERFORMANCE STANDARDS

Descriptive:
* Familiarizes self with amounts of fuel, water and oil aboard.
* Correctly evaluates the affect down equipment/machinery will have on the ability to complete assigned trips.
* Determines the amount of ship's stores and groceries aboard.

Numerical:
* In 100% of the cases, correctly appraises the materiel condition of the OSV.

TRAINING CONTENT

Functional:
* How to recognize and evaluate material condition.
* How to evaluate the impact of down equipment/machinery on OSV operations.
* Knowledge of vessel operations.

Specific:
* Knowledge of own OSV's characteristics and missions.

TASK CODE: MASTER-I.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	80	2	20	1A	5	3	4	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Relieved/be relieved of master of an OSV.

TASK: Communicates with off-going master and dispatcher in person, to determine any scheduled trips and new rig locations in order to plan for taking on additional supplies and scheduling maintenance and repair work.

PERFORMANCE STANDARDS

Descriptive:
* Is able to schedule maintenance and repair work with the information obtained.
* Supplies to maintain and operate OSV are identified.
* Scheduled trips and locations of rigs are identified and verified.

Numerical:
* In 100% of the cases, no conflicts will arise between maintenance/repair work and scheduled trips.

TRAINING CONTENT

Functional:
* Knowledge of the time it takes to perform varied maintenance and repairs.
* How to prioritize maintenance and repair work.

Specific:
* Knowledge of the operational area OSV is generally assigned.
* Knowledge of the types of rigs serviced.

TASK CODE: MASTER-I.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	1	1	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Relieve/be relieved of master of an OSV.

TASK: Examines rough log, company log, reports and requisitions, and licenses and vessel documents taking into consideration government regulations and company policies in order to determine if all required paperwork is complete.

PERFORMANCE STANDARDS

Descriptive:
* Complete, accurate and legible entries are made in the logs, reports, and requisitions.
* Ensures that vessel documents are current and aboard the OSV.

Numerical:
* In 100% of the cases, all required information has been recorded.
* In 100% of the cases, all vessel documents are current.
* In 100% of the cases, all requisitions and purchases are properly documented.

TRAINING CONTENT

Functional:
* Knowledge of information to be recorded in each log and report.
* Knowledge of phraseology required for log entries.
* How to properly document all requisitions and purchases.
* Knowledge of vessel documents.

Specific:
* Knowledge of logs, vessel documents and licenses required by government, company and charterer.
* Knowledge of company guidelines and instructions for purchasing or requistioning supplies.

TASK CODE: MASTER-I.A.4

WORKER FUNCTION LEVEL AND ORIENTATION					WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4		1A	5	1A	20	4	5	4	4

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Relieve/be relieved of master of an OSV.

TASK: Familiarizes himself with the OSV's handling characteristics in order to be prepared to maneuver the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Can operate expeditiously and accurately all wheelhouse equipment.
* Accurately ascertains OSC's response to various controls, (engine response to throttles, rudder response to helm, OSV response to shaft RPM changes, etc.).

Numerical:
* In 100% of the cases, is able to operate the OSV safely.

TRAINING CONTENT

Functional:
* How to operate wheelhouse equipment.
* How to maneuver a vessel.
* How to recognize the interrelationship that exists between ships and environmental factors.
* General knowledge of OSV systems and capabilities.

Specific:
* Knowledge of own OSV's handling characteristics, i.e., rudder rate, response, stability, etc.
* Special characteristics and location of own OSV's equipment.

TASK CODE: MASTER-I.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	2	85	1A	5	1	2	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Sign crew on and off.

TASK: Communicates with appropriate company personnel to obtain properly qualified crew members if a shortage exists in order to comply with Coast Guard manning requirements and ensure the safety of the vessel and the crew.

PERFORMANCE STANDARDS

Descriptive:
* Advises company officials of all manning shortages.
* Sails OSV properly manned in accordance with the Certificate of Inspection.

Numerical:
* In 100% of the cases, all crew shortages are reported to appropriate officials.

TRAINING CONTENT

Functional:
* How to understand the Certificate of Inspection.
* Familiar with Coast Guard manning regulations and requirements to properly man the OSV.

Specific:
* Knowledge of established company guidelines for reporting a crew shortage.

TASK CODE: MASTER-I.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	90	1A	5	1A	5	1	2	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Sign crew on and off.

TASK: Ascertains if OSV is manned in accordance with the Certificate of Inspection by collecting the licenses and documents of crew members in order to complete government paperwork.

PERFORMANCE STANDARDS

Descriptive:
* Properly signs crew on and off.
* Distributes copies of all paperwork as required.
* Identifies manning shortages.

Numerical:
* In 100% of the cases, the crew members are properly signed on and off the OSV.
* In 100% of the cases, the OSV manning is in accordance with the Certificate of Inspection.

TRAINING CONTENT

Functional:
* How to prepare and distribute copies of a "Certificate of Discharge to Merchant Seaman".
* How to ship and discharge crew members.
* Ability to understand the Certificate of Inspection.

Specific:
* Knowledge of manning required on the own OSV by the Certificate of Inspection.

TASK CODE: MASTER-I.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	80	5	20	1A	5	4	4	2	4

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete necessary routine maintenance and repairs.

TASK: Evaluate and prioritizes identified maintencance and repair items taking into account the OSV's known schedule, weather, crew size and experience, in order to prepare a worklist for the chief engineer and mate, using his own judgement and company policy and guidelines.

PERFORMANCE STANDARDS

Descriptive:
* Anticipates the need for all routine maintenance.
* Assigns realistic worklist items to mate and chief engineer for completion.
* Obtains necessary verbal information to accurately assess work progress.
* Makes appropriate changes to work schedules to assure timely completion of work.

Numerical:
* In 100% of the cases, required routine maintenance and repairs are assigned and completed.

TRAINING CONTENT

Functional:
* How to prepare work schedules and assignments.
* How to evaulate the experience of crew members.
* Knowledge of the time it takes to perform various maintenance and repair items.
* Knowledge of the proper procedures for completing routine maintenance and repairs.
* How to communicate clearly.

Specific:
* Knowledge of proper operation of all systems on own OSV.
* Knowledge of company policy and guidelines regarding vessel maintenance and repairs.

TASK CODE: MASTER-I.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	70	2	25	1A	5	3	4	2	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete necessary routine maintenance and repairs.

TASK: Continually remains alert and observant using experience and reports from crew members in order to identify maintenance items and needed repairs.

PERFORMANCE STANDARDS

Descriptive:
* OSV is maintained at a satisfactory level.
* Is alert to identify equipment or machinery that will require minor repairs before they become major.
* Insures preventive maintenance is performed as schedule permits.

Numerical:
* In 100% of the cases, identifies maintenance and repair items in a timely manner.

TRAINING CONTENT

Functional:
* Knowledge of supply vessel operations and procedures.
* General seamanship knowledge.
* How to recognize the need for maintenance.

Specific:
* Knowledge of the proper condition and operation of all OSV systems and equipment.

TASK CODE: MASTER-I.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	80	2	15	1A	5	2	1	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Take steps to ensure that required paperwork is completed.

TASK: Determines what paperwork requirements have been placed on the OSV (rough log, company log, charterer's log, reports, forms, engineering maintenance systems (if applicable) using company guidelines, charterer's guidelines, and government regulations in order to assign crew members to collect data to meet all requirements.

PERFORMANCE STANDARDS

Descriptive:
* All paperwork requirements placed on the OSV are ideintified.
* Assigns specific persons to collect or provide data.
* Insures that data needed to complete all paperwork requirements is collected.

Numerical:
* In 100% of the cases, all data is recorded that is required to complete paperwork.

TRAINING CONTENT

Functional:
* Knowledge of information to be recorded in each log, report, form, etc.
* How to properly complete each paperwork item.

Specific:
* Knowledge of government regulations, company guidelinges and charterer's guidelines regarding paperwork requirements for the own OSV.

TASK CODE: MASTER-I.D.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	85	2	10	1A	5	2	2	2	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Take steps to ensure that required paperwork is completed.

TASK: Fills out and submits all required logs, forms, reports, and checklists in order to comply with government, company and charterer requirements.

PERFORMANCE STANDARDS

Descriptive:
* Properly distributes copies of paperwork.
* All paperwork submitted is legible.
* Submits paperwork within time requirements.
* Verifies all paperwork prepared by the mate or chief engineer for him.

Numerical:
* In 100% of the cases, all required paperwork is properly completed and submitted.

TRAINING CONTENT

Functional:
* Knowledge of proper procedures for completing paperwork.
* How to submit/distribute the original and any copies of required paperwork.
* Knowledge of time requirements placed on submission of paperwork.
* Knowledge of importance to keep accurate records of transferred fuel.
* How to add, subtract and copy whole numbers.

Specific:
* Knowledge of the proper procedures for completion and distribution of paperwork using government regulations, company and charterer guidelines and operational manuals.

TASK CODE: MASTER-I.E.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	60	2	35	1A	5	3	4	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Maintain supplies and spares aboard OSV.

TASK: Fills out requisitions and arranges with port captain, port engineer, or dispatcher using information provided by the mate and chief engineer, and established company policy/guidelines in order to resolve deficiencies in fuel, water, oil, spares, consumables and non-consumables aboard the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Arrangements are made to correct deficiencies.
* Requisitions are submitted in a timely manner.
* Requisition forms are properly and accurately completed.

Numerical:
* In 100% of the cases, requistion forms are completed and submitted in a timely fashion to ensure the OSV is ready for sea.

TRAINING CONTENT

Functional:
* How to obtain needed items.
* How to describe equipment requirements.
* How to prepare requistion.

Specific:
* Knowledge of company requisitions and established policy.
* Knowledge of appropriate company personnel to communicate needs to.

TASK CODE: MASTER-II.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	65	2	30	1A	5	2	2	3	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Ensure trips instructions are clear and understood correctly.

TASK: Checks with the dispatcher in person, by telephone, or radio to determine the nature of the trip, destination(s), estimated duration, effect of crew changes, expected difficulties, and future trips, in order to properly plan for the upcoming trip.

PERFORMANCE STANDARDS

Descriptive:
* Obtains available information on scheduled trip.

Numerical:
* In 100% of the cases, obtains the correct information for upcoming trips.
* In 100% of the cases, is able to properly plan for a scheduled trip.

TRAINING CONTENT

Functional:
* How to compute the amount of fuel, oil and water required for trip.
* Ability to determine if additional or special equipment will be required for the trip (anchor handling/rig tow).
* How to operate communications equipment.

Specific:
* Knowledge of the types of rigs serviced by own OSV and the possible difficulties which could be expected based on the nature of the trip.

TASK CODE: MASTER-II.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	85	2	10	1A	5	2	2	3	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Ensure trips instructions are clear and understood correctly.

TASK: Obtains information and instructions on cargo loading from the dispatcher in order to ensure the OSV is available at the proper terminal/facility for the loading.

PERFORMANCE STANDARDS

Descriptive:
* Is able to properly determine the time required to transit to the loading facility/terminal.

Numerical:
* In 100% of the cases, cargo loading information and instructions are correctly understood.

TRAINING CONTENT

Functional:
* Ability to determine running times to a facility/terminal.
* How to estimate, from information provided by the dispatcher, the amount of cargo to be transported.
* Ability to estimate the time required to load the cargo.

Specific:
* Knowledge of all terminals/facilities in the general operational area of the own OSV.

TASK CODE: MASTER-II.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	80	1A	5	1A	15	3	3	3	4

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Determine tracks and running times to rigs/platforms serviced.

TASK: Ascertain the operational area's physical and environmental characteristics, berthing facilities, local navigational rules and practices, aids to navigation, potential navigational hazards and company policy, using appropriate navigational charts, block charts and publications, in order to prepare for scheduled trip.

PERFORMANCE STANDARDS

Descriptive:
* Adequately studies charts, publications and policies.
* Is thoroughly acquainted with area's physical characteristics, prevailing environmental situation, local aids to navigations, potential navigational hazards, and local navigational rules and practices.

Numerical:
* In 100% of the cases, all relevant data are ascertained as dictated by the particular situation.

TRAINING CONTENT

Functional:
* How to read and interpret navigational charts, block charts, and publications.
* How to relate these data to actual physical environment.

Specific:
* Knowledge of particular berthing area, its aids to navigation and potential navigational hazards, local navigational rules and practices, physical characteristics and environmental conditions.
* Knowledge of own OSV's physical and handling characteristics.

TASK CODE: MASTER-II.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	75	1A	5	3A	15	3	3	3	4

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Determine tracks and running times to rigs/platforms serviced.

TASK: Makes necessary corrections to navigational charts relevant to trip, using his own knowledge of chart reference guides and correction/update notices, and in accordance with company or OSV correction/update procedures, in order to ensure that navigational charts are accurate and up-to-date.

PERFORMANCE STANDARDS

Descriptive:
* Accurately, completely, and clearly corrects charts.
* Corrections are completed prior to departure.

Numerical:
* In 100% of the cases, all relevant charts are corrected/updated.

TRAINING CONTENT

Functional:
* How to read navigational charts and understand navigational terminology.
* Knowledge of applicable correction publications and their use.

Specific:
* Knowledge of company or OSV chart correction/update procedures.

TASK CODE: MASTER-II.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	75	1A	5	3A	20	3	3	3	4

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Determine tracks and running times to rig/platforms serviced.

TASK: Procures and makes necessary corrections to navigational publications such as Coast Pilots, Sailing Directions and Light Lists, using correction/update notices, and in accordance with company or OSV correction/update procedures, in order to update navigational publications used to plot intended track.

PERFORMANCE STANDARDS

Descriptive:
* Accurately and completely updates navigational publications.
* Corrections are completed prior to departure.

Numerical:
* In 100% of the cases, all available corrections are made.

TRAINING CONTENT

Functional:
* How to understand navigational terminology used in navigational publications.
* Knowledge of available and applicable correction publications.

Specific:
* Knowledge of publication updating and correction recordkeeping procedures for company or OSV.

TASK CODE: MASTER-II.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	60	1A	5	3A	35	3	3	3	3

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Determines tracks and running times to rigs/platforms serviced.

TASK: Draws line of intended track on charts using navigational publications such as Coast Pilot or sailing directions, and knowledge of speed, atmospheric conditions, sea conditions, water depth, vessel traffic, rig locations, as well as own judgement and experience, in order to plot a safe route for the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Track drawn is most expeditious and safe.
* Clearly and accurately draws track.

Numerical:
* In 100% of the cases, track drawn is most expeditious and safe.

TRAINING CONTENT

Functional:
* How to use navigational charts, block charts and publications.
* Knowledge of the effect of various sea and atmospheric conditions on vessel movement.
* How to interpret charted navigational hazards.

Specific:
* Knowledge of particular water, land and atmospheric characteristics and conditions along intended track.
* Knowledge of own OSV's characteristics.

TASK CODE: MASTER-II.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
2	40	1A	20	1A	20	1	1	1	2

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Ensure that OSV is operationally ready to get underway.

TASK: Receives and verifies report from the chief engineer that all engines are serviced and ready for operation, sufficient fuel, oil, and water to make the trip is aboard and that the engineer has completed his checklist (if applicable) for getting underway in order to ensure that the engineering plant is operational.

PERFORMANCE STANDARDS

Descriptive:
* Computes correctly the amount of fuel, oil, and water required to make the scheduled trip.
* All engines are serviced and ready for operation.

Numerical:
* In 100% of the cases, the OSV engines are serviced and ready for operation prior to getting underway.

TRAINING CONTENT

Functional:
* How to compute fuel, oil, water consumption.
* General knowledge of marine diesel engineering systems.

Specific:
* Knowledge of the operational characteristics of the specific engineering system aboard his own OSV.

TASK CODE: MASTER-II.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	30	2	30	2C	40	3	3	1	2

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Ensure that OSV is operationally ready to get underway.

TASK: Communicates with chief engineer in engine room to check out bridge/engine room interfacing equipment, such as standard steering gear and related electrical and hydraulic transmission systems, engine room alarms, throttle controls, bridge/engine room telephone, using own judgement of equipment and manipulation of knobs, dials, and switches representing test maneuvers, in order to ensure that equipment is functioning. (This task includes standard tests of rudder and propeller shaft.)

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly and accurately checks out equipment.

Numerical:
* In 100% of the cases, checks out all bridge/engine room interfacing equipment.

TRAINING CONTENT

Functional:
* How to use communication systems between bridge and engine room.
* Knowledge of kinds of equipment linkages between bridge and engine room.

Specific:
* Knowledge of bridge navigational equipment and engine room equipment on own OSV.

?r TASK CODE: MASTER-II.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	35	2	30	2C	35	2	2	2	2

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Ensure that OSV is operationally ready to get underway.

TASK: Tests all internal and external communcations equipment, such as bridge SSB and VHF sets, and company radios, using own knowledge of equipment, in order to ensure that equipment is functioning.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly tests commication equipment.

Numerical:
* In 100% of the cases, ensures that all communications equipment is functioning properly.

TRAINING CONTENT

Functional:
* How to operate ship communications systems.
* How to perform radio checks.

Specific:
* Knowledge of communications systems for own OSV.

TASK CODE: MASTER-II.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	65	1A	5	1C	30	2	2	2	2

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Ensure that OSV is operationally ready to get underway.

TASK: Turns on power supply of electronic navigational aids, such as radar, loran, fathometer, gyro compass, radio directional finder, as applicable, following standard procedures, and visually inspects scopes, dials, and indicators of component parts, using own knowledge of equipment, in order to ensure that equipment is functioning.

PERFORMANCE STANDARDS

Descriptive:
* Accurately energizes and checks electronic navigational aids.

Numerical:
* In 100% of the cases, ensures that all electronic navigational aids are performing within prescribed specifications.

TRAINING CONTENT

Functional:
* How to operate electronic navigational aids.

Specific:
* Knowledge of operation of electronic navigational aids for own OSV.

TASK CODE: MASTER-II.C.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	1	1	1	1

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Ensure that OSV is operationally ready to get underway.

TASK: Tests and inspects lights and signaling equipment, such as navigational lights, search lights, mast lights, signal flags, day marks, ship's whistle, and bell and gong, in order to ensure that equipment is functioning.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly tests and checks equipment.

Numerical:
* In 100% of the cases, ensures that all lights and signaling equipment are functioning properly.

TRAINING CONTENT

Functional:
* Knowledge of various navigation/safety lights and signal systems.

Specific:
* Knowledge of type and location of lights, signaling equipment and respective controls on own OSV.

TASK CODE: MASTER-II.C.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	2	85	1A	5	2	2	1	2

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Ensure that OSV is operationally ready to get underway.

TASK: Checks with dispatcher for possible last minute changes, such as additional cargo, persons other than crew, and in destination(s), for the trip in order to avoid delays or the need for an additional trip.

PERFORMANCE STANDARDS

Descriptive:
* Contacts dispatcher for changes to scheduled trip.
* Makes entries in log for persons other than crew.

Numerical:
* In 100% of the cases, ensures that there have been no changes to a scheduled trip.

TRAINING CONTENT

Functional:
* How to contact the dispatcher.
* Proper procedures for log entries for persons other than crew aboard for trip.

Specific:
* Knowledge of company and chaterer procedure for notifying vessels of scheduled changes.

TASK CODE: MASTER-II.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	2	25	2A	25	5	5	4	3

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Observe safe loading procedures.

TASK: Positions the OSV through maneuvers using the tasks in MASTER-III.B/C/D, in order to be able to safely take aboard cargo.

PERFORMANCE STANDARDS

Descriptive:
* Maneuvers the vessel safely and expeditiously.
*Is alert to environmental changes while taking on cargo.

Numerical:
* In 100% of the cases, the OSV is positioned at the facility/terminal to facilitate the loading of cargo aboard the OSV.

TRAINING CONTENT

Functional:
* Training required by MASTER-III.B/C/D.
* How to position the OSV at the facility/terminal.

Specific:
* Training required by MASTER-III.B/C/D.

TASK CODE: MASTER-II.D.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	4	4	4

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Observe safe loading procedures.

TASK: Ensures stability of OSV as cargo is brought aboard and stowed in accordance with the stability letter or Trim and Stability Book, by visually checking the forward and after drafts, the ABS loadline and performing necessary calculations in order to safely operate the vessel.

PERFORMANCE STANDARDS

Descriptive:
* Performs stability calculations precisely.
* Accurately determines drafts and water depths.
* Ensures cargo is loaded in accordance with the stability letter or Trim and Stability Book.

Numerical:
* In 100% of the cases, the OSV is not operated in violations of the vessel's stability letter or the Trim and Stability Book.

TRAINING CONTENT

Functional:
* How to read draft and loadline marks.
* How to use a stability letter or Trim and Stability Book.
* Knowledge of OSV cargo pumping systems.
* Order of unloading of cargo at rigs.
* How to operate fathometer and read navigational charts and publications.
* How to convert liquid measure into tons.
* How to perform various stability calculations.

Specific:
* Knowledge of own OSV's trim and stability data.
* Knowledge of bottom and tidal characteristics of particular berth area.
* Knowledge of the ability of the crane on the rig being serviced to reach different deck areas.

TASK CODE: MASTER-II.D.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	4B	90	1A	5	3	3	2	2

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Observe safe loading procedures.

TASK: Remains alert to possible safety hazards, as a safety observer, while cargo is brought aboard the OSV in order to prevent personnel injuries or damage to the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Spots and prevents hazardous situations from resulting in injuries or damages.

Numerical:
* In 100% of the cases, he is able to prevent personnel injuiries or damage to the OSV.

TRAINING CONTENT

Functional:
* How to load liquid and dry bulk cargoes.
* Knowledge of the dangers involved in the transfer of cargoes under pressure.
* Knowledge of crane and hoist hand signals.
* Safety hazards involved with loading cargo on an OSV.
* Knowledge of the danger involved in the transfer of flamable or combustible liquids.

Specific:
* Knowledge of own OSV's cargo pumping system.

TASK CODE: MASTER-II.D.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	80	1A	10	1A	10	2	2	2	2

GOAL: Prepare for trip and supervise safe loading of cargo.

OBJECTIVE: Observe safe loading procedures.

TASK: Verifies personally and checks with the mate that all cargo and loose gear is aboard in accordance with the manifest, stowed, and is secured for sea in order to prevent personnel injuries and damages to the OSV through shifting cargo.

PERFORMANCE STANDARDS

Descriptive:
* Cargo is properly secured to prevent shifting.
* All access to hatches, watertight doors and vents are clear of cargo.

Numerical:
* In 100% of the cases, the listed cargo is aboard and properly stowed and secured for sea.

TRAINING CONTENT

Functional:
* Knowledge of the proper securing and stowing of deck cargo on an OSV.

Specific:
* Knowledge of own OSV's trim and stability data.
* Knowledge of own OSV's watertight door, hatch and vent configuration.

TASK CODE: MASTER-III.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	75	1A	5	1B	20	2	3	3	1

GOAL: Berth/unberth OSV.

OBJECTIVE: Make final preparations to berth/unberth the OSV.

TASK: Ascertains the OSV's draft and calculates the minimum and maximum depth of water in berth area in order to determine the OSV's underkeel clearance at berth.

PERFORMANCE STANDARDS

Descriptive:
* Accurately determines drafts and water depth.
* Precisely calculates underkeel clearance from drafts and water depths.

Numerical:
* In 100% of the cases, water depth and draft determinations are made within 0.1 foot accuracy.

TRAINING CONTENT

Functional:
* How to read draft marks.
* How to determine water depths.
* Understands the rise and fall of the water level as a function of the season of the year and time of day at various locations.

Specific:
* Knowledge of the own OSV's draft under various loading conditions.
* Knowledge of bottom characteristics of a particular berth area.
* Knowledge of the water depths of a particular berthing area.

TASK CODE: MASTER-III.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	80	1A	5	1A	15	2	2	3	3

GOAL: Berth/unberth OSV.

OBJECTIVE: Make final preparations to berth/unberth the OSV.

TASK: Estimates wind direction and speed, current velocity, and water depth, using OSV's communications equipment and/or environmental indicators (if available) in order to obtain environmental information within the berthing/unberthing area.

PERFORMANCE STANDARDS

Descriptive:
* Routinely ascertains current and water depth data.

Numerical:
* In 100% of the cases, readings and observations are within acceptable limits in accordance with the particular situation.

TRAINING CONTENT

Functional:
* How to determine wind speed and direction.
* How to obtain current information.
* How to obtain water depths.
* How to operate various communcations circuits such as radiotelephone.

Specific:
* Knowledge of prevailing environmental conditions and seasonal variations throughout the range of expected values.
* Knowledge of particular area's meteorological data.
* Knowledge of own OSV's communications equipment.

TASK CODE: MASTER-III.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	2	45	2A	25	2	2	2	2

GOAL: Berth/unberth OSV.

OBJECTIVE: Make final preparations to berth/unberth the OSV.

TASK: Communicates with port authorities in person or using communications equipment, in order to verify or report arrival/departure time, berth assignment, and readiness of pier, as applicable.

PERFORMANCE STANDARDS

Descriptive:
* Communication in a timely before arrival/departure.

Numerical:
* In 100% of the cases, all pertinent information is exchanged, understood, and acknowledged.

TRAINING CONTENT

Functional:
* What information must be communicated.
* How to operate various ship-to-shore communications equipment such as telephone and radio.

Specific:
* Knowledge of own OSV's time of arrival/departure and pier requirements, as applicable.
* Knowledge of particular area's services and means to communicate with those services.
* Knowledge of own OSV's communications equipment.

TASK CODE: MASTER-III.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	50	2	35	1C	15	2	3	3	3

GOAL: Berth/unberth OSV.

OBJECTIVE: Make final preparation to berth/unberth OSV.

TASK: Exchanges manuevering information with persons-in-charge of other ships, using bridge-to-bridge radiotelephones, ship-to-shore communications equipment, whistle signals, or any combination of the three, in order to establish the communications necessary for berthing/unberthing and to ensure understanding of intended movements of all pertinent vessels.

PERFORMANCE STANDARDS

Descriptive:
* Proper communication procedures are used.
* Communications are appropriately timed and are complete.

Numerical:
* In 100% of the cases, clarification is requested in all instances of uncertainty.
* In 100% of the cases, berthing/unberthing does not proceed until all appropriate communications have been made.

TRAINING CONTENT

Functional:
* How to operate OSV's communication equipment.
* Knowledge of standard communication procedures.
* Knowledge of navigational terms and phraseology.
* Knowledge of required whistle signals and how to sound them.

Specific:
* Knowledge of radiotelephone on own OSV.
* Knowledge of communications practices/procedures used at the particular terminal.

TASK CODE: MASTER-III.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	80	1A	5	1A	15	3	3	2	2

GOAL: Berth/unberth OSV.

OBJECTIVE: Make final preparations to berth/unberth OSV.

TASK: Reviews standard and emergency procedures for intended berthing/unberthing maneuvers, relying on own experience and judgement, navigational charts, and any existing company guidelines, in order to be familiar with OSV handling requirements associated with berth approach/departure.

PERFORMANCE STANDARDS

Descriptive:
* Reviews procedures carefully, precisely and thoroughly.
* Familiarization is timely before port arrival/departure.

Numerical:
* In 100% of the cases, all pertinent data are reviewed.

TRAINING CONTENT

Functional:
* How to use and read navigational charts and publications.
* General knowledge of OSV systems and capabilities.
* General knowledge of the effect of various environmental conditions on OSV operations.

Specific:
* Knowledge of particular water, traffic characteristics, prevailing land and environmental characteristics and conditions in berth area, including seasonal variations throughout range of expected values.
* Knowledge of own OSV's characteristics, equipment, and crew capability.
* Knowledge of company guidelines concerning arrival/departure procedures.

TASK CODE: MASTER-III.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	90	1A	5	1	5	4	4	3	3

GOAL: Berth/unberth OSV.

OBJECTIVE: Make final preparations to berth/unberth OSV.

TASK: Analyzes and evaluates all pertinent information (traffic and obstacles, rules and regulations, weather and water conditions, personnel readiness, other vessel conditions), in order to decide how or whether to proceed with berthing/unberthing maneuvers.

PERFORMANCE STANDARDS

Descriptive:
* Safety considerations are given priority in decision-making.
* Appropriate factors enter into the analysis.
* Decision is made in a timely manner.

Numerical:
* In 100% of the cases, all pertinent variables are considered.
* In 100% of the cases, all berthing/unberthing maneuvers, once initiated, are completed without casualty or other negative results, such as inappropriate interference with the movement of other ships.

TRAINING CONTENT

Functional:
* Knowledge of standard procedures for berthing/unberthing.
* Knowledge of rules and regulations applicable to terminal areas.
* Understanding of effects of all conditions on OSV's handling requirements/limitations (e.g., closest point of approach in relation to vessel speeds, current, water depth).

Specific:
* Knowledge of procedures, rules and regulations applicable in specific location.
* Knowledge of maneuvering capabilities of OWN OSV in specific locale as it may be affected by prevailing environmental conditions.

TASK CODE: MASTER-III.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	70	1A	5	1A	25	3	3	1	1

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Visually scans the waters surrounding the wharf/pier area, utilizing the naked eye, binoculars, and search lights (at night), in order to detect and identify naviagational hazards.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly scans the surrounding waters.
* Accurately and promptly identifies various navigational hazards.

Numerical:
* In 100% of the cases, all navigational hazards are detected and identified.

TRAINING CONTENT

Functional:
* How to engergize and control search lights.
* How to use binoculars.
* How to visually recognize hazards such as floating debris, shallow water, etc.
* How to visually recognize various aids to navigation such as fixed and floating channel markings, ranges, etc.

Specific:
* Knowledge of special hazards to navigation known in particular locale.
* Knowledge of what conditions are hazardous to own OSV.
* Knowledge of the navigational aids along the track and their particular characteristics.

TASK CODE: MASTER-III.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	75	1A	5	3A	20	3	3	3	1

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Operates the radar and fathometer in order to detect and identify navigational hazards.

PERFORMANCE STANDARDS

Descriptive:
* Selects the optimum combination of range scales, sector search, intensity, etc., for the most accurate and prompt detection of navigational hazards.
* Accurately detects various navigational hazards on radar.
* Accurately detects any navigational hazards (i.e., proximity of bottom) on fathometer.

Numerical:
* In 100% of the cases, all navigational hazards are detected.

TRAINING CONTENT

Functional:
* How to manipulate radar unit, i.e., vary range scales, sector search selector, intensity, range and bearing circles and lines, true or relative motion mode, etc.
* How to manipulate fathometer unit, i.e., vary depth scale, intensity, etc.
* How to detect navigational hazards on radar and fathometer.
* How to identify navigational hazards and aids to navigation on radar.

Specific:
* Knowledge of special hazards known in particular locale which present radar targets.
* Knowledge of own OSV's particular radar unit.
* Knowledge of own OSV's particular fathometer unit.
* Knowledge of what conditions are hazardous to own OSV that can be detected on radar or fathometer.

TASK CODE: MASTER-III.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	80	1A	5	1A	15	2	2	3	3

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Estimates wind direction and speed, current velocity, and water depth, by visually observing the weather and using the OSV's communication equipment and/or environmental indicators (if available), in order to obtain environmental information within the berthing/unberthing area.

PERFORMANCE STANDARDS

Descriptive:
* Routinely ascertains environmental information.

Numerical:
* In 100% of the cases, readings and observations are within acceptable limits in accordance with particular situation.

TRAINING CONTENT

Functional:
* How to estimate wind speed and direction.
* How to estimate current speed and direction.
* How to obtain water depth by fathometer and estimate visually.
* How to operate various communications and navigational equipment such as radiotelephone and fathometer.

Specific:
* Knowledge of prevailing environmental conditions and seasonal variations throughout the range of expected values.
* Knowledge of particular area's meteorlogical data.
* Knowledge of own OSV's communications and navigational equipment.

TASK CODE: MASTER-III.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3	85	1A	5	1A	10	2	2	2	2

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Reads dials of instruments such as compass, rudder angle indicator, throttle position indicator, and RPM indicator; visually scans steering and propulsion system status indicators; looks and listens for steering machinery and propulsion system audio and visual failure alarms, in order to ascertain heading, speed, rudder angle, and wheel speed and to monitor operating conditions of steering and propulsion systems.

PERFORMANCE STANDARDS

Descriptive:
* Correctly reads and surveys all instrumentation.

Numerical:
* In 100% of the cases, readings and observations are within acceptable limits in accordance with particular situation.

TRAINING CONTENT

Functional:
* How to read compass, rudder angle indicator, throttle position indicator, and RPM indicator.
* How to monitor steering and propulsion systems status indicators.
* How to recognize audio and visual failure alarms for steering and propulsion systems.

Specific:
* Knowledge of location, arrangement, and characteristics of particular indicators, displays, and alarms on own OSV.

TASK CODE: MASTER-III.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	85	1A	5	2B	10	3	2	2	2

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Monitors voice radio (bridge-to-bridge, ship-to-shore, company and vessel traffic system (VTS) network, as applicable) and internal communication systems in order to maintain radio watch during berthing/unberthing maneuvers.

PERFORMANCE STANDARDS

Descriptive:
* Remains attentive to all voice radio traffic.
* Efficiently monitors all communications applicable to own OSV and situation.

Numerical:
* In 100% of the cases, all pertinent communications are detected, understood, and acknowledged.

TRAINING CONTENT

Functional:
* How to operate various radio frequency (rf) equipment.
* Knowledge of voice radio communications procedures.

Specific:
* Knowledge of availability of various rf networks in particular locale.
* Knowledge of specific rf equipment provided on own OSV.

TASK CODE: MASTER-III.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	90	1A	5	1A	5	5	6	4	3

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Examines and evaluates total data input concerning environmental situation, own OSV characteristics, response to helm and engine controls, status of onboard equipment, and own OSV's mission (purpose and goals), in order to determine course of action to maneuver into/away from wharf/pier, while simultaneously avoiding rammings and groundings.

PERFORMANCE STANDARDS

Descriptive:
* Anticipates any and all possibilities which may arise.
* Continually maintains mental alertness, i.e., is vigilant.
* Maintains sense of proportion among input data and various action options as situation changes or progresses.
* Makes decision in timely manner commensurate with situation.

Numerical:
* In 100% of the cases, all pertinent data are examined and evaluated in accordance with the particular situation before decision is reached.

TRAINING CONTENT

Functional:
* Understands environmental factors as they relate to the controllability of the OSV in shallow water and alongside wharf/pier.

Specific:
* Knowledge of own OSV's hydrodynamic characteristics as they may be affected by prevailing environmental conditions at particular locale and the seasonal variations of those environmental conditions through the range of expected values.
* Knowledge of particular wharf/pier and adjacent waters.
* Knowledge of own OSV's mission at the time.

TASK CODE: MASTER-III.B.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	45	2	50	1A	5	4	3	3	3

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Communicates to mate and crew personally or via internal communications equipment, the arrival/departure time and the type of moor, in order to prepare and assign personnel for maneuvers and mooring stations.

PERFORMANCE STANDARDS

Descriptive:
* Communication of information is clear and timely before arrival/departure.

Numerical:
* In 100% of the cases, all pertinent information is directed to all appropriate personnel.

TRAINING CONTENT

Functional:
* Knowledge of various types of moors.
* Ability to convey information.
* How to use internal communications equipment.

Specific:
* Knowledge of details of berthing/unberthing maneuvers for own OSV and port, including mooring station assignments.
* Knowledge of arrival/departure.

TASK CODE: MASTER-III.B.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	45	1A	5	1B	50	1	1	1	1

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Adjusts RPM of OSV's wheel(s) and bow thruster (if applicable) utilizing bridge throttles or internal communications circuits in order to change OSV's speed in maneuvering OSV into/out of berth.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately manipulates equipment to effect speed change.

Numerical:
* In 100% of the cases, all adjustments are made exactly as ordered (or desired).

TRAINING CONTENT

Functional:
* How to operate bridge throttles and communications circuits.

Specific:
* Special characteristics and location of own OSV's equipment.

TASK CODE: MASTER-III.B.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	45	1A	20	1C	50	2	1	1	2

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Turns OSV's helm, operates rudders and reads compass in order to change or maintain heading in maneuvering OSV into/out of berth.

PERFORMANCE STANDARDS

Descriptive:
* Routinely and accurately manipulates helm and rudders to change or maintain course.
* Continuously monitors compass, and rudder angle indicator.

Numerical:
* In 100% of the cases, all readings of instrumentation are within acceptable limits in accordance with particular situation.
* In 100% of the cases, all helm adjustments are made exactly as desired.

TRAINING CONTENT

Functional:
* How to operate the helm rudders.
* How to read a compass.
* How to read a rudder angle indicator.
* How to detect drift off desired heading.

Specific:
* Knowledge of own OSV's handling characteristics, i.e., rudder rate, lateral stability, rate of turn, etc.

TASK CODE: MASTER-III.B.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1	5	1	80	1	1	1	1

GOAL: Berth/unberth OSV.

OBJECTIVE: Maneuver into/away from wharf/pier, while avoiding rammings and groundings.

TASK: Sounds OSV's whistle and displays other required identification in accordance with Rules of the Road, in order to approach/leave berth safely and according to proper procedure.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates whistle and displays appropriate signals.
* Operation of whistle and displaying of signals is timely to arrival/departure.

Numerical:
* In 100% of the cases, appropriate whistle signals are sounded.
* In 100% of the cases, appropriate day signals are displayed.
* In 100% of the cases, appropriate navigational lights are displayed.

TRAINING CONTENT

Functional:
* How to operate OSV's whistle.
* How to identify and use signals.
* Knowledge of Rules of the Road pertaining to whistle and other signals.

Specific:
* Knowledge of location of whistle controls (automatic and manual) and other day signals on own OSV.

TASK CODE: MASTER-III.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	85	1A	5	1A	10	4	5	4	2

GOAL: Berth/unberth OSV.

OBJECTIVE: Identify and respond to potentially hazardous conditons in order to avoid collisions, rammings, and groundings, while simultaneously maneuvering OSV into/away from wharf/pier.

TASK: Assesses all other vessel traffic in vicinity of wharf/pier in order to determine the existence of any real or potential collision hazard.

PERFORMANCE STANDARDS

Descriptive:
* Accurately determines the intentions of all threatening traffic in the vicinity.
* Properly ascertains the governing Rules of the Road, local navigational rules, practices, and VTS, if applicable.
* Anticipates possible actions by threatening traffic which may dictate reassessment of situation.
* Makes assessment in timely manner commensurate with situation.

Numerical:
* In 100% of the cases, all pertinent traffic data are assessed for potential collision hazard.

TRAINING CONTENT

Functional:
* Understands principles of relative motion.
* How to determine course and speed of all other vessels.
* Understands applicable Rules of the Road and the limitations they impose upon his OSV in determining potential collision hazard and possible counter action.

Specific:
* Knowledge of prevailing traffic patterns alongside wharf/pier including seasonal variations.
* Knowledge of local navigation rules, practices, and VTS, if applicable.

TASK CODE: MASTER-III.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	85	1A	5	1A	10	5	6	4	3

GOAL: Berth/unberth OSV.

OBJECTIVE: Identify and respond to potentially hazardous conditions in order to avoid collisions, rammings, and groundings, while simultaneously maneuvering OSV into/away from wharf/pier.

TASK: Examines and evaluates total data input from all the tasks in MASTER-III.B in order to determine a course of action to maneuver the OSV so as to avoid identified traffic in a safe manner.

PERFORMANCE STANDARDS

Descriptive:
* Identifies any and all possibilities which may arise, especially other vessels' intentions and actions.
* Continually maintains mental alertness.
* Maintains sense of proportion among input data and various action options as situation changes or progresses.
* Makes decision in timely manner to maneuver OSV safely.

Numerical:
* In 100% of the cases, all pertinent data are examined and evaluated in accordance with particular situation before desicion is reached.

TRAINING CONTENT

Functional:
* Understands environmental factors as they relate to OSV controllability in shallow water and alongside wharf/pier.
* Understands applicable Rules of the Road.
* Training required in tasks MASTER-III.B.

Specific:
* Knowledge of particular wharf/pier and adjacent waters.
* Knowledge of local navigation rules, practices and VTS, if applicable.
* Knowledge of own and other vessels' hydrodynamic characteristics as they may be affected by prevailing environmental conditions.
* Training required in tasks MASTER-III.B.

TASK CODE: MASTER-III.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	75	1A	20	1	5	1	1	1	2

GOAL: Berth/unberth OSV.

OBJECTIVE: Maintain required records and logs.

TASK: Records required information in specified logs in order to have legal documentation of OSV's maneuvering and material condition history.

PERFORMANCE STANDARDS

Descriptive:
* Is complete, accurate, and legible in recording entries.
* Is able to log information quickly after hearing it once.

Numerical:
* In 100% of the cases, all required information is recorded.

TRAINING CONTENT

Functional:
* Knowledge of information to be recorded in each log (communications, maneuvering, and safety equipment checks, draft readings, meteorological information, course and speed changes, unusual occurrences, communication traffic, anchor bearings, etc.).
* Knowledge of standard phraseology required for each entry.
* Knowledge of the source for each item to be recorded.
* Knowledge of who is permitted to make entries in each log.

Specific:
* Knowledge of log information specific to own OSV.

TASK CODE: MASTER-IV.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	75	1A	5	1A	20	3	3	3	3

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Ascertains intended track, refering to navigational charts/publ ations as appropriate, in order to acquaint self with local conditions of waterway limitations including revetment characteristics (if any), prevailing environmental situation, aids to navigation, and potential navigational hazards.

PERFORMANCE STANDARDS

Descriptive:
* Charts and publications are adequately studied.
* Is thoroughly familiar with intended track, prevailing environmental situation, local aids to navigation, potential navigational hazards, and local navigation rules and practices.

Numerical:
* In 100% of the cases, all relevant data are ascertained as dictated by the particular situation.
* In 100% of the cases, choses a track that will not stand the OSV into danger.

TRAINING CONTENT

Functional:
* How to read and interpret navigational charts and publications including Notices to Mariners.
* How to relate charts to actual physical environment.

Specific:
* Knowledge of particular waterway revetment characteristics (if any), its aids to navigation and potential navigational hazards, local navigation rules and practices, and prevailing environmental conditions for that particular locale.
* Knowledge of what conditions are hazardous to own OSV.

TASK CODE: MASTER-IV.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	70	1A	5	1C	25	3	3	1	1

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Visually scans the waters surrounding the intended track utilizing the naked eye, binoculars, and search lights (at night) in order to detect and identify navigational hazards and aids to navigation.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly scans the surrounding waters.
* Accurately and promptly identifies various aids to navigation and navigational hazards.

Numerical:
* In 100% of the cases, all necessary navigational aids and all navigational hazards are detected and identified.

TRAINING CONTENT

Functional:
* How to energize and control search lights.
* How to use binoculars.
* How to visually recognize hazards such as floating debris, shallow water, etc.
* How to visually recognize various aids to navigation such as fixed and floating channel markings, ranges, etc.

Specific:
* Knowledge of navigational aids along the track and their particular characteristics.
* Knowledge of special hazards to navigation known in particular locale.
* Knowledge of what conditions are hazardous to own OSV.

TASK CODE: MASTER-IV.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	75	1A	5	3A	20	3	3	3	1

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Operates the radar and fathometer in order to detect and identify shallow water, navigational hazards, and aids to navigation.

PERFORMANCE STANDARDS

Descriptive:
* Selects the optimum combination of range scales, sector search, intensity, etc., for the most accurate and prompt detection of navigational hazards and aids to navigation.
* Accurately detects various aids to navigation and navigational hazards on radar.
* Accurately detects any navigational hazards (i.e., proximity of bottom) on fathometer.

Numerical:
* In 100% of the cases, all necessary navigational aids and all navigational hazards are detected.

TRAINING CONTENT

Functional:
* How to manipulate radar unit, i.e., vary range scales, sector search selector, intensity, range and bearing circles and lines, true or relative motion mode, etc.
* How to manipulate fathometer unit, i.e., vary depth scale, intensity, etc.
* How to detect navigational hazards and aids to navigation on radar and fathometer.
* How to identify navigational hazards and aids to navigation on radar.

Specific:
* Knowledge of navigational aids along track or man-made and geophysical characteristics which present good radar targets.
* Knowledge of own OSV's particular radar unit.
* Knowledge of own OSV's particular fathometer unit.
* Knowledge of what conditions can be detected on radar and fathometer and are hazardous to own OSV.

TASK CODE: MASTER-IV.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	80	1A	5	2A	15	3	3	4	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Visually determines ranges to and bearings of fixed aids to navigation (reference points) in order to establish the OSV's naviational position.

PERFORMANCE STANDARDS

Descriptive:
* Accurately determines the position of the OSV.

Numerical:
* In 100% of the cases, navigational position is determined within acceptable limits commersurate with OSV speed, channel configuration and limitations, and prevailing environmental situation at particular locale.

TRAINING CONTENT

Functional:
* How to select reference points for ranges and bearings.
* How to determine the position of the OSV from selected aids to navigation.

Specific:
* Knowledge of local fixed aids to navigation.
* Knowledge of limits by which the OSV may vary about the intended track safely.

TASK CODE: MASTER-IV.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	50	1A	5	3A	45	3	3	3	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Operates and takes readings from the loran, radar unit, compass, and fathometer in order to determine navigational position.

PERFORMANCE STANDARDS

Descriptive:
* Accurately and promptly acquires navigational position and water depth.

Numerical:
* In 100% of the cases, navigational position and water depth are determined and within acceptable limits commensurate with OSV speed, channel configuration and limitations, and prevailing environmental situation at particular locale.

TRAINING CONTENT

Functional:
* How to operate (i.e., take ranges and bearings) radar unit.
* How to operate (i.e., measure water depth) fathometer.
* How to operate a gyro compass.
* How to operate (i.e., obtain and plot readings) on the loran unit.

Specific:
* Knowledge of local fixed aids to navigation or man-made and geophysical characteristics along track which present good radar targets.
* Knowledge of the loran, radar, compass, and fathometer units provided aboard own OSV.

TASK CODE: MASTER-IV.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	80	1A	5	1A	15	2	2	3	3

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required in order to avoid rammings and groundings.

TASK: Estimates wind direction and speed, current velocity, and water depth, using OSV's communications equipment and/or environmental indicators (if available) in order to obtain environmental information.

PERFORMANCE STANDARDS

Descriptive:
* Routinely ascertains environmental information.

Numerical:
* In 100% of the cases, readings and observations are within acceptable limits in accordance with particular situation.

TRAINING CONTENT

Functional:
* How to determine wind speed and direction.
* How to obtain currentt information.
* How to obtain water depth.
* How to operate various communications circuits such as radiotelephone.
* How to forecast weather from available indicators (clouds, temperature, barometers, wind, etc.).

Specific:
* Knowledge of prevailing environmental conditions and seasonal variations throughout the range of expected values.
* Knowledge of particular area's meteorological data.
* Knowledge of own OSV's communications equipment.

TASK CODE: MASTER-IV.A.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	85	1A	5	1A	10	2	1	2	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Reads dials of instruments such as compass, rudder angle indicator, throttle position indicator, and RPM indicator; visually scans steering and propulsion system status indicators; looks and listens for steering machinery and propulsion system audio and visual failure alarms, in order to ascertain heading, rudder angle, and wheel speed, and to monitor operating conditions of steering and propulsion systems.

PERFORMANCE STANDARDS

Descriptive:
* Correctly reads and surveys all instrumentation.

Numerical:
* In 100% of the cases, readings and observations are within acceptable limits in accordance with particular situation.

TRAINING CONTENT

Functional:
* How to read compass, rudder angle indicator, throttle position indicactor, and RPM indicator.
* How to monitor steering and propulsion system status indicators.
* How to recognize audio and visual failure alarms for steering and propulsion system.

Specific:
* Knowledge of location, arrangement, and characteristics of particular indicators, displays, and alarms on own OSV.

TASK CODE: MASTER-IV.A.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	85	1A	5	2B	10	3	2	2	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Monitors voice radio (bridge-to-bridge, ship-to-shore, company, and vessel traffic system (VTS) network, as applicable) and internal communciations systems in order to maintain radio watch.

PERFORMANCE STANDARDS

Descriptive:
* Remains attentive to all voice radio traffic.
* Efficiently monitors all communications applicable to own OSV and situation.

Numerical:
* In 100% of the cases, all pertinent communications are detected, understood and acknowledged.

TRAINING CONTENT

Functional:
* How to operate various radio frequency (rf) equipment.
* Knowledge of voice radio communication procedures.

Specific:
* Knowledge of availability of various rf networks in particular locale.
* Knowledge of specific rf equipment provided on own OSV.

TASK CODE: MASTER-IV.A.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	55	1A	5	2B	40	3	3	2	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundins.

TASK: Surveys (visually, electronically on radar, and from charts and publications) bridges and canal locks, in order to determine the location of and available navigation distance between bridge supports and the width and length of locks, overhead clearence and to relate that distance to his own OSV length, breath and height.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and accurately estimates/establishes location of an available distance between bridge supports and the width and length of locks.
* Correctly relates that available distance to OSV length and breath.

Numerical:
* In 100% of the cases, bridge spans and canal locks are detected and available distances are ascertained to within acceptable limits commensurate with prevailing environmental situation, configuration of particular OSV, and any local navigation rules or practices.

TRAINING CONTENT

Functional:
* How to visually detect and estimate distance between bridge supports/piers and overhead clearence.
* How to read various charts and publications and ascertain distances between bridge supports/piers and height, width and length of canal locks.
* How to operate radar, detect bridge supports/piers and canal locks, and determine distances.

Specific:
* Knowledge of radar unit on own OSV.
* Knowledge of local charts and publications.
* Knowledge of particular bridges and canal locks along waterway and their radar image characteristics.

TASK CODE: MASTER-IV.A.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	90	1A	5	1A	5	5	6	4	3

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Examines and evaluates total data input concerning environmental situation, own OSV characteristics, status of aboard equipment, and own OSV's mission (purpose and goals), in order to determine course of action to maintain desired track or position within the prescribed limits of the waterway.

PERFORMANCE STANDARDS

Descriptive:
* Anticipates any and all possibilities which may arise.
* Continually maintains mental alertness, i.e., is vigilant.
* Maintain sense of proportion among input data and various action options as situation changes or progresses.
* Makes decision in timely manner commensurate with situation.

Numerical:
* In 100% of the cases, all pertinent data are examined and evaluated in accordance with the particular situation before decision is reached.

TRAINING CONTENT

Functional:
* Understands environmental factors as they relate to the controllability of the OSV.

Specific:
* Knowledge of specific own OSV's hydrodynamic characteristics as they may be affected by prevailing environmental conditions at particular locale (including eddy currents around bridges), and the seasonal variations of those environmental conditions through the range of expected values.
* Knowledge of own OSV's mission at the time.

TASK CODE: MASTER-IV.A.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	45	1A	5	1B	50	1	1	1	1

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Adjusts RPM of OSV's wheel(s) and bow thruster (if applicable), utilizing bridge throttles or internal communications circuits in order to change OSV's speed.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately manipulates equipment to effect speed changes.

Numerical:
* In 100% of the cases, all adjustments are made exactly as desired.

TRAINING CONTENT

Functional:
* How to operate bridge throttles and communications circuits.

Specific:
* Special characteristics and location of own OSV's equipment.

TASK CODE: MASTER-IV.A.12

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	45	1A	20	1C	50	2	1	1	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Turns OSV's helm, operates rudders, and reads compass and rate of turn indicators (if provided) in order to change or maintain course.

PERFORMANCE STANDARDS

Descriptive:
* Routinely and accurately manipulates helm and rudders to change or maintain course.
* Continuously monitors compass and rudder angle.

Numerical:
* In 100% of the cases, all readings of intrumentation are within acceptable limits in accordance with particular situation.
* In 100% of the cases, all helm adjustments are made exactly as desired.

TRAINING CONTENT

Functional:
* How to operate a helm and rudders.
* How to read a compass.
* How to read a rudder angle indicator.
* How to detect drift off course.

Specific:
* Knowledge of own OSV's handling characteristics, i.e., rudder rate, lateral stability, rate of turn, etc.

TASK CODE: MASTER-IV.A.13

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1	5	1	80	1	1	1	1

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain designated track and speed within restricted waterway, modifying as required by conditions in order to avoid rammings and groundings.

TASK: Sounds OSV's whistle and displays other required identification in accordance with Rules of the Road, in order to maneuver in restricted waters safely and according to proper procedures.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates whistle and displays appropriate signals.
* Operation of whistle and displaying of signals is timely to changing course or ordering engines astern.

Numerical:
* In 100% of the cases, appropriate whistle signals are sounded.
* In 100% of the cases, appropriate day signals are displayed.
* In 100% of the cases, appropriate navigation lights are displayed.

TRAINING CONTENT

Functional:
* How to operate OSV's whistle.
* How to identify and use signals.
* Knowledge of Rules of the Road pertaining to whistle and other signals.

Specific:
* Knowledge of location of whistle controls (automatic and manual) and day signals on own OSV.

TASK CODE: MASTER-IV.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	85	1A	5	1A	10	4	5	4	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Identify and respond to potentially hazardous conditions in order to avoid collisions, rammings, and groundings while simultaneously maintaining position within the limitations of the restricted waterway.

TASK: Assesses all other vessel traffic in vicinity and navigational situation in order to determine the existence of any real or potential collision hazard.

PERFORMANCE STANDARDS

Descriptive:
* Accurately determines the intentions of all threatening traffic in vicinity.
* Properly ascertains the governing rules of the road imposed upon traffic by local navigational rules, practices and VTS, if applicable.
* Anticipates possible actions by threatening traffic which may dictate reassessment of situation.
* Makes assessment in timely manner commensurate with situation.

Numerical:
* In 100% of the cases, all pertinent traffic data are assessed for potential collision hazard.

TRAINING CONTENT

Functional:
* Understands principles of relative motion.
* How to determine course and speed (i.e., intentions) of all other vessels.
* Understands applicable rules of the road and the limitations they impose upon own OSV in determining potential collision hazard and possible counter action.

Specific:
* Knowledge of prevailing traffic patterns along track including seasonal variations.
* Knowledge of local navigation rules, practices and VTS, if applicable.

TASK CODE: MASTER-IV.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	85	1A	5	1A	10	5	6	4	3

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Identify and respond to potentially hazardous conditions in order to avoid collsions, rammings, and groundings while simultaneously maintaining position within the limitations of the restricted waterway.

TASK: Examines and evaluates total data input from all tasks in MASTER-IV.A in order to determine a course of action to maneuver the OSV so as to avoid identified traffic in a safe manner.

PERFORMANCE STANDARDS

Descriptive:
* Anticipates any and all possiblities which may arise, especially other vessels' intentions and actions.
* Continually maintains mental alertness.
* Maintains a sense of proportion among input data and various action options as situation changes or progresses.
* Makes decision in timely manner to maneuver the OSV safely.
* Acts effectively and with aplomb under pressure.

Numerical:
* In 100% of the cases, all pertinent data are examined and evaluated in accordance with the particular situation before decision is reached.

TRAINING CONTENT

Functional:
* Understands environmental factors as they relate to the controllability of the OSV.
* Understands applicable Rules of the Road.
* Training required in MASTER-IV.A.

Specific:
* Knowledge of own and other vessels' hydrodynamic characteristics as they may be affected by prevailing environmental conditions.
* Knowledge of local navigation rules, practices and VTS, if applicable.
* Training required in tasks MASTER-IV.A.

TASK CODE: MASTER-IV.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	75	1A	20	1	5	1	1	1	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Maintain required records and logs.

TASK: Records required information in specified logs in order to have legal documentation of OSV's maneuvering and material condition history.

PERFORMANCE STANDARDS

Descriptive:
* Is complete, accurate, and legible in recording entries.
* Is able to log information quickly after hearing it once.

Numerical:
* In 100% of the cases, all required information is recorded.

TRAINING CONTENT

Functional:
* Knowledge of information to be recorded in each log (communication, maneuvering, and safety equipment checks, draft readings, meteorological information, course and speed changes, unusual occurrences, communication traffic, anchor bearings, etc.).
* Knowledge of standard phraseology required for each entry.
* Knowledge of the source for each item to be recorded.
* Knowledge of who is permitted to make entries in each log.

Specific:
* Knowledge of information specific to own OSV.

TASK CODE: MASTER-V.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
2	75	1A	5	1A	20	3	3	3	3

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintain intended course and speed while avoiding collsions, rammings and groundings.

TASK: Studies intended course, using approprate navigational charts and publications, in order to acquaint self with conditions along route, prevailing environmental situation, aids to navigation, and potential navigational hazards.

PERFORMANCE STANDARDS

Descriptive:
* Charts and publications are adequately studied.
* Is thoroughly familiar with intended track, prevailing environmental situation, aids to navigation, potential navigational hazards, and applicable navigation rules and practices.

Numerical:
* In 100% of the cases, all relevant data are ascertained as dictated by the particular situation.

TRAINING CONTENT

Functional:
* How to read and interpret navigational charts and publications.
* How to relate charts to actual physical environment.

Specific:
* Knowledge of particular trip, its aids to navigation and potential navigational hazards, applicable navigation rules and practices, and prevailing environmental conditions for that trip.

TASK CODE: MASTER-V.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	70	1A	5	1A	25	3	3	1	1

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintains intended course and speed while avoiding collisions, rammings, and groundings.

TASK: Visually scans the waters surrounding the intended course utilizing the naked eye and binoculars in order to detect and identify navigational hazards and aids to navigation.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly scans the surrounding waters.
* Accurately and promptly identifies various aids to navigation and navigational hazards.

Numerical:
* In 100% of the cases, all necessary navigational aids and all navigational hazards are detected and identified.

TRAINING CONTENT

Functional:
* How to use binoculars.
* How to visually recognize hazards such as floating debris, shallow water, etc.
* How to visually recognize various aids to navigation such as fixed and floating channel markers, lighthouse, ranges, etc.
* How to visually recognize various aids to navigation.

Specific:
* Knowledge of navigational aids along the course, and their particular characteristics.
* Knowledge of special hazards to navigation known in particular locale.
* Knowledge of navigational aids along the track and their particular characteristics.

TASK CODE: MASTER-V.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	55	1A	5	3A	40	3	3	3	1

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintain intended course and speed in order to avoid collisions, rammings, and groundings.

TASK: Operates the radar and fathometer in order to detect and identify navigational hazards and aids to navigation.

PERFORMANCE STANDARDS

Descriptive:
* Selects the optimum combination of range scales, sector search, intensity, etc., for the most accurate and prompt detection of navigational hazards and aids to navigation.
* Accurately detects various aids to navigation and navigational hazards on radar.
* Accurately detects any navigational hazards on fathometer.

Numerical:
* In 100% of the cases, all necessary navigational aids and all navigational hazards are detected.

TRAINING CONTENT

Functional:
* How to manipulate radar unit, i.e., vary range scales, sector search selector, intensity, range and bearing circles and lines, true or relative motion mode, etc.
* How to manipulate fathometer unit, i.e., vary depth scale, intensity, etc.
* How to detect navigational hazards and aids to navigation on radar and fathometer.
* How to identify navigational hazards and aids to navigation on radar and fathometer.

Specific:
* Knowledge of navigational aids along course, or man-made and geophysical characteristics which present good radar targets.
* Knowledge of special hazards known along route which present radar targets.
* Knowledge of own OSV's particular radar unit.
* Knowledge of own OSV's particular fathometer unit.

TASK CODE: MASTER-V.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	45	1A	5	3A	50	3	3	3	2

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintain intended course and speed in order to avoid collisions, rammings and groundings.

TASK: Operates and takes readings from RDF, loran, radar, and fathometer, as applicable, in order to determine lines of position, water depths, and navigational positions.

PERFORMANCE STANDARDS

Descriptive:
* Selects the optimum system or combination of systems for most accurate and prompt acquisition of information.
* Accurately reads selected system output and precisely transposes those data to charts.

Numerical:
* In 100% of the cases, ranges and bearings are determined and are within acceptable limits commensurate with ship speed, channel configuration and limitations, and prevailing environmental situation along route.

TRAINING CONTENT

Functional:
* How to select appropriate navigational system.
* How to operate and take ranges, bearings, and depth readings from selected system.
* How to transpose those readings to navigational charts.

Specific:
* Knowledge of those fixed aids to navigation or man-made and geophysical characteristics along route which present good radar targets.
* Knowledge of availability and reliability of various electronic navigational systems along route.

TASK CODE: MASTER-V.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	75	1A	5	1A	20	2	2	3	3

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintain intended course and speed in order to avoid collisions, rammings and groundings.

TASK: Monitors wind direction and speed indicators, and obtains/reviews information on currents and wave height and direction, in order to ascertain wind, current, and wave conditions.

PERFORMANCE STANDARDS

Descriptive:
* Correctly reads all instruments.
* Reliably estimates wave height and direction.

Numerical:
* In 100% of the cases, readings and observations are within acceptable limits in accordance with particular situation.

TRAINING CONTENT

Functional:
* How to read wind speed and direction indicators.
* How to visually estimate wave height and direction.
* Where to obtain current data.

Specific:
* Knowledge of prevailing environmental conditions along course and seasonal variations throughout the range of expected values.

TASK CODE: MASTER-V.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	85	1A	5	1A	10	2	1	2	2

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintains intended course and speed in order to avoid collisions, rammings and groundings.

TASK: Reads dials of instruments such as compass, rudder angle indicator, thottle position indicator, and RPM indicator; visually scans steering and propulsion system status indicators; looks and listens for steering machinery and propulsion system audio and visual failure alarms, in order to ascertain heading, speed, rudder angle, and propeller speed, and to monitor operating conditions of steering and propulsion systems.

PERFORMANCE STANDARDS

Descriptive:
* Correctly reads and surveys all instrumentation.

Numerical:
* In 100% of the cases, readings and observations are within acceptable limits in accordance with particular situation.

TRAINING CONTENT

Functional:
* How to read compass, rudder angle indicator, throttle position indicator, and RPM indicator.
* How to monitor steering and propulsion system status indicators.

Specific:
* Knowledge of location, arrangement, and characteristics of particular indicators, displays, and alarms on own OSV.

TASK CODE: MASTER-V.A.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	85	1A	5	2B	10	3	2	2	2

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintains intended course and speed in order to avoid collisions, rammings and groundings.

TASK: Monitors voice radio (bridge-to-bridge and/or ship-to-shore) and internal communication systems in order to maintain radio watch.

PERFORMANCE STANDARDS

Descriptive:
* Remains attentive to all voice radio traffic.
* Efficiently monitors all communications applicable to own OSV and situation.

Numerical:
* In 100% of the cases, all pertinent communications are detected, understood, and acknowledged.

TRAINING CONTENT

Functional:
* How to operate various radio frequency (rf) equipment.
* Knowledge of voice radio communication procedures.

Specific:
* Knowledge of specific rf equipment provided on own OSV.

TASK CODE: MASTER-V.A.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	90	1A	5	1A	5	5	6	4	3

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintain intended course and speed in order to avoid collisions, rammings and groundings.

TASK: Examines and evaluates total data input concerning environmental situation, own OSV's characteristics, status of aboard equipment, collision hazards, and own OSV's mission (purpose and goals), in order to determine course of action to maintain desired course and speed, while simultaneously avoiding collisions, rammings or groundings.

PERFORMANCE STANDARDS

Descriptive:
* Anticipates any and all possibilities which may arise, especially other ships' intentions and actions.
* Continually maintains mental alertness, i.e., is vigilant.
* Maintains sense of proportion among input data and various action options as situation changes or progresses.
* Makes decision in timely manner commensurate with situation.
* Acts effectively and with aplomb under pressure.

Numerical:
* In 100% of the cases, all pertinent data are examined and evaluated in accordance with the particular situation before decision is reached.

TRAINING CONTENT

Functional:
* Understands interrelationships which exist among OSV's and environmental factors as they relate to OSV's controllability.
* How to use regulations, conventions, principles and Rules of the Nautical Road for navigating an OSV in non-restricted waters.

Specific:
* Knowledge of own and other vessels' hydrodynamic characteristics as they may be affected by prevailing environmental conditions along route and the seasonal variations of those environmental conditions through the range of expected values.
* Knowledge of own OSV's emergency bill organization and emergency procedures.
* Knowledge of own OSV's mission at the time.

TASK CODE: MASTER-V.A.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	45	1A	5	1B	50	1	1	1	1

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintain intended course and speed in order to avoid collisions, rammings and groundings.

TASK: Adjusts RPM of OSV's wheel(s) and bow thruster (if applicable) or internal communications circuits, in order to change speed.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately manipulates equipment to effect speed change.

Numerical:
* In 100% of the cases, all adjustments are made exactly as ordered (or desired).

TRAINING CONTENT

Functional:
* How to operate bridge throttles and communications circuits.

Specific:
* Special characteristics and location of own OSV's equipment.

TASK CODE: MASTER-V.A.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	45	1A	20	1C	50	2	1	1	2

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintain intended course and speed in order to avoid collisions, rammings and groundings.

TASK: Turns ship's helm, adjusts autopilot, reads compasses (gyro and magnetic) and rudder angle indicator in order to change or maintain course.

PERFORMANCE STANDARDS

Descriptive:
* Routinely and accurately manipulates helm to change or maintain course.
* Continuously monitors compass, rudder angle, and rate of turn indicator.

Numerical:
* In 100% of the cases, all readings of instrumentation are within acceptable limits in accordance with particular situation.
* In 100% of the cases, all helm adjustments are made exactly as ordered (or desired).

TRAINING CONTENT

Functional:
* How to operate a helm.
* How to read a compass.
* How to operate an autopilot.
* How to read a rudder angle indicator and a rate of turn indicator.
* How to detect drift off desired heading.

Specific:
* Knowledge of own OSV's handling characteristics, i.e., rudder rate, lateral stability, rate of turn, etc.

TASK CODE: MASTER-V.A.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1	5	1	80	1	1	1	1

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintain intended course and speed in order to avoid collisions, rammings and groundings.

TASK: Sounds OSV's whistle and displays required lights/signals/flags in accordance with Rules of the Road, in order to maneuver in non-restricted waters safely and according to proper procedure.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates whistle and displays appropriate signals, flags and navigational lights.
* Operation of whistle and displaying of flags is timely to change course or ordering engines astern.

Numerical:
* In 100% of the cases, appropriate whistle signals are sounded.
* In 100% of the cases, all other appropriate day signals are displayed.
* In 100% of the cases, appropriate navigation lights are displayed.

TRAINING CONTENT

Functional:
* How to operate OSV whistle.
* How to operate navigation lights.
* How to identify and use signal flags.
* Knowledge of Rules of the Road pertaining to whistle, flag signals and day shapes.

Specific:
* Knowledge of location of whistle controls (automatic and manual), navigation lights panel and day signals on own OSV.

TASK CODE: MASTER-V.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	85	1A	5	1A	10	4	5	4	2

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Identify and respond to potentially hazardous conditons in order to avoid collisions and rammings.

TASK: Assesses all other vessel traffic and location of all rigs in vicinity and navigational situation in order to determine the existence of any real or potential collision hazard.

PERFORMANCE STANDARDS

Descriptive:
* Accurately determines the course, speed, closest point of approach (CPA), time to closest point of approach (TCPA) of all threatening traffic in vicinity.
* Properly ascertains the governing rules of the road and considers any other restraints imposed upon own OSV or other traffic by applicable navigation rules and practices, if provided.
* Anticipates possible actions by threatening traffic which may dictate reassessment in timely manner commensurate with situation.

Numerical:
* In 100% of the cases, all potential traffic data are assessed for potential collision hazards.

TRAINING CONTENT

Functional:
* Understands principles of relative motion.
* How to determine course, speed, CPA, TCPA of all other vessels.
* Understands applicable rules of the road and the limitations they impose upon his OSV in determining potential collision hazard and possible counter action.

Specific:
* Knowledge of prevailing traffic patterns along ›ute including seasonal variations.
* Knowledge of applicable navigation rules and practices, if provided.

TASK CODE: MASTER-V.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	90	1A	5	1A	5	4	4	2	3

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Identify and respond to potentially hazardous conditions in order to avoid collisions and rammings.

TASK: Examines and evaluates total data input from all tasks in MASTER-V.A. in order to determine a course of action to maneuver the OSV so as to avoid identified traffic and rigs in a safe manner.

PERFORMANCE STANDARDS

Descriptive:
* Anticipates any and all possiblities which may arise, especially other ships' intentions and actions.
* Continually maintains mental alertness, i.e., is vigilant.
* Maintains sense of proprotion among input data and various action options as situation changes or progresses.
*Makes decision in timely manner commensurate with situation.
* Acts effectively and with aplomb under pressure.

Numerical:
* In 100% of the cases, all pertinent data are examined and evaluated in accordance with the particular situation before decision is reached.

TRAINING CONTENT

Functional:
* Understands principles of relative movement.
* How to use regulations and Rules of the Nautical Road for navigating an OSV in non-restricted waters.

Specific:
* Knowledge of own and other vessels' hydrodynamic characteristics as they may be affected by prevailing environmental conditions.
* Training required in tasks MASTER-V.A.

TASK CODE: MASTER-V.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	75	1A	20	1	5	1	1	1	2

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Maintain required records and logs.

TASK: Records required information in specified logs in order to have legal documentation of OSV's maneuvering and material condition history.

PERFORMANCE STANDARDS

Descriptive:
* Is complete, accurate, and legible in recording entries.
* Is able to log information quickly after hearing it once.

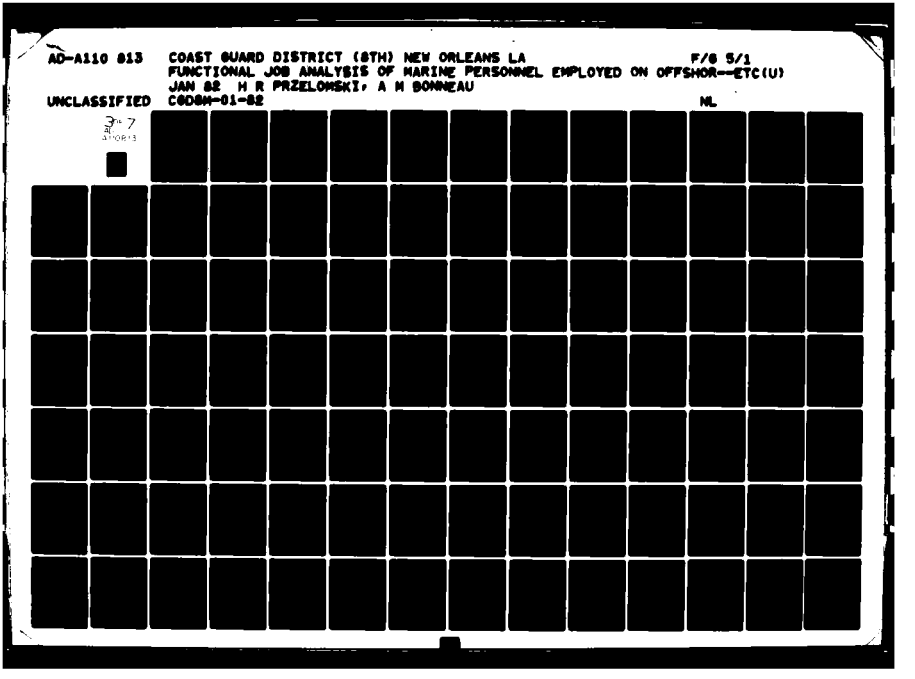
Numerical:
* In 100% of the cases, all required information is recorded.

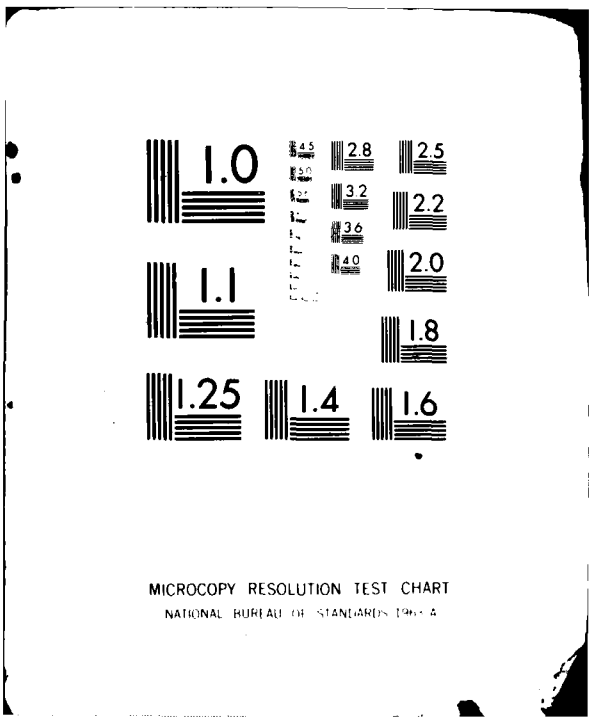
TRAINING CONTENT

Functional:
* Knowledge of information to be recorded in each log (communication, maneuvering, and safety equipment checks, draft readings, meteorological information, course and speed changes, unusual occurrances, communicatior. traffic, anchor bearings, etc.).
* Knowledge of standard phraseology required for each entry.
* Knowledge of the source of each item to be recorded.
* Knowledge of who is permitted to make entries in each log.

Specific:
* Knowledge of information specific to own OSV.

AD-A110 813 COAST GUARD DISTRICT (8TH) NEW ORLEANS LA F/G 5/1
FUNCTIONAL JOB ANALYSIS OF MARINE PERSONNEL EMPLOYED ON OFFSHOR--ETC(U)
JAN 82 H R PRZELOMSKI, A M BONNEAU
UNCLASSIFIED CGDSM-01-82 NL

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

TASK CODE: MASTER-VI.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	2	2	3	3

GOAL: Conduct transfer operations between OSV and drilling and production rigs /platforms.

OBJECTIVE: Position OSV to safely transfer cargo to a rig/platform.

TASK: Estimates wind direction and speed current direction and velocity and wave height by visually observing environmental conditions including judging wave height by the rise and fall of the sea on the rig legs in order to aid in determining a safe approach to the rig/platform.

PERFORMANCE STANDARDS

Descriptive:
* Ascertains wind direction and speed, and current direction and velocity.
* Ascertains wave height.

Numerical:
* In 100% if the cases, pertinent environmental observations are determined within the particular situation.

TRAINING CONTENT

Functional:
* How to determine wind speed and direction.
* How to estimate current direction and velocity.
* Understands environmental factors as they relate to the controllability of an OSV.

Specific:
* Knowledge of own OSV's hydrodynamic characteristics as they may be affected by prevailing environmental conditions.

TASK CODE: MASTER VI.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	85	1A	5	1A	10	5	5	4	3

GOAL: Conduct transfer operations between OSV and drilling and production rigs/platforms.

OBJECTIVE: Position OSV to safely transfer cargo to a rig/platform.

TASK: Evaluates the prevailing environmental conditions, the cargoes to be transferred, and the physical configuration of the rig and cranes, using own judgement and experience to determine if a method to safely moor the OSV and transfer cargo without endangering personnel, OSV, the rig/platform, and cargo exists.

PERFORMANCE STANDARDS

Descriptive:
* All possible methods of mooring and transferring of cargoes are considered.
* Is able to remain in control of the situation without being intimidated or influenced by outside sources.

Numerical:
* In 100% of the cases, the safest method for mooring and transferring cargoes is used.
* In 100% of the cases, the OSV and crew are not placed in jeopordy if there is no safe way to offload the cargo.

TRAINING CONTENT

Functional:
* Knowledge of methods used to transfer different cargoes to rigs/platforms.
* Knowledge of the advantages and disadvantages of different methods of mooring to a rig/platform.
* Experience in maneuvering an OSV around a rig/platform.
* How to operate communications equipment.

Specific:
* Knowledge of own OSV's handling characteristics as affected by environmental conditions.
* Knowledge of configuration of rig/platform to be serviced (mooring set-up, crane locations, anchoring system, etc.).

TASK CODE: MASTER-VI.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	50	1A	5	1B	45	5	5	4	3

GOAL: Conduct transfer operations between OSV and drilling and production rigs/platforms.

OBJECTIVE: Position OSV to safely transfer cargo to a rig/platform.

TASK: Maneuvers the OSV into/away from the rig/platform utilizing bridge throttle controls (bow thruster, if applicable), helm, mooring buoy or own anchor (if necessary), in order to safely position the OSV for transferring cargo.

PERFORMANCE STANDARDS

Descriptive:
* Safety considerations are given priority in deciding to continue approach.
* Remains alert for changes in the situation.
* Manipulates bridge throttles expeditiously and accurately to change speed and direction.
* Routinely and continually manipulates helm and rudders to change direction.

Numerical:
* In 100% of the cases, all bridge throttle and helm adjustments are made exactly as desired.
* In 100% of the cases, the OSV is maneuvered so as to prevent injuries and damage.

TRAINING CONTENT

Functional:
* Knowledge of proper procedures for anchoring an OSV.
* How to cast-off from a rig/platform.
* How to perform different approaches for mooring to a rig/platform.
* How to operate bridge throttle controls.
* How to operate a helm.
* Experience in handling an OSV around a rig/platform.

Specific:
* Knowledge of own OSV's handling characteristics as affected by environmental conditions.
* Knowledge of own OSV's bridge throttle controls and helm.

TASK CODE: MASTER-VI.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	10	2	55	1C	35	3	3	1	1

GOAL: Conduct transfer operations between OSV and drilling and production rigs/platforms.

OBJECTIVE: Position OSV safely to transfer cargo to a rig/platform.

TASK: Communicates with own crew and rig/platform personnel either directly or by radio, and directs the deployment and securing of appropriate lines, hawsers, fenders, etc., in order to safely secure the OSV alongside or off the rig/platform.

PERFORMANCE STANDARDS

Descriptive:
* Properly and clearly communicates all directions.
* Appropriate lines, hawsers, fenders, etc. are accurately and expeditiously deployed and attached to secure the OSV.
* safety considerations are given priority in securing the OSV.

Numerical:
In 100% of the cases, the OSV is secured in the desired manner for the particular transfer evolution without damage to the OSV or rig/platform.

TRAINING CONTENT

Functional:
* Understands the procedure for securing an OSV to a rig/platform.
* Knows the safety procedures involved in securing the OSV to a rig/platform.
* How to operate communications equipment, VHF sets, walkie-talkies, etc.

Specific:
* Knowledge of particular procedures and practices for securing to the particular rig/platform.
* Knowledge of radio equipment on own OSV.

TASK CODE: MASTER-VI.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	1A	5	2C	65	2	3	2	2

GOAL: Conduct transfer operations between OSV and drilling and production rigs/platforms.

OBJECTIVE: Position OSV to safely transfer cargo to a rig/platform.

TASK: Maintains position of OSV to the rig/platform by adjusting bridge throttle controls (bow thruster, if applicable), and turning the helm when environmental conditions prevent the OSV from securing engines, in order to safely transfer the cargoes.

PERFORMANCE STANDARDS

Descriptive:
* Manipulates bridge throttle controls accurately to maintain position in the seaway.
* Continually adjusts helm and rudder to maintain desired orientation with the rig/platform.
* Remains alert to situation changes that may necessitate terminating the transfer operation.

Numerical:
* In 100% of the cases, the OSV is maintained in a position conducive to a safe transfer of cargoes without damage to the OSV or rig/platform.

TRAINING CONTENT

Functional:
* How to operate bridge throttle controls.
* How to operate a helm.
* Experience in handling an OSV around a rig/platform.

Specific:
* Knowledge of own OSV's handling characteristics as affected by environmental conditions.
* Knowledge of own OSV's bridge throttle controls and helm.

TASK CODE: MASTER-VI.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	60	2	30	1A	10	2	3	3	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Position OSV to safely transfer cargo to a rig/platform.

TASK: Continually monitors the transfer of cargoes to the rig/platform, by visually observing and by communicating with the rig/platform in order to ensure that cargo is transferred in a proper sequence so as to maintain vessel stability and provide a safe work platform on the cargo deck.

PERFORMANCE STANDARDS

Descriptive:
* Communicates intentions clearly and accurately.
* Cargo is transferred in a sequence that will maintain maximum vessel stability.
* Records the specifics as to type, amount, etc., for cargoes transferred.

Numerical:
* In 100% of the cases, all of the cargo is transferred to the rig/platform without damaging the OSV, the rig/platform or injuring personnel or the environment.

TRAINING CONTENT

Functional:
* Knowledge of vessel stability and trim.
* Knowledge of safe and proper procedures for transferrring cargoes from an OSV.
* How to operate communications equipment, VHF sets, walkie-talkies, etc.

Specific:
* Knowledge of the affect of cargo transfer and ballast on own OSV's stability.

TASK CODE: MASTER-VI.A.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	1	3	2	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Position OSV to safely transfer cargo to a rig/platform.

TASK: Logs all of the specifics of any casualty (and Letters of Protest) that occur during a transfer operation to be able to file reports as required by government regulations and company policy, and immediately notifies the company of the casualty in order to provide accurate documentation.

PERFORMANCE STANDARDS

Descriptive:
* Is complete, accurate, and legible in recording entries.
* Immediately notifies the company of all casualties.

Numerical:
* In 100% of the cases, all required information is recorded and notifications are made regarding casualties during transfer operations.

TRAINING CONTENT

Functional:
* How to log the specifics of a casualty.
* Knowledge of Letters of Protest and their uses.
* How to operate communications equipment.
* Knowledge of information to be recorded in the log.

Specific:
* Knowledge of company's policy regarding Letters of Protest.
* Knowledge of government regulations pertaining to vessel casulties.

TASK CODE: MASTER-VI.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	80	1A	5	1A	15	2	2	3	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely anchor OSV.

TASK: Estimates wind direction and speed, current direction and velocity, and water depth by visually observing environmental conditions and manipulating the fathometer in order to prepare for a safe anchoring.

PERFORMANCE STANDARDS

Descriptive:
* Ascertains wind direction and speed, and current direction and velocity.
* Ascertains the depth of the water.

Numerical:
* In 100% of the cases, pertinent environmental observations are determined within acceptable limits in accordance with the particular situation.

TRAINING CONTENT

Functional:
* How to determine wind speed and direction.
* How to estimate current direction and velocity.
* How to operate a fathometer.
* Understands environmental factors as they relate to the controllability of an OSV.

Specific:
* Knowledge of fathometer on own OSV.
* Knowledge of own OSV's hydrodynamic characteristics as they may be affected by prevailing environmental conditions.

TASK CODE: MASTER-VI.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	80	2	15	1A	5	2	2	1	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely anchor OSV.

TASK: Verifies and checks the position of flowlines, pipelines, and communication lines in the area by studying pipeline charts, communicating with the rig/platform, and visually scanning the rig/platform in order to prevent damage to underwater lines or OSV.

PERFORMANCE STANDARDS

Descriptive:
* Ascertains the position of flowlines, pipelines and communication lines before commencing an anchoring operation.

Numerical:
* In 100% of the cases, all underwater lines are identified and located prior to anchoring.

TRAINING CONTENT

Functional:
* How to read and understand a pipeline chart.
* Understanding of the inherent dangers of anchoring near a production platform.
* How to operate communications equipment.

Specific:
* Knowledge of the location of various underwater lines for the specific rig/platform.
* Knowledge of the own OSV's communication equipment.

TASK CODE: MASTER-VI.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	90	1A	5	1A	5	3	3	3	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely anchor OSV.

TASK: Ascertains that the proper types and amounts of ground tackle are avilable using navigational charts and experience in order to safely anchor the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Routinely ascertains bottom composition.
* Determines the type and amount of ground tackle to properly anchor the OSV.

Numerical:
* In 100% of the cases, the proper types and amounts of ground tackle are determined to safely anchor the OSV.

TRAINING CONTENT

Functional:
* How to read and understand navgational chart bottom symbols.
* Knowledge of ground tackle.
* Understands the advantages and disadvantages of different anchors, i.e., Danforth, mushroom, patent, etc.
* How to determine scope of chain to be used.

Specific:
* Knowledge of own OSV's ground tackle.
* Knowledge of specific area's bottom composition.

TASK CODE: MASTER-VI.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	65	1A	5	2C	30	3	4	2	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely anchor OSV.

TASK: Maneuvers the OSV utilizing bridge throttle controls (bow thrusters, if applicable), and helm in order to properly position and anchor the OSV in the desired locations.

PERFORMANCE STANDARDS

Descriptive:
* Safety considerations are given priority in deciding to continue the anchoring operation.
* Remains constantly alert for changes in the situation.
* Routinely and continually manipulates bridge throttle controls and helm to alter speed and change direction.

Numerical:
* In 100% of the cases, all bridge throttle and helm adjustments are made exactly as desired.
* In 100% of the cases, the OSV is maneuvered so as to safely anchor the OSV.

TRAINING CONTENT

Functional:
* Knowledge of anchoring procedures and safety considerations.
* How to operate bridge throttle controls.
* Hbw to operate a helm.
* Experience in anchoring an OSV.

Specific:
* Knowledge of own OSV's handling characteristics as affected by environmental conditions.
* Knowledge of own OSV's bridge throttle controls and helm.

TASK CODE: MASTER-VI.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	5	75	1C	15	3	3	2	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely anchor OSV.

TASK: Communicates with own crew directly, by voice, hand signals, and internal communication system, to supervise the anchoring evolution, in order to safely anchor the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Properly and clearly communicates all directions.
* Provides effective supervision during anchoring evolution.

Numerical:
* In 100% of the cases, the OSV is anchored in the desired manner.

TRAINING CONTENT

Functional:
* How to operate internal communication system.
* Knowledge of proper terminology in anchoring.
* Knowledge of anchoring procedure and safety considerations.
* Knowledge of proper hand signals.

Specific:
* Knowledge of own OSV's internal communication system.

TASK CODE: MASTER-VI.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	55	5	40	1A	5	4	4	1	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely anchor OSV.

TASK: Sets anchor and radio watch using own judgement as to the expericence level of particular crew members, prevailing environmental conditions, and nearby navigational hazards, and within established company policy, in order to ensure the safety of the OSV and monitor the OSV's radios.

PERFORMANCE STANDARDS

Descriptive:
* Appropriate watch is set for the prevailing conditions.
* Instructions are clear and complete.

Numerical:
* In 100% of the cases, adequate watch schedules are developed to ensure the safety of the OSV while at anchor.

TRAINING CONTENT

Functional:
* How to estimate the affects of environmental conditions, i.e., wind, waves, and current on an anchored vessel.
* How to evaluate experience level of crew members.
* Hbw to adjust instructions based on the experience level of the individual.

Specific:
* Knowledge of the characteristics of own OSV's ground tackle.
* Knowledge of established company policy with regard to maintaining radio and anchor watches.

TASK CODE: MASTER-VII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	65	2	30	1A	5	2	2	3	2

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Prepare for anchor handling trip.

TASK: Coordinates with the dispatcher the estimated duration of the trip, and the arrival and number of personnel in the anchor handling crew (if appropriate) in person, by telephone, or radio, in order to properly plan for the trip.

PERFORMANCE STANDARDS

Descriptive:
* Obtains all available information to properly plan for anchor handling trip.
* Properly and effectively communicates with the dispatcher.

Numerical:
* In 100% of the cases, obtains the correct information for anchor handling trip.
* In 100% of the cases, is able to properly plan for the anchor handling trip.

TRAINING CONTENT

Functional:
* How to operate communications equipment.
* Knowledge of anchor handling procedures.
* Understanding of voice communication procedures.

Specific:
* Knowledge of companies' policies and guidelines for anchor handing jobs.
* Knowledge of communications equipment on own OSV.

TASK CODE: MASTER-VII.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	25	2	65	1A	5	1	2	2	2

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Prepare for anchor handling trip.

TASK: Verifies and checks with mate, chief engineer and anchor handling crew foreman (if applicable), that all systems on the winch have been checked while running out the anchor work wire, shackles greased, pelican hooks and associated gear and tools are available, and burning and welding gear has been tested in order to be able to perform the job.

PERFORMANCE STANDARDS

Descriptive:
* Anchor handling winch systems are checked out for proper operation.
* Anchor handling gear and tools are in good condition and available.
* Burning and welding gear is tested for proper operation.

Numerical:
* In 100% of the cases, all anchor handling equipment and associated gear and tools are operable and available.

TRAINING CONTENT

Functional:
* Understanding of safety considerations and proper procedures in handling rig anchors.
* Knowledge of anchor handling gear and tools.
* How to operate a winch.
* General knowledge of welding and associated gear.

Specific:
* Knowledge of own OSV's anchor handling capabilities.
* Knowledge of company policy and guidelines for anchor handling jobs.

TASK CODE: MASTER-VII.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	5	30	2B	20	5	5	4	4

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Prepare for anchor handling trip.

TASK: Positions OSV at a terminal to load additional anchors, anchoring systems or associated gear if required, by using the tasks required in MASTER-II/III/IV in order to perform the job.

PERFORMANCE STANDARDS

Descriptive:
* Accurately positions the OSV at the terminal to facilitate loading.
* Performance standards applicable to MASTER-II/III/IV.

Numerical:
* In 100% of the cases, positions the OSV to load required anchors, anchoring systems and associated gear.

TRAINING CONTENT

Functional:
* Training required in MASTER II/III/IV.

Specific:
* Knowledge required to perform the tasks of a MASTER-II/III/IV.

TASK CODE: MASTER-VII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	35	4	60	1A	5	4	4	2	3

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Planning the anchor handling evolution to be performed.

TASK: Plans and communicates with the anchor handling foreman (if applicable), rig captain and underwriter's surveyor (if rig move), in order to reach agreement on the procedure to be followed in setting out/running anchors and retrieving/lifting anchors.

PERFORMANCE STANDARDS

Descriptive:
* A procedure taking safety into consideration is agreed upon.
* Communications to be used during the operation are established.

Numerical:
* In 100% of the cases, an agreement is reached as to the procedures to be followed during the anchor handling operation and is understood by all concerned.

TRAINING CONTENT

Functional:
* Knowledge of various anchoring deployment arrays.
* Understanding of safety considerations and proper procedures for handling rig anchors.

Specific:
* Knowledge of the arrangement and special characteristics of particular rig's anchor handling equipment.
* Knowledge of particular rig's anchoring deployment array.

TASK CODE: MASTER-VII.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	20	4B	75	1A	5	3	4	1	3

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Planning the anchor handling evolution to be performed.

TASK: Explains to the crew the principles of anchor work and assigns their specific duties, (if an anchor handling crew is not used) by using own judgement and experience in order to properly prepare the crew to safely preform the job.

PERFORMANCE STANDARDS

Descriptive:
* Accurately describes the operation to the crew.
* Assigns crew to specific jobs within their capability to perform.

Numerical:
* In 100% of the cases, the crew is properly briefed on the anchor handling procedures and their assigned duties/tasks.

TRAINING CONTENT

Functional:
* Knowledge of safety considerations and proper procedures for handling rig anchors.
* Knowledge of winch signals.
* How to rig the OSV for anchor handling.

Specific:
* Knowledge of specific OSV's anchor handling capabilities and procedures.

TASK CODE: MASTER-VII.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	5	30	2B	20	5	5	4	4

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Running an anchor for a rig.

TASK: Positions the OSV to receive anchors, anchor pennants and anchor buoys from the rig, using own judgment to compensate for various currents, wave actions and other weather conditions, in order to run the anchor.

PERFORMANCE STANDARDS

Descriptive:
* Accurately positions the OSV to receive anchors, anchor pennants and anchor buoys.
* Is alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, anchors, anchor pennants and anchor buoys are received from the rig without personnel injuries or damage to the OSV or rig.

TRAINING CONTENT

Functional:
* How to estimate wind direction and speed.
* How to estimate current velocity and direction.
* Understanding of the environmental factors as they relate to the controllability of the OSV.
* Understanding of the procedures to receive and rig anchor, anchor pennant and anchor buoy from a rig.
* Understanding of the safety procedures in passing heavy equipment between two vessels.
* Knowledge of winch signals.

Specific:
* Knowledge of the own OSV's handling characteristics as they may be affected by prevailing environmental conditions.
* Knowledge of handling anchors, anchor pennants and anchor buoys on own OSV.

TASK CODE: MASTER-VII.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	90	1A	5	1A	5	3	2	1	2

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Running an anchor for a rig.

TASK: Observes and monitors the rigging of the anchor system by the anchor handling crew (or OSV crew) for running, by using own experience and judgement, in order to ensure it is done properly and safely.

PERFORMANCE STANDARDS

Descriptive:
* Ensures that safety procedures are heeded.
* Anchor is rigged properly for lowering.
* Remains alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, the anchor is made ready for lowering without personnel injuries.

TRAINING CONTENT

Functional:
* Knowledge of anchor handling procedures, and associated equipment, gear and tools.
* Understanding of winch signals.
* Understanding of the make-up of anchor systems.
* How to ensure pennant is longer than depth of water.
* Understanding of safety procedures for rigging the anchor for running.

Specific:
* Knowledge of the make-up of the anchor system for the particular rig.
* Knowledge of company guidelines and policy for running anchors.

TASK CODE: MASTER-VII.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	5	30	2B	20	5	5	4	4

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Running an anchor for a rig.

TASK: Maneuvers the OSV, as the rig pays out cable (chain), to run out the anchor to a position confirmed by the rig; lowers the anchor and connects the achor buoy in order to set the anchor while avoiding collisions and/or rammings.

PERFORMANCE STANDARDS

Descriptive:
* Accurately runs the anchor out to the position required by the rig.
* Lowers the anchor to the sea bottom.
* Remains alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, anchors are run and lowered in the desired locations without incident.

TRAINING CONTENT

Functional:
* Knowledge of procedures for running and lowering anchors.
* Training required to maneuver a vessel as in MASTER-V.A/B.
* Understanding of radio signals.
* Understanding of safety procedures for running anchors.

Specific:
* Knowledge of the capabilities of own OSV to run anchors.
* Knowledge of the established company guidelines and policy for running anchors.

TASK CODE: MASTER-VII.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	5	30	2B	20	5	5	4	4

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Lifting an anchor for a rig.

TASK: Maneuvers the stern of the OSV to the anchor buoy of the anchor to be lifted, by using own judgement to compensate for various currents, wave actions, and other weather conditions in order to lasso the buoy.

PERFORMANCE STANDARDS

Descriptive:
* Properly aligns the anchor buoy at the center of the stern roller on the OSV.
* Safely lassos the anchor buoy.
* Is alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, the anchor buoy is properly positioned at the stern of the OSV and safely lassoed.

TRAINING CONTENT

Functional:
* Knowledge of anchor handling operations.
* Knowledge of the procedures for lifting an anchor.
* Training required to maneuver a vessel as in MASTER-V.A/B.
* How to safely lasso an anchor buoy.

Specific:
* Knowledge of the capability of specific OSV for lifting anchors.
* Knowledge of company guidelines and policy for lifting anchors.

TASK CODE: MASTER-VII.D.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	70	1A	5	2B	25	5	5	4	4

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Lifting an anchor for a rig.

TASK: Observes and monitors the bringing of the buoy on deck, diconnection and securing of the buoy, connection of the winch work wire to the anchor pennant, and the lifting of the anchor with the winch in low gear, while positioning the OSV to assist in the operation, in order to lift the anchor off the bottom.

PERFORMANCE STANDARDS

Descriptive:
* Safety considerations take priority.
* Anchor buoy is disconneted and properly secured.
* Winch is operated in low gear and anchor is lifted off the bottom.

Numerical:
* In 100% of the cases, the anchor is lifted off the bottom without mishap.

TRAINING CONTENT

Functional:
* Knowledge of anchor handling operations.
* Knowledge of procedures for lifting an anchor.
* Knowledge of the difficulties that can be encountered while lifting an anchor.
* Understands the safety procedures for lifting an anchor with an OSV.
* How to secure an anchor buoy on an OSV.
* Understanding of winch signals.

Specific:
* Knowledge of the capabilities of specific OSV for lifting anchors.
* Knowledge of company guidelines and policy for lifting anchors.

TASK CODE: MASTER-VII.D.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	2	85	1	5	2	2	2	3

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Lifting an anchor for a rig.

TASK: Communicates with the rig using external communications, advising them that the anchor is off the bottom so that the rig can commence heaving the cable in (pulling the OSV toward the rig) while continuing to lift the anchor to determine if the anchor is damaged or fouled before lifting on the deck, in order to prepare for the racking of the anchors.

PERFORMANCE STANDARDS

Descriptive:
* Safety considerations take priority.
* Properly and effectively communicates with the rig to determine the condition of the anchor and the pennant.
* Properly positions the anchor on the stern of the OSV in preparation for racking the anchor.

Numerical:
* In 100% of the cases, the anchor is lifted on the stern of the OSV and prepared for racking.
* In 100% of the cases, the anchor and the anchor pennant are examined for damage and fouling.

TRAINING CONTENT

Functional:
* How to operate external communications equipment.
* Understanding of voice communication procedures.
* Knowledge of procedures for lifting an anchor.
* How to determine if the anchor is damaged or fouled.
* Understanding of winch signals.
* Understanding of safety procedures for lifting an anchor with an OSV.

Specific:
* Knowledge of the capabilities of specific OSV for lifting anchors.
* Knowledge of the capabilities of the particular rig's anchor handling equipment.
* Knowledge of company guidelines and policy for lifting anchors.

TASK CODE: MASTER-I.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	90	1A	5	1A	5	1	2	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Sign crew on and off.

TASK: Ascertains if OSV is manned in accordance with the Certificate of Inspection by collecting the licenses and documents of crew members in order to complete government paperwork.

PERFORMANCE STANDARDS

Descriptive:
* Properly signs crew on and off.
* Distributes copies of all paperwork as required.
* Identifies manning shortages.

Numerical:
* In 100% of the cases, the crew members are properly signed on and off the OSV.
* In 100% of the cases, the OSV manning is in accordance with the Certificate of Inspection.

TRAINING CONTENT

Functional:
* How to prepare and distribute copies of a "Certificate of Discharge to Merchant Seaman".
* How to ship and discharge crew members.
* Ability to understand the Certificate of Inspection.

Specific:
* Knowledge of manning required on the own OSV by the Certificate of Inspection.

TASK CODE: MASTER-VII.D.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	5	30	2B	20	5	5	4	4

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Lifting an anchor for a rig.

TASK: Maneuvers the OSV into the rig's anchor rack position, using own judgement and experience, in order to allow for the anchor to be safely racked and the anchor pennant lifted on the rig.

PERFORMANCE STANDARDS

Descriptive:
* Safety considerations take priority.
* The OSV is maneuvered to enable the anchor to be safely and expeditiously racked.
* Is alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, the anchor is properly and safely racked.
* In 100% of the cases, the anchor pennant and additional pennants are passed to the rig.

TRAINING CONTENT

Functional:
* Knowledge of the procedures for the racking of anchors.
* Knowledge of the procedures for lifting an anchor.
* Understanding of winch signals.
* Understanding of safety procedures in passing heavy equipment between two vessels.
* Knowledge of the type of problems that may occur during racking an anchor.

Specific:
* Knowledge of the capabilities of specific OSV for lifting anchors.
* Knowledge of the locations of other anchor cables that may still be out from the rig.

TASK CODE: MASTER-VII.E.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	5	30	2B	20	5	5	4	4

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Dragging for or chasing out anchor cable.

TASK: Positions the OSV to receive a grapnel and pennants for dragging or a chain chasing hook or permanent anchor chain chaser and pennants for chasing out anchor cable, using own judgement to compensate for various currents, wave actions, and other weather conditions in order to receive equipment from the rig to drag for or chase out anchor cable.

PERFORMANCE STANDARDS

Descriptive:
* Accurately positions the OSV to receive grapnel, chain chasing hook or permanent anchor chain chaser, and pennants.
* Is alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, grapnel, chain chasing hook or permanent anchor chain chaser, and pennants from the rig without personnel injuries or damage to the OSV or rig.

TRAINING CONTENT

Functional:
* How to estimate environmental conditions.
* Understands environmental factors as they relate to the controllability of an OSV.
* Understanding of the procedures to receive grapnel, chain chasing hook, and pennants from a rig.
* Understanding of safety procedures in passing heavy equipment between two vessels.
* Understanding of winch signals.

Specific:
* Knowledge of specific OSV's handling characteristics as they may be affected by prevailing environmental conditions.
* Knowledge of company guidelines and policy for handling grapnel, chain chasing hook or permanent anchor chain chaser, and pennants.

TASK CODE: MASTER-VII.E.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	75	2	15	1A	10	3	2	2	3

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Dragging for or chasing out anchor cable.

TASK: Verifies and checks the position of flowlines, pipelines, and communication lines, in the area by studying pipeline charts, communicating with the rig, and visually scanning the rig in order to prevent damage to underwater lines or OSV during dragging for or chasing out anchor cable.

PERFORMANCE STANDARDS

Descriptive:
* Ascertains the position of various underwater lines before commencing dragging for or chasing out anchor cable.

Numerical:
* In 100% of the cases, all underwater lines are identified and located prior to dragging for or chasing out anchor cable operations.

TRAINING CONTENT

Functional:
* How to read and understand a pipeline chart.
* How to operate communications equipment.
* Understanding of the potential dangers of dragging for an anchor cable.

Specific:
* Knowledge of the locations of various underwater lines in the operational area.
* Knowledge of company guidelines and policy on dragging for or chasing out anchor cable.
* Knowledge of specific OSV's communication equipment.

TASK CODE: MASTER-VII.E.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	5	30	2B	20	5	5	4	4

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Dragging for or chasing out anchor cable.

TASK: Maneuvers the OSV, using own judgement and experience and accepted grappling procedures, in order to hook the anchor or anchor cable.

PERFORMANCE STANDARDS

Descriptive:
* Accurately maneuvers the OSV to locate the anchor cable by dragging a grapnel.
* Is alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, the anchor cable is located without personnel injuries or damage to the OSV rig or submerged pipe and cables.

TRAINING CONTENT

Functional:
* Knowledge of standard grappling procedures.
* Hbw to tell when anchor or cable has been hooked.
* Understanding of safety procedures in dragging for an anchor cable.
* Understanding of winch signals.

Specific:
* Knowledge of specific OSV's anchor handling capabilities.
* Knowledge of company's guidelines and policy on dragging for anchor cable.

TASK CODE: MASTER-VII.E.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	5	30	2B	20	5	5	4	4

GOAL: Handle anchors and buoys for rigs safely and expeditiously.

OBJECTIVE: Dragging for or chasing out anchor cable.

TASK: Maneuvers the OSV, using own experience and judgement, and accepted chain chasing procedures, in order to lift an anchor.

PERFORMANCE STANDARDS

Descriptive:
* Accurately maneuvers the OSV to hook the anchor using a chain chasing hook.
* Is alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, the anchor is hooked and lifted without personnel injuries, or damage to the OSV or rig.

TRAINING CONTENT

Functional:
* Knowledge of standard chain chasing procedures.
* How to tell the chain chasing hook has hooked the anchor.
* Understanding of the safety procedures in chasing out an anchor cable.
* Understanding of winch signals.

Specific:
* Knowledge of specific OSV's anchor handling capabilities.
* Knowledge of company's policy and guidelines on chasing out anchor cable.

TASK CODE: MASTER-VIII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	25	2	70	1A	5	2	1	2	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Preparation for taking vessel or rig in tow.

TASK: Determines by verifying and checking with the mate and chief engineer that the towing winch and systems are operating and that the tow bar, towing pod, nylon towing spring, chaffing gear, shackles and associated towing gear are aboard and in good condition in order to perform the towing job.

PERFORMANCE STANDARDS

Descriptive:
* Properly evaluates the conditon of the OSV towing winches, equipment and associated gear.

Numerical:
* In 100% of the cases, all towing winches, equipment and associated gear are available and in good condition.

TRAINING CONTENT

Functional:
* Knowledge of towing winches and associated towing gear.
* Knowledge of towing procedures.
* Experience in evaluating the condition of towing gear.

Specific:
* Knowledge of specific OSV's towing capabilities and gear.

TASK CODE:MASTER-VIII.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	45	2	50	1A	5	4	4	2	3

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Preparation for taking vessel or rig in tow.

TASK: Coordinates with the master of the rig, barge captain, charterer's representative and insurance surveyor to reach an agreement on the method of rigging the tow based on its configuration and material condition, responsibilities of all involved, means of communication, etc., using own judgement and within companies' policies and guidelines, and industry standards, in order to safely perform the job.

PERFORMANCE STANDARDS

Descriptive:
* A proper method of rigging the tow is decided upon based on various factors.
* Various means of communication between the OSV and the towed vessel or rig are established.
* Individual responsibilities are agreed upon.

Numerical:
* In 100% of the cases, a mutually acceptable agreement is reached on the procedures to be followed during the towing evolution.

TRAINING CONTENT

Functional:
* General knowledge of towing methods and procedures.
* How to evaluate the condition of a vessel or rig to be towed.
* Understanding of communications equipment.

Specific:
* Knowledge of specific OSV's towing capabilities and gear.
* Knowledge of company policies and guidelines with regard to towing vessels and rigs.
* Knowledge of specific OSV's communications capabilities.
* Knowledge of particular vessel or rig configuration and material condition.

TASK CODE: MASTER VIII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	4A	10	3B	50	2	2	2	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely connect/disconnet to or from the vessel or rig to be towed.

TASK: Determines that towing gear is properly rigged by visually and physically checking the gear, using own experience and judgement, within company policies and industry standards, in order to be ready to rig the towing pennant or briddle.

PERFORMANCE STANDARDS

Descriptive:
* Determines that the OSV towing gear is properly rigged.
* Is alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, the OSV is rigged to tow the particular vessel or rig.

TRAINING CONTENT

Functional:
* General knowledge of towing methods and procedures.
* How to rig an OSV for various methods of towing.
* Knowledge of safety procedures for rigging an OSV for towing.
* Understanding of various towing gear such as shackles, spring lines, stoppers, etc.

Specific:
* Knowledge of specific OSV's towing capabilities and gear.
* Knowledge of methods for rigging the OSV and the towed vessel or rig as decided upon.

TASK CODE: MASTER-VIII.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	50	1A	5	1C	45	5	5	3	3

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely connect/disconnect to or from the vessel or rig to be towed.

TASK: Maintaining the position of the OSV to receive/or pass back the pennant or towing briddle using the bridge throttle controls, helm, and own judgement to compensate for various currents, wave actions, and other weather conditions in order to connect/disconnect the vessel or rig from the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Accurately positions the OSV to receive a pennant or towing briddle.
* Is alert to situation changes that could affect the safety of the crew on the work deck.
* OSV and towed vessel or rig are properly connected or disconnected.

Numerical:
* In 100% if the cases, the OSV and towed vessel or rig are connected or disconnected safely and expeditiously, without incident.

TRAINING CONTENT

Functional:
* Understanding of environmental factors as they relate to controllability of an OSV.
* Understanding of safety procedures in passing heavy equipment between two vessels.
* Knowledge of towing methods and procedures.
* Understanding of winch signals.
* Understanding of various towing gear such as shackles, spring lines, stoppers, etc.

Specific:
* Knowledge of specific OSV's handling characteristics as they may be affected by prevailing environmental conditions.
* Knowledge of specific method of towing to be utilized in the particular towing operation.

TASK CODE: MASTER-VIII.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	65	1A	5	1C	30	3	4	3	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely tow vessel or rig to new location.

TASK: Continually evaluates available data, weather conditions and maneuvering requirements, to adjust the length of tow wire needed to provide a good catenary on the wire, using own judgment and within accepted standard towing practices, in order to safely tow the vessel or rig to the destination.

PERFORMANCE STANDARDS

Descriptive:
* Safely and properly adjusts tow wires as dictated by particular situation.
* Ensures that tow wires are properly secured after adjustments are made.
* Remains alert to situation changes that could affect the safety of the OSV or towed vessel or rig.

Numerical:
* In 100% of the cases, tow wires are adjusted without damaging the tow wires, the OSV, or the towed vessel or rig, or by placing any of them in a hazardous condition.

TRAINING CONTENT

Functional:
* Understands environmental factors as they relate to controllability and safety of an OSV towing a vessel or rig.
* How to take in or let out on a tow wire.
* Understanding of tow wire limitations.
* Understanding of various towing gear such as shackles, spring lines, stoppers, etc.
* Knowledge of the hazards involved in adjusting the tow wire and their causes.

Specific:
* Knowledge of the limitations of a particular tow wire.
* Knowledge of the effect of varying tension on vessel or rig and own OSV.

TASK CODE: MASTER-VIII.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	15	2	60	2B	25	2	3	1	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely tow vessel or rig to a new location.

TASK: Comminicates with vessel or rig being towed as conditions dictate, using compatible communications equipment, in order to remain advised of the situation aboard the towed rig or vessel.

PERFORMANCE STANDARDS

Descriptive:
* Properly and effectively communicates with the vessel or rig to determine conditions aboard.
* Remains alert to changes in towed vessel or rig motion from visual observations.

Numerical:
* In 100% of the cases, all pertinent information regarding conditions aboard the towed vessel or rig are communicated exactly as desired.

TRAINING CONTENT

Functional:
* How to operate various communications equipment.
* Understanding of voice communication procedures.
* Knowledge of hazardous situations inherent with towing operations.
* Knowledge of stability and trim as they relate to towing operations.

Specific:
* Knowledge of specific communications equipment aboard own OSV and towed vessel or rig.
* Knowledge of own OSV's and towed vessel's or rig's stability and trim characteristics.

TASK CODE:MASTER-VIII.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	40	1A	20	2C	40	3	4	3	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely tow vessel or rig to new location.

TASK: Positions the vessel or rig at the desired location using information provided by the rig, own judgement and accepted towing practices, in order to complete the operation.

PERFORMANCE STANDARDS

Descriptive:
* Accurately ascertains navigational position and water depth.

Numerical:
* In 100% of the cases, position of towed vessel or rig is within acceptable limits for prevailing environmental conditions.

TRAINING CONTENT

Functional:
* How to operate and take readings from LORAN unit.
* How to operate and take readings from radar.
* How to operate and take readings from fathometer.
* How to transpose those readings to navigational charts.
* Knowledge of procedures for positioning vessels or rigs.

Specific:
* Knowledge of radar, fathometer, and LORAN units aboard own OSV.
* Knowledge of particular requirements for positioning specific vessel or rig.
* Knowledge of specific communications equipment aboard own OSV and the towed vessel or rig.

TASK CODE: MASTER-IX.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Manipulates buttons, switches, levers of alarm and/or communications system in order to sound alarm and/or issue an OSV-wide alert,and starts fire pump from the wheel house (if applicable), using knowledge of the characteristics of internal communications equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for fire aboard.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of alram device(s) and internal communications system.
* Acts calmly in emergency situation.
* Correctly follows applicable procedures.
* Clearly sounds signal or message so the it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sounds the alarm immediately -upon seeing or hearing about the emergency situation.

TRAINING CONTENT

Functional:
* How to operate internal communications systems, i.e., sound-powered phone, PA system, etc.
* How to operate emergency alarm systems.
* Understands emergency procedures and communicate them to others.

Specific:
* Knowledge of type and location of internal communications system and alarm system on OSV.
* Knowledge of emergency alert procedures, including standard signals and messages.

TASK CODE:MASTER-IX.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	80	2	15	1A	5	4	4	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of a fire aboard an OSV.

TASK: Assesses the type (class) and severity of fire and the capabilities/limitations of personnel and equipment aboard in order to determine the best method of containing/extinguishing the fire, using knowledge of possible classes of fires, of the type of extinguishing agent appropriate for each class of fire, of the type of fire fighting equipment available on the OSV, of knowledge/experience of the personnel available to fight fire, obtaining information about extent of fire from observation and/or from verbal reports, and in accordance with any specified emergency procedures.

PERFORMANCE STANDARDS

Descriptive:
* Accurately analyzes capabilities/limitations of personnel and equipment.
* Properly evaluates the effectiveness of various fire extinguishing agents for a particular type of fire and under given weather conditions.
* Remains calm while receiving and evaluating information.
* Correctly reads and interprets specific emergency procedures.

Numerical:
* In 100% of the cases, confers with own personnel and company personnel on shore, if more information is needed, to assess the situation.
* In 100% of the cases, selects the appropriate fire fighting method for the situation at hand.

TRAINING CONTENT

Functional:
* Understanding of the characteristics of various classes of fires.
* Understanding of the type of extinguishing agents/equipment appropriate for various classes of fires.
* Understanding of type and number of personnel and equipment needed to combat fires of varying severity.

Specific:
* Knowledge of the type and location of extinguishing agents/equipment available on the OSV.
* Knowledge of the capabilities of personnel on the OSV.
* Knowledge of any specified emergency procedures used on the OSV.

TASK CODE:MASTER-IX.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	55	1A	5	1C	40	5	4	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of a fire aboard the OSV.

TASK: Maneuvers the OSV to remain in navigable waters, avoiding other ship contacts, minimizing wind and sea effects and to compensate for the possible loss of the main engines, steering, visibility and stability in order to limit the damage from a fire.

PERFORMANCE STANDARDS

Descriptive:
* Manipulates bridge throttle controls, and helm accurately to maintain a position advantageous for containing the fire.
* Remains alert to situation changes that require immediate actions.
* Remains calm while maneuvering the OSV.

Numerical:
* In 100% of the cases, the OSV is maneuvered to minimize the wind and sea effects and to compensate for a possible additional emergency while limiting damage from a fire.

TRAINING CONTENT

Functional:
* How to operate bridge throttle controls.
* How to operate a helm.
* How to read a rudder angle indicator.
* Knowledge of emergency procedures should loss of main engine, steering, visibility, etc. occur.
* Understanding of stability and trim as related to an OSV.

Specific:
* Knowledge of specific OSV handling characteristics.
* Knowledge of the effects of environmental conditions on the stability and trim of a particular OSV.
* Knowledge of the effects of wind and sea with regard to containing a fire.

TASK CODE:MASTER IX.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	25	5	60	1C	15	4	4	2	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of a fire aboard an OSV.

TASK: Monitors and coordinates the fire fighting activities using the internal communications systems, voice, and visual signals from the bridge to the mate and the chief engineer in order to contain and extinguish the fire.

PERFORMANCE STANDARDS

Descriptive:
* Smoothly and effectively coordinates the fire fighting activities.
* Uses fire fighting techniques appropriate to class of fire and prevailing weather conditions.
* Acts calmly in an emergency situation.
* Correctly uses internal communications equipment.

Numerical:
* In 100% of the cases, remains alert to the situation to decide if directives to crew members should be modified.

TRAINING CONTENT

Functional:
* Understanding of fire fighting techniques.
* How to operate internal communications systems.
* How to coordinate/direct the activities of others.

Specific:
* Knowledge of fire fighting techniques and equipment used on an OSV.
* Knowledge of specified emergency procedures used on an OSV.
* Knowledge of the type of internal communications equipment on a specific OSV.

TASK CODE:MASTER IX.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
2	40	2	40	1C	20	3	3	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of a fire aboard an OSV.

TASK: Summons additional assistance as required from other ships, rigs/platforms, or the Coast Guard, in order to control or extinguish the fire using external communications equipment and using own judgement as to the severity of the situation and the need for such assistance, and in accordance with emergency procedures regarding obtaining assistance.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates external communications system.
* Uses good judgement in discretionary situations.
* Correctly follows emergency procedures.

Numerical:
* In 100% of the cases, obtains additional assistance if it will clearly minimize injury to personnel and/or destruction of the OSV.

TRAINING CONTENT

Functional:
* How to operate external communications equipment.
* Ability to judge severity of fire.
* Knowledge of Lloyd's Standard Form of Salvage Agreement.

Specific:
* Knowledge of types and location of communications equipment.
* Knowledge of emergency procedures used regarding rthe obtaining of assistance.
* Knowledge of established company guidelines and policy on obtaining assistance.

TASK CODE: MASTER-IX.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	40	2	40	1C	20	3	3	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of a fire aboard an OSV.

TASK: Orders abandonment of the OSV and notifies the Coast Guard in order to prevent personnel injury, using internal and external communications equipment and/or alarm system and using own judgement as to the need for abandonment, and in accordance with any emergency procedures the regarding the abandonment of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates communications system and/or alarm system.
* Uses good judgement in discretionary situations.
* Correctly follows emergency procedures.

Numerical:
* In 100% of the cases, acts as quickly as possible to alert the crew once the decision to abondon the OSV has been made.

TRAINING CONTENT

Functional:
* How to operate internal and external communications equipment and/or alarm systems.

Specific:
* Knowledge of the type and location of communications equipment and controls of alarm system on the OSV.
* Knowledge of emergency procedures concerning the abandonment of the OSV.

TASK CODE: MASTER-IX.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Manipulates buttons, switches, levers of alarm and/or communications systems in order to sound alarm and/or to issue an OSV-wide alert, using knowledge of the characteristics of internal communications equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for collision or flooding emergency.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of alarm device(s) and internal communications systems.
* Acts calmly in emergency situation.
* Correctly follows applicable procedure.
* Clearly sounds signal or message so that it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sounds the alarm immediately upon seeing or hearing about an emergency situation.

TRAINING CONTENT

Functional:
* How to operate internal communications systems, i.e., telephone, PA system, intercoms, etc.
* How to operate emergency alarm systems.
* Understands emergency procedures and communicate them to others.

Specific:
* Knowledge of type and location of internal communications systems and alarm system on the OSV.
* Knowledge of emergency alert procedures, including standard signals and messages.

TASK CODE: MASTER-IX.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	80	2	15	1A	5	4	4	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Assesses the source, cause, extent of flooding and the capabilities/limitations of available crew and equipment onboard the OSV in order to determine the type of emergency procedures which are applicable, using knowledge and experience/training of personnel onboard in this type of emergency, own experience of the type of equipment available to combat the situation, and obtaining information about the severity of the situation from observation and/or from verbal reports, and in accordance with any specified emergency procedures.

PERFORMANCE STANDARDS

Descriptive:
* Accurately analyzes capabilities/limitations of personnel and equipment.
* Accurately evaluates the effectiveness of various flood control procedures.
* Remains calm while receiving and evaluating information.
* Correctly interprets specified emergency procedures.

Numerical:
* In 100% of the cases, always obtains additional infonnation if available data are unclear or inadequate for correct assessment of the situation.
* In 100% of the cases, always determines the appropriate dewatering procedures to cope with the extent of flooding at hand while maintaining positive vessel stability.

TRAINING CONTENT

Functional:
* Understanding of the types of procedures used to control flooding.
* Understanding of the personnel and equipment needed to control flooding.
* How to determine the extent of the flooding.

Specific:
* Knowledge of the capabilities of personnel and equipment on the OSV for combating a flood.
* Knowledge of any specified emergency procedures used on the OSV.

TASK CODE: MASTER-IX.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
4	60	1A	5	1C	35	5	4	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Evaluates all available data (if collision or grouding), using own judgement and experience, to determine a course of action for maneuvering the OSV to recover personnel, anchor, or ground the vessel, if necessary, in order to minimize the effects of flooding, wind and sea, and to avoid additional contacts.

PERFORMANCE STANDARDS

Descriptive:
* Manipulates bridge throttle controls and helm accurately to minimize flooding and avoid collisions.
* Remains alert to situation changes that require immediate action.
* Remains calm while maneuvering the OSV.

Numerical:
* In 100% of the cases, the OSV is maneuvered to minimize wind and sea effects, control flooding, and to avoid additional contacts.
* In 100% of the cases, personnel in the water are recovered.

TRAINING CONTENT

Functional:
* How to operate bridge throttle controls.
* How to operate a helm.
* Knowledge of emergency procedures to minimize flooding on an OSV.
* How to anchor an OSV.
* How to recover personnel from the water.

Specific:
* Knowledge of particular OSV's trim and stability data.
* Knowledge of particular OSV's controllability as affected by environmental factors and flooding conditions.
* Knowledge of company policy and guidelines.

TASK CODE: MASTER-IX.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	25	5	60	1C	15	4	4	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Monitor and coordinate personnel to stop or reduce entry of water into OSV by most appropriate method(s), e.g., plugging/patching hole(s), closing valves, turning off pump, etc., in order to avoid intensifying or alleviate the emergency, using knowledge of source, cause, and severity of flooding; of personnel, equipment, and materials available for use to curb the flooding; of the operation of internal communications equipment (if used); and in accordance with any specified emergency procedures.

PERFORMANCE STANDARDS

Descriptive:
* Effectively directs and coordinates personnel.
* Directs personnel in method(s) most appropriate to flood situation.
* Acts calmly in emergency situation.
* Correctly uses internal communications equipment.

Numerical:
* In 100% of the cases, remains alert to the situation to decide if directives to the crew members should be modified.

TRAINING CONTENT

Functional:
* Understanding of various procedures and equipment used to control flooding once source, cause, and severity of flooding are known.
* How to coordinate/direct activities of others.
* How to operate internal communications equipment, e.g., telephones, intercoms, etc.

Specific:
* Knowledge of personnel, equipment, and materials for use to curb flooding that are available on own OSV.
* Knowledge of any specified emergency procedures regarding flood control.
* Knowledge of type of internal communications equipment used on own OSV.

TASK CODE: MASTER-IX.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3	40	2	40	1C	20	3	3	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Summons additional assistance as required from other ships, rigs/platforms, or the Coast Guard, in order to control flooding, using external communications equipment and using own judgement as to the severity of the situation and the need for such assistance, and in accordance with any emergency stipulations or procedures regarding the obtaining of assistance.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates communications system.
* Uses good judgement in discretionary situations.
* Correctly follows emergency stipulations or procedures.

Numerical:
* In 100% of the cases, obtains additional assistance if it will clearly minimize injury or destruction.
* In 100% of the cases, enters into salvage agreements precisely in accordance with company procedures.

TRAINING CONTENT

Functional:
* How to operate external communications equipment.
* Knowledge of Lloyd's Standard Form of Salvage Agreement.

Specific:
* Knowledge of type and location of communications equipment on own OSV.
* Knowledge of emergency stipulations or company procedures used regarding the obtaining of assistance.

TASK CODE: MASTER-IX.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
2	40	2	40	1C	20	3	3	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Orders abandonment of the OSV and notifies the Coast Guard, in order to prevent personnel injury, using internal and external communications equipment and/or alarm system and using own judgement as to the need for abandonment, and in accordance with any emergency stipulations or procedures regarding the abandonment of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates communications systems and/or alarm system.
* Uses good judgement in discretionary situations.
* Correctly follows emergency stipulations or procedures.

Numerical:
* In 100% of the cases, acts as quickly as possible to alert the crew once the decision to abandon the OSV has been made.

TRAINING CONTENT

Functional:
* How to operate internal and external communications equipment, and/or alarm system.

Specific:
* Knowledge of the type and locations of communication equipment and controls of alarm system on own OSV.
* Knowledge of emergency stipulations or procedures concerning the abandonment of own OSV.

TASK CODE: MASTER-IX.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to man overboard situation.

TASK: Communicates message, "man overboard port (starboard) side," using voice and internal communications equipment in order to alert personnel of man overboard emergency.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and clearly alerts OSV personnel of a man overboard emergency.

Numerical:
* In 100% of the cases, all crew members are alerted to the emergency.

TRAINING CONTENT

Functional:
* How to operate internal communications systems, i.e., loud hailer, PA system, etc.
* Knowledge of procedures for man overboard emergency.

Specific:
* Knowledge of own OSV's internal communications equipment.

TASK CODE: MASTER-IX.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
4	55	1A	5	1C	40	5	5	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Repond to man overboard situation.

TASK: Maneuvers the OSV initially to clear the man and remain in navigable waters, using a Williamson turn or other accepted maneuver depending on the situation and environmental conditions in order to safely recover the man.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and precisely maneuvers the OSV to clear the man in the water.
* Navigates the OSV to remain in navigable waters and avoid other vessels.

Numerical:
* In 100% of the cases, the OSV clears the man in the water, remains in naviable waters, and avoids other vessels.

TRAINING CONTENT

Functional:
* How to perform a Williamson turn.
* Knowledge of procedures for maneuvering an OSV to avoid a man overboard.

Specific:
* Knowledge of handling characteristics of own OSV.

TASK CODE: MASTER-IX.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	55	1C	30	2	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to man overboard situation.

TASK: Communicates to vessels in the vicinity using external communications equipment and signals that a man is overboard in order to protect and locate the man in the water.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates the external communications equipment.
* Clearly and accurately communicates that a man is overboard.

Numerical:
* In 100% of the cases, all vessels in the vicinity are notified and aware that a man is in the water.

TRAINING CONTENT

Functional:
* How to operate external communications equipment.
* Understanding of proper radio procedures.
* Knowledge of proper pennant to hoist, i.e., OSCAR.

Specific:
* Knowledge of external communications equipment on own OSV.

TASK CODE: MASTER-IX.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
4	55	1A	5	1C	40	5	4	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to man overboard situation.

TASK: Positions the OSV to provide a lee for recovering the man overboard using own judgement to compensate for various currents, wave actions and other weather conditions in order to protect personnel on deck and the man in the water.

PERFORMANCE STANDARDS

Descriptive:
* Manipulates bridge throttle controls and helm accurately to provide a lee for recovering the man in the water.
* Is alert to situation changes that require immediate action.
* Remains calm while maneuvering the OSV.

Numerical:
* In 100% of the cases, the OSV is positioned so as to best protect the man in the water and the recovery personnel during the recovery operation.

TRAINING CONTENT

Functional:
* How to estimate current direction and velocity.
* How to estimate wind speed and direction.
* Understanding of environmental factors as they relate to the controllability of an OSV.
* Understanding of safety procedures for recovering a man in the water.

Specific:
* Knowledge of own OSV's handling characteristics as they may be affected by prevailing environmental conditions.
* Knowledge of company guidelines and procedures for man overboard.

TASK CODE: MASTER-IX.C.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	20	5	65	1C	15	4	4	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to man overboard situation.

TASK: Monitors and directs the personnel involved in the recovery operation and movements of the rescue boat (if used), using own judgement, walkie-talkies, loud hailer, and hand signals in order to safely bring the man aboard.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and safely brings the man in the water aboard.
* Smoothly and effectively coordinates the recovery operation.

Numerical:
* In 100% of the cases, remains alert to the situation to decide if directions to crew members should be modified.

TRAINING CONTENT

Functional:
* How to operate walkie-talkies and loud hailers.
* Understanding of safety procedures for recovering a man in the water.
* Knowledge of gear available to assist the man in the water, life ring, ladder, heaving lines, etc.
* How to direct/coordinate the activities of others.

Specific:
* Knowledge of the physical configuation of own OSV.
* Knowledge of particular OSV's internal communications system.

TASK CODE: MASTER-IX.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Manipulates buttons, switches, levers of alarm, ship's whistle, and/or communications system in order to sound alarm or to issue an OSV-wide alert, using knowledge of the characteristics of internal communications equipment and alarm system and in accordance with specified emergency procedures and standard signal codes for abandoning ship.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of alarm device(s) and internal communications system.
* Acts calmly in emergency situation.
* Correctly follows applicable procedure.
* Clearly sounds signal or message so that it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sound alarm immediately upon determining the need to abandon the OSV.

TRAINING CONTENT

Functional:
* How to operate internal communications systems, e.g., sound-powered phone, PA system, etc.
* How to operate emergency alarm system.
* Understands emergency procedures and communicate them to others.
* How to operate ship's whistle.

Specific:
* Knowledge of type and location of internal communications system and alarm system on own OSV.
* Knowledge of emergency alert procedures, including standard signals and messages.
* Knowledge of company guidelines and policy regarding abandoning own OSV.

TASK CODE: MASTER-IX.D.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	1A	90	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Manipulate clips and straps of life preserver using experience and accepted method of securing, in order to properly don the life preserver.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and correctly dons the life preserver.
* Remains calm and alert while donning the life preserver.

Numerical:
* In 100% of the cases, the life preserver is properly donned.

TRAINING CONTENT

Functional:
* How to don a life preserver.
* Knowledge of life preserver stowage.

Specific:
* Knowlege of the location and number of life preservers on own OSV.

TASK CODE: MASTER-IX.D.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	40	2	40	1C	20	3	3	3	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Advises the Coast Guard, nearby vessels and rigs/platforms, and company, using radio communications, that they are abandoning the OSV, providing position and number of personnel in order to aid in the search and rescue.

PERFORMANCE STANDARDS

Descriptive:
* Clearly transmits abandon ship message.
* Correctly operates radio communications equipment.
* Correctly follows emergency procedures.
* Remains calm and alert.

Numerical:
* In 100% of the cases, the intention to abandon ship is promptly and correctly transmitted and received.

TRAINING CONTENT

Functional:
* How to operate the radio communications system.
* How to determine position using LORAN, radar, navigation and/or block charts.
* Knowledge of abandon ship procedures.

Specific:
* Knowledge of own OSV's radio communications equipment.
* Knowledge of own OSV's navigation equipment and charts.

TASK CODE: MASTER-IX.D.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	55	1A	5	1C	40	5	4	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Positions the OSV to provide a lee for launching the life raft(s) using own judgement to compensate for various currents, wave actions and other weather conditions, in order to protect personnel while abandoning ship.

PERFORMANCE STANDARDS

Descriptive:
* Manipulates bridge throttle controls and helm accurately to provide a lee for launching life raft(s).
* Is alert to situation changes that require immediate action.
* Remains calm while maneuvering the OSV.

Numerical:
* In 100% of the cases, the OSV is positioned so as to launch the life raft(s) quickly and safely.

TRAINING CONTENT

Functional:
* How to estimate current direction and velocity.
* How to estimate wind direction and speed.
* Understanding of environmental factors as they relate to controllability of an OSV.
* Understanding of safety procedures for abandoning ship.

Specific:
* Knowledge of particular OSV's handling characteristics as they may be affected by prevailing environmental conditions.
* Knowledge of the type and number of life rafts aboard own OSV.

TASK CODE: MASTER-IX.D.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	25	5	65	1C	10	4	4	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandons ship safely and expeditiously.

TASK: Directs the actions of the crew, using own judgement in accordance with accepted practices, in order to safely abandon the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Effectively directs and coordinates the activities of others.
* Directs personnel in method(s) most appropriate for abandoning the OSV.
* Acts calmly in emergency situations.

Numerical:
* In 100% of the cases, the OSV is quickly and safely abandoned after the decision to abandon has been made.

TRAINING CONTENT

Functional:
* Knowledge of various procedures and life-saving equipment for abandoning the OSV.
* How to coordinate/direct the activities of others.
* How to launch a life raft.

Specific:
* Knowledge of life-saving equipment aboard own OSV.
* Knowledge of any specified emergency procedures for abandoning own OSV.
* Knowledge of procedures for launching a life raft on for own OSV.

TASK CODE: MASTER-IX.E.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	25	4B	70	1A	5	4	4	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensure the OSV is prepared for heavy weather.

TASK: Instructs the crew as to the anticipated conditions and their assignments, using own judgement, in order to prepare the crew members and the OSV for heavy weather.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and effectively instructs crew members in actions to be performed.
* Is alert to situation changes that require immediate action.

Numerical:
* In 100% of the cases, actions to prepare the OSV for heavy weather are promptly initiated.

TRAINING CONTENT

Functional:
* How to evaluate worsening weather conditions.
* Knowledge of procedures for preparing an OSV for heavy weather.

Specific:
* Knowledge of own OSV's material condition.
* Knowledge of own OSV's cargo and stability in prevailing environmental conditions.

TASK CODE: MASTER-IX.E.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	80	1A	10	1A	10	2	2	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensure the OSV is prepared for heavy weather.

TASK: Verifies and checks reports from the mate and chief engineer by visually observing that deck and engineering spaces have been inspected for loose or improperly secured cargo, gear and equipment, in order to reduce personnel injuries and damage to the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Ensures all loose gear, cargo and equipment are properly secured.

Numerical:
* In 100% of the cases, the OSV is made secure within the limitations of the vessel configuation and the cargo aboard.

TRAINING CONTENT

Functional:
* Knowledge of the proper method of securing various gear, cargo and equipment.

Specific:
* Knowledge of own OSV's configuration and means for securing gear, cargo and equipment.

TASK CODE: MASTER-IX.E.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	2	60	1A	5	2	2	1	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensure the OSV is prepared for heavy weather.

TASK: Verifies that all watertight doors, hatches and vents have been properly secured and dogged down, using reports from the mate and chief engineer, in order to provide watertight integrity of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Accurately evaluates the effectiveness of watertight doors, hatches and vents.

Numerical:
* In 100% of the cases, all watertight doors, hatches and vents are properly secured.

TRAINING CONTENT

Functional:
* Knowledge of damage control and flooding control procedures.
* Understanding of the effects of flooding on stability and vessel handling.
* Understanding of the need to secure watertight doors and vents to ensure the watertight inteegrity of the OSV.

Specific:
* Knowledge of the location of all watertight doors, hatches and vents on own OSV.

TASK CODE: MASTER-IX.E.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	4	4	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensures the OSV is prepared for heavy weather.

TASK: Checks the loading and distribution of cargo, stores, fuel and lube oil, potable water and ballast, using own judgement, and reports from the mate and chief engineer, in order to ensure maximum stability.

PERFORMANCE STANDARDS

Descriptive:
* Accurately ascertains if any cargoes, stores, fuel and lube oil, or potable water can be shifted to provide additional stability.

Numerical:
* In 100% of the cases, cargoes, stores, fuel and lube oil, potable water, etc. are located within limitations to provide maximum stability.

TRAINING CONTENT

Functional:
* Understanding of pumping systems.
* Understanding of cargo manifests.
* Knowledge of the affects of the distribution of weights on the stability of the OSV.

Specific:
* Knowledge of own OSV's pumping and tank system.
* Knowledge of limitations on shifting cargoes while underway or in heavy weather.

TASK CODE: MASTER-IX.E.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	55	1A	5	1C	40	5	4	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensure that the OSV is prepared for heavy weather.

TASK: Maneuvers the OSV so as to lessen the effects of heavy weather and maintains stability, using own judgement, experience and accepted seamanship, in order to reduce the possibility of personnel injuries, damage to or loss of the OSV or cargo.

PERFORMANCE STANDARDS

Descriptive:
* Correctly and accurately maneuvers the OSV as desired.

Numerical:
* In 100% of the cases, the OSV is maneuvered to minimize the effects of heavy weather and maintains stability.

TRAINING CONTENT

Functional:
* Knowledge of the effects of heavy weather on an OSV and its cargo.
* Understanding of stability.
* How to maneuver an OSV.

Specific:
* Knowledge of own OSV's handling characteristics in heavy weather conditions.

TASK CODE: MASTER-IX.E.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
2	40	2	40	1C	20	3	3	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensure that the OSV is prepared for heavy weather.

TASK: Orders abandonment of the OSV and notifies the Coast Guard in order to prevent personnel injuries, using internal and external communications systems and/or alarm system, using own judgement as to the need for abandonment, and in accordance with any emergency stipulations or procedures requiring the abandonment of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates the communications system and/or alarm system.
* Uses good judgement in discretionary situations.
* Correctly follows emergency stipulations or procedures.

Numerical:
* In 100% of the cases, acts as quickly as possible to alert the crew once the decision to abandon the OSV has been made.

TRAINING CONTENT

Functional:
* How to operate internal and external communications equipment and/or alarm systems.

Specific:
* Knowledge of the type and location of communications equipment and controls of the alarm system on own OSV.
* Knowledge of emergency stipulations and/or procedures concerning the abandonment of own OSV.

TASK CODE: MASTER-IX.F.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	4C	50	1A	20	3	4	2	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Provides first aid to victims, moves victims from disaster/accident scene if possible or feasible, and obtains additional assistance if necessary in order to give immediate care and prevent further injury to victims, using knowledge of first aid procedures for various kinds of injuries, of available medical kits and manuals, and giving evidence of the willingness to aid, reassure, and encourage injured person(s).

PERFORMANCE STANDARDS

Descriptive:
* Correctly uses first aid kits, procedures, manuals.
* Uses good judgement in moving injured personnel.
* Promptly provides first aid and calls for any required additional medical attention.
* Promotes confidence in victim by demonstrating competence and acting calmly.

Numerical:
* In 100% of the cases, medical attention is given where required.
* In 100% of the cases, the injured person is never moved until an examination has been made of all injuries.

TRAINING CONTENT

Functional:
* Understanding of the procedures used to treat various kinds of injuries, including the rules of movement of injured personnel.
* How to read and interpret first aid/medical manuals.
* How to use first aid equipment, e.g., stimulants, tourniquents, bandages, splints, etc.
* How to reassure and encourage the victim.

Specific:
* Knowledge of the location and contents of the first aid/medical kits and manuals on own OSV.
* Knowledge of company guidelines for obtaining additional assistance.

TASK CODE: MASTER-IX.F.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	40	4C	45	1C	15	3	4	2	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Ascertains if additional medical assistance is required by using own judgment, judgment of knowledgeable crew members, available medical manuals, and radio communications in order to obtain the necessary assistance in accordance with company guidelines and policy.

PERFORMANCE STANDARDS

Descriptive:
* Correctly uses medical manuals.
* Promptly seeks additional medical assistance when illness or injury is beyond the capacity of shipboard personnel to treat.

Numerical:
* In 100% of the cases, required medical assistance is obtained for injured or ill crew members.

TRAINING CONTENT

Functional:
* How to read/interpret first aid/medical manuals.
* How to operate communications equipment.
* Understanding of basic medical procedures.
* How to reassure and encourage an ill or injured person.

Specific:
* Knowledge of the location and contents of medical kits and manuals on own OSV.
* Knowledge of company guidelines and policy for obtaining additional medical assistance.

TASK CODE: MASTER-IX.F.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	20	2	60	1C	15	2	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Communicates to the company immediately the details of the death of any person aboard the OSV, by using telephone, company radio, etc., in order to obtain guidance, instructions and assistance in the notification of the proper authorities, in accordance with standard company policy, city, county, parish, state or federal regulations/laws.

PERFORMANCE STANDARDS

Descriptive:
* Immediately notifies appropriate company officials of a death aboard.
* Correctly carries out instructions provided by the company.
* Correctly operates communications equipment.

Numerical:
* In 100% of the cases, all laws and regulations regarding deaths aboard an OSV are complied with.

TRAINING CONTENT

Functional:
* How to operate communications equipment.
* Understanding of the importance of notifying the appropriate authorities.

Specific:
* Knowledge of the particular communications capabilities on own OSV.
* Knowledge of the company policies for handling deaths aboard own OSV.

TASK CODE: MASTER-IX.G.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	80	2	15	1A	5	2	1	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Document circumstances of all emergencies, accidents, injuries, illnesses or deaths aboard an OSV.

TASK: Records all pertinent information/circumstances of an emergency, injury, accident, illness or death by using the rough log in order to document and complete all reports in accordance with government regulations, company's and charterer's policies.

PERFORMANCE STANDARDS

Descriptive:
* Ensures data needed to complete reports are collected and recorded.
* Accurately and legibly records all information.

Numerical:
* In 100% of the cases, all data are recorded as required to document an emergency, accident, illness, injury or death aboard an OSV.

TRAINING CONTENT

Functional:
* How to document all accidents, injuries, illnesses and deaths.
* Knowledge of information to be recorded in the rough log.
* How to complete government, company's and chaterer's reports.

Specific:
* Knowledge of government regulations, company's and charterer's guidelines regarding report requirements.

TASK CODE: MASTER-X.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	30	5	65	1A	5	4	4	3	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Impart knowledge about specific features, characteristics, and procedures of OSV operations.

TASK: Interviews/evaluates new personnel using own judgement within the guidelines of company policy, regulations, and accepted practices, in order to find out their needs for orientation, specific training, and performance monitoring, relevant to OSV operating requirements.

PERFORMANCE STANDARDS

Descriptive:
* Personnel needs for orientation, training, and supervision are determined promptly, thoroughly and accurately.
* Effective communication is established.

Numerical:
* In 100% of the cases, specific knowledge and skills of all personnel are evaluated and established.

TRAINING CONTENT

Functional:
* Knowledge of responsibilities prescribed for various OSV personnel and general content of tasks that go with those responsiblities.
* How to conduct informal interview procedures.

Specific:
* Knowledge of own OSV's design and operating procedures.
* Knowledge of safety features and procedures on own OSV.
* Knowledge of company policy and pertinent regulations.
* Knowledge of the content of manuals and other information sources used aboard own OSV.

TASK CODE: MASTER-X.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	40	4B	40	1A	20	5	5	3	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Impart knowledge about specific features, characteristics and procedures of OSV operations.

TASK: Walks personnel through the OSV, explains layout and special equipment, and demonstrates operations related to a specific job, using available aids, and own judgment concerning how detailed orientation/indoctrination should be, in order to orient personnel to OSV procedures.

PERFORMANCE STANDARDS

Descriptive:
* Indoctrination to OSV is conducted clearly, thoroughly and efficiently.

Numerical:
* In 100% of the cases, all personnel acquire necessary orientation.

TRAINING CONTENT

Functional:
* Knowledge of OSV systems, functions, operations and personnel responsibilities.
* How to teach and demonstrate skills.
* Understanding of importance of thorough indoctrination to OSV.

Specific:
* Knowledge of own OSV control system, functions, operations and procedures.
* Knowledge of specific personnel responsibilities, knowledge and experience.
* Knowledge of aids available aboard own OSV to assist in task performance.

TASK CODE: MASTER-X.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	65	2	20	1A	15	3	3	1	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Impart knowledge about specific features, characteristics and procedures of OSV operations.

TASK: Orders, posts, and/or maintains in specified location(s) on the OSV standard sources of reference information (equipment and arrangement diagrams, station bill, standing orders, operations and safety manuals), following company policies and governmental regulations about required materials, in order to ensure that the information is available when needed.

PERFORMANCE STANDARDS

Descriptive:
* Standard information is posted, stowed, updated and replaced promptly and accurately.
* Availability and condition of information sources are checked thoroughly on a regular basis.

Numerical:
* In 100% of the cases, all prescribed information is in designated location or known status whenever needed.
* In 100% of the cases, changes are made upon notification.
* In 100% of the cases, replacements are ordered as soon as known to be required.

TRAINING CONTENT

Functional:
* How to obtain and distribute standard information sources.
* Knowledge of purposes for which different sources are used.
* How to order, update and replace documents.

Specific:
* Knowledge of information sources required and used aboard own OSV.
* Knowledge of the locations for various types of information.
* Knowledge of own OSV procedures for obtaining information and their distribution.

TASK CODE: MASTER-X.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	55	4B	35	1A	10	5	5	3	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Impart knowledge about specific features, characteristics and procedures of OSV operations.

TASK: Provides on-the-job training (OJT), including emergency response drills, throughout the trip following standard operating procedures and using own discretion within the guidelines of company policy, regulations and personnel's interest in developing skills above the minimum.

PERFORMANCE STANDARDS

Descriptive:
* Is sensitive to personnel's work-related needs and interests.
* Is clear and accurate in demonstrations and explanations.
* Is sensible in selecting time and place for the on-the-job training so as not to disrupt operations.

Numerical:
* In 100% of the cases, informal talks are held at prescribed intervals with all personnel, to check their needs.
* In 100% of the cases, all departures from standards of personnel performance are noted.

TRAINING CONTENT

Functional:
* Knowledge of OSV array systems, functions and personnel responsibilities.
* How to conduct on-the-job training and "hands-on demstration" techniques.
* Knowledge of aboard documentation available to assist in task learning performance.
* Knowledge of proper emergency response procedures.

Specific:
* Knowledge of the own OSV control systems, functions, operations and procedures.
* Knowledge of specific personnel responsibilities, capabilities and experience.
* Knowledge of specific performance standards for tasks.
* Knowledge of company policy and pertinent regulations.
* Knowledge of own OSV fire fighting equipment and systems.
* Knowledge of own OSV life saving equipment.

TASK CODE: MASTER-X.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	40	4B	40	1A	20	4	4	3	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Impart knowledge about specific features, characteristics and procedures of OSV operations.

TASK: Makes announcements to crew, and/or conducts meeting of personnel in order to assure that all personnel are informed of all new or changing conditions and procedures pertinent to their work, using knowledge of such changes and the nature and scope of work, procedures, regulations and personnel affected by such changes.

PERFORMANCE STANDARDS

Descriptive:
* Announcements, notifications, meetings, etc., are conducted in a thorough and effective manner.
* Encourges questions from personnel to promote a clear understanding of the impact of changing conditions and procedures on their work.

Numerical:
* In 100% of the cases, notifies personnel of changing conditions or procedures as soon as possible after notification or in time to allow such changes to be incorporated smoothly into existing work activities.

TRAINING CONTENT

Functional:
* Understanding of the necessity for keeping crew informed of changing conditions and/or procedures.
* How to communicate clearly and effectively.

Specific:
* Knowledge of the nature and scope of total work performed on own OSV and the impact of changing conditions or procedures on that work.

TASK CODE: MASTER-X.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
4	50	4B	55	1A	5	5	4	4	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Train and/or evaluate personnel in the performance of their specified duties.

TASK: Explains and demonstrates specific equipment characteristics and procedures, task actions and the relationships among individual actions and equipment components, "tricks of the trade," expected performance standards, and points out written reference materials and documentation to inexperienced personnel or personnel unfamiliar with the OSV in order to provide practical training, upgrade personnel performance, maintain/increase motivation and safety, and efficiency of operations, using knowledge of the nature and scope of the work on the OSV, of personnel's work experience, and following guidelines of company policy, contract terms, and using own judgment to decide the needs of personnel and the time and length of explanations/demonstrations.

PERFORMANCE STANDARDS

Descriptive:
* Explanations/demonstrations are thorough, clear and presented effectively.
* Is sensitive to individual needs and capabilities of personnel.

Numerical:
* In 100% of the cases, practical training is held as specified intervals or at the request of crew members.

TRAINING CONTENT

Functional:
* Understanding of the nature and scope of the total work performed on the OSV.
* How to communicate and demonstrate work techniques clearly and effectively.

Specific:
* Knowledge of the tasks, procedures, equipment, performance standards, etc., characteristic to own OSV.
* Knowledge of company policy, and accepted practices regarding the training/upgrading of crew members.

TASK CODE: MASTER-X.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	55	5	40	1A	5	5	4	4	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Train and/or evaluate personnel in the performance of their specified duties.

TASK: Watches, listens to and questions personnel at work, checks results and questions others as appropriate in order to assure that performance meets standards and that safe efficient operations are encouraged and maintained, using knowledge of the nature and scope of the work on an OSV, of performance standards to meet that work, and using guidelines of established company policy and operating circumstances.

PERFORMANCE STANDARDS

Descriptive:
* Thorough observations are made on a regular basis.
* Standards are applied consistently and objectively.
* Personnel are informed clearly of departures from performance standards and are given corrections or suggestions to aid performance.

Numerical:
* In 100% of the cases, personnel are stopped, replaced or corrected immediately if their actions are judged to jeopardize safety.

TRAINING CONTENT

Functional:
* Understanding of the nature and scope of the total work performed on OSV and associated task performance requirements.
* How to observe and evaluate personnel performance.

Specific:
* Knowledge of the tasks, procedures, equipment and performance standards characteristic of own OSV operations.
* Knowledge of company policy regarding the setting or maintaining of performance standards.

TASK CODE: MASTER-X.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	35	5	60	1A	5	4	4	2	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Train and/or evaluate personnel in the performance of their specific duties.

TASK: Talks with subordinate personnel about job performance and any problems in order to provide feedback and to find out needs, grievences, individual's views about own performance, and to promote communication, using knowledge of personnel background, capabilities and performance, and of company policy and practices, and using discretion in applying those policies/practices.

PERFORMANCE STANDARDS

Descriptive:
* Formal performance reviews are held as required; informal feedback is provided frequently.
* Communicates clearly with and listens closely to personnel.
* Give criticism in fair, objective and constructive manner.

Numerical:
* In 100% of the cases, never ignores a detected grievance or problem.
* In 100% of the cases, always tries to reconcile hostile crew members and keeps lines of communication open.

TRAINING CONTENT

Functional:
* Understanding of the performance standards required of OSV crew members.
* How to maintain harmonious relations and open communication among personnel.
* How to communicate with others.

Specific:
* Knowledge of performance standards for tasks of subordinates.
* Knowledge of the background, capabilities, personality characteristics, physical/emotional conditon of subordinates.
* Knowledge of company policies/practices regarding personnel management.

TASK CODE: MASTER-X.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	85	1A	10	1A	5	4	4	3	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conduct an ongoing safety program.

TASK: Ensures a Station Bill is posted and revises it as necessary in order to assure the dissemination of information on crew member assignments and appropriate procedures during emergencies, using knowledge of all types of possible emergencies on an OSV, of the procedures, equipment, activities required to handle emergencies, and of the company's and government rules/regulations concerning the preparation of Station Bills.

PERFORMANCE STANDARDS

Descriptive:
* Assures that the Station Bill includes procedures, location assignments, etc., for all types of emergencies.
* Ensures that the Station Bill is in a manner/format that can be understood easily by all crew members.

Numerical:
* In 100% of the cases, revises the Station Bill immediately upon receipt of new, relevant information or required changes in procedures.
* In 100% of the cases, the Station Bill is prepared prior to the trip.

TRAINING CONTENT

Functional:
* Understanding of the information required in a Station Bill.
* Understanding of the importance of the preparation of clear, thorough emergency information to the safety of life and property on the OSV.
* Understanding of the hazards and emergencies of offshore operations and the methods used to handle these situations.

Specific:
* Knowledge of the procedures and equipment used on the OSV to handle emergencies.
* Knowledge of the company's and government's rules or regulations concerning the preparation of own OSV Station Bill.

TASK CODE: MASTER-X.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	85	1A	10	1A	5	4	4	3	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conduct an ongoing safety program.

TASK: Obtains from the company and/or writes safety instructions for both routine and emergency operations in order to prepare and make available safety-related material to all personnel, using knowledge of the nature and the scope of the work performed on an OSV and the hazards associated with that work, and referring to applicable government safety regulations, industry safety codes, company policy, and other pertinent safety information.

PERFORMANCE STANDARDS

Descriptive:
* Ensures instructions are written using simple, proper and clear language adequate for the level of personnel on the OSV.
* Obtains existing safety information appropriate for dissemination to personnel on the OSV.

Numerical:
* In 100% of the cases, changes or revises the instructions that are not clearly understood by personnel.

TRAINING CONTENT

Functional:
* Understanding of the nature and the scope of total work performed on the OSV and the hazards associated with that work.
* How to write clearly.

Specific:
* Knowledge of government safety regulations, company policies, and other available information pertinent to safe practices aboard own OSV.

TASK CODE: MASTER-X.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	50	2	45	1A	5	3	3	3	3

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conduct an ongoing safety program.

TASK: Checks records, and first aid supplies and emergency equipment in order to assure that such supplies and equipment have been checked, are available in sufficient quantities, are stored in designated locations, and are in good condition, using knowledge of inspection and recording procedures for such equipment, and of company safety practices/procedures and any pertinent government or industry-wide regulations/rules regarding the condition and availability of safety and emergency equipment.

PERFORMANCE STANDARDS

Descriptive:
* Assures that safety and emergency equipment have been thoroughly inspected and that records are kept current.

Numerical:
* In 100% of the cases, arranges for the immediate inspection of equipment if required inspections have not been performed.

TRAINING CONTENT

Functional:
* Understanding of the importance for checking thoroughly on the availability and condition of safety and emergency equipment.

Specific:
* Knowledge of inspection and recording procedures for safety and emergency equipment on the OSV.
* Knowledge of company practices/policies, industry-wide and/or government regulations/rules regarding the condition and availability of safety equipment.

TASK CODE: MASTER-X.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	50	4B	45	1A	5	4	4	4	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conduct an ongoing safety program.

TASK: Plans and conducts drills involving all personnel in order to alert personnel to the hazards of the job and train/prepare personnel for emergency situations, using knowledge of the hazards and emergency situations which can occur offshore; of training and/or information documentation to aid instruction; and of government, industry, and/or company policies or rules regarding the conduct and/or documentation of safety training activities.

PERFORMANCE STANDARDS

Descriptive:
* Ensures that planned safety drills contain accurate and current information presented in a clear, direct and simple manner.
* Drills are conducted periodically in accordance with stated policies and regulations.
* Documents, as necessary, the occurrence of required safety drills.

Numerical:
* In 100% of the cases, crew members receive all necessary safety and emergency training/information and participate in safety drills.

TRAINING CONTENT

Functional:
* Understanding of the necessity for planning and conducting safety programs, including ongoing safety instruction and periodic drills, i.e., fire and emergency, man overboard and abandon ship drills.
* Understanding of the hazards and emergency conditions which could occur in an offshore environment.

Specific:
* Knowledge of the type and location on the OSV of materials to aid in the conduct of safety presentations and drills.
* Knowledge of government, industry and/or company rules regarding the conduct and/or documentation of safety training activities.

TASK CODE: MASTER-X.C.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	30	3A	65	1A	5	3	3	1	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conduct an ongoing safety program.

TASK: Enforces the proper use of electrical equipment, tools (hand and power) and machinery, and the wearing of safety hats, work vests, shoes, ear protection and goggles as appropriate for the task being performed in order to prevent or reduce injuries aboard the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Provides information on the proper use of equipment.
* Ensures that safety equipment/clothing is available and properly maintained.
* Stresses common sense in the performance of assigned tasks as a means of increasing safety and reducing accidents.

Numerical:
* In 100% of the cases, assures that crew members are properly attired to perform tasks.
* In 100% of the cases, ensures that all electrical equipment, tools and machinery are properly used and safety procedures are followed.

TRAINING CONTENT

Functional:
* Understands the nature and scope of the total work performed on an OSV and the hazards associated with that work.
* Knowledge of the protection provided by safety equipment/clothing.
* How to operate the equipment aboard an OSV.
* Stresses common sense.

Specific:
* Knowledge of government safety regulations, company policies, and other available information pertinent to safe practices aboard own OSV.

TASK CODE: MASTER-X.C.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	10	4A	85	5	1A	3	3	2	4

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conduct an ongoing safety program.

TASK: Ensures that crew members report to him and take prompt action to correct potential safety hazards using the necessary tools and materials; reports to appropriate company officials those hazards beyond the crew's ability to correct in order to prevent injuries.

PERFORMANCE STANDARDS

Descriptive:
* Impresses the importance to crew members to be safety conscious.
* Follows-up on all reports of hazards made by crew members.
* Ensures that corrective action is undertaken.

Numerical:
* In 100% of the cases, crew members promptly report potential hazards.
* In 100% of the cases, crew members correct potential hazards.
* In 100% of the cases, company officials are advised of hazards beyond the crew's ability to correct.

TRAINING CONTENT

Functional:
* Understands the types of hazards common to OSV's.

Specific:
* Knowledge of company policies for obtaining support to correct potential safety hazards.
* Knowledge of OSV operations and the potential dangers.

TASK CODE: MATE-I.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	70	2	25	1A	5	3	3	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on the OSV.

TASK: Obtains worklist from master and suggests additional maintenance/repair items, using own experience and judgement, in order to ensure that the OSV, all equipment and systems are in good condition/properly functioning, in accordance with accepted standards.

PERFORMANCE STANDARDS

Descriptive:
* Promptly advises master of maintenance and repair items identified.

Numerical:
* In 100% of the cases, all maintenance and repair items are identified.

TRAINING CONTENT

Functional:
* How to inspect and evaluate material condition of the OSV and equipment.
* Knowledge of OSV operations.

Specific:
* Knowledge of own OSV's equipment, systems and general condition.

TASK CODE: MATE-I.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	35	1A	5	2A	60	3	2	2	4

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on the OSV.

TASK: Visually inspects and maintains OSV safety and lifesaving equipment, including life raft(s), boat davit and winch (if applicable), rescue boat, EPIRB, life rings and lights, life preservers, flares and smoke signals, line throwing gun, etc., using own knowledge of equipment, safety directives, equipment manuals, government regulations and Certificates of Inspection, in order to ensure proper number, accessibility and good physical condition of the equipment.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly inspects and maintains safety and lifesaving equipment.
* Ensures physical condition of equipment is adequate for intended use.

Numerical:
* In 100% of the cases, ensures that all safety and lifesaving equipment are serviceable and accessible.

TRAINING CONTENT

Functional:
* Familiarity with and knowledge of uses and maintenance of OSV safety and lifesaving equipment.
* Understanding of government regulations and the Certificate of Inspection.

Specific:
* Knowledge of the types and location of all safety and lifesaving equipment on own OSV.
* Knowledge of emergency plans and procedures for use of safety and lifesaving equipment on own OSV.

TASK CODE: MATE-I.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	55	1A	5	2A	40	3	3	1	4

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on the OSV.

TASK: Inspects, maintains and tests fire extinguishing equipment and systems, and records information regarding inspection dates and examinations for recharge in order to maintain the required number of extinguishers and systems in good working order and to keep/update pertinent recharging/inspection history, using knowledge of the function and operation of such equipment, and in accordance with standard procedures and requirements stated in fire association bulletins, company directives, government regulations and the Certificate of Inspection.

PERFORMANCE STANDARDS

Descriptive:
* Correctly inspects and tests equipment in accordance with fire protection bulletins or company directives.
* Completely and accurately records necessary information.

Numerical:
* In 100% of the cases, arranges for equipment to be repaired, replaced, or augmented if it fails inspection/testing.
* In 100% of the cases, the required fire extinguishing equipment is maintained for its intended use and is accessible.

TRAINING CONTENT

Functional:
* How to inspect/maintain/test fire extinguishing equipment.
* Understanding of the fuction and operation of fire extinguishing equipment.
* How to read and interpret procedures or directives concerning the inspection and testing of fire fighting equipment.
* Understanding of information on Certificate of Inspection.

Specific:
* Knowledge of the type and location of fire fighting equipment on own OSV.
* Knowledge of the procedures used for the inspection, testing and recording of information about fire extinguishing equipment on own OSV.

TASK CODE: MATE-I.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	1A	5	1A	55	2	2	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on the OSV.

TASK: Visually checks and maintains first aid kits, supplies, and first aid equipment, (e.g. stretchers), in order to assure that supplies/equipment are clean, refilled and available for use, using knowledge of the type and amount of supplies/equipment required, and in accordance with procedures stated in medical/emergency bulletins, company directives, and government regulations.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly checks out first aid equipment in accordance with medical/emergency bulletins, regulations and directives.

Numerical:
* In 100% of the cases arranges for equipment to be refilled, replaced, repaired, etc., if it is not available for use.

TRAINING CONTENT

Functional:
* How to check out first aid supplies and equipment.
* Understanding of the types and quantity of first aid articles/equipment which must be available at all times.
* How to read and interpret medical/emergency bulletins, regulations, first aid kits and equipment.

Specific:
* Knowledge of the type and location of first aid kits and equipment on own OSV.
* Knowledge of the location of medical/emergency bulletins or directives concerning the inspection of first aid equipment on own OSV.

TASK CODE: MATE-I.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	1A	5	1A	55	2	2	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on OSV.

TASK: Inspects OSV for needed cleaning, painting and general housekeeping, including hull decks, bulkheads, rub and hand rails, ladders, masts, equipment, gallery mess, pantry, staterooms, heads, etc., using own judgement and accepted practices, in order to properly maintain metal surfaces and provide clean and sanitary conditions.

PERFORMANCE STANDARDS

Descriptive:
* Ensures working surfaces, equipment, spaces, etc., are in good condition, clean and sanitary.
* Stems corrosion before it becomes a problem.

Numerical:
* In 100% of the cases, identifies areas in need of cleaning, painting and general housekeeping.

TRAINING CONTENT

Functional:
* Understanding of characteristics of all types of paints and other corrosion inhibitors and why/where each is used.
* How to properly prepare surfaces to accept protective coverings.
* Knowledge of the type/location on OSV of paints, corrosion inhibitors, and all other types of protective coverings.
* How to identify unsanitary conditions.

Specific:
* Knowledge of the type and location of corrosion control materials on own OSV.

TASK CODE: MATE-I.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	45	1A	5	2A	50	3	2	2	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on the OSV.

TASK: Inspects and tests the internal communications systems and general alarm system in order to maintain the sound-powered phones, loud hailer, PA, and general alarm system controls in good working order using own knowledge of the operation of such equipment, in accordance with operating instructions.

PERFORMANCE STANDARDS

Descriptive:
* Correctly inspects and tests equipment in accordance with operating instructions and government regulations.

Numerical:
* In 100% of the cases, arranges for equipment to be repaired, replaced or augmented if it fails inspection/testing.

TRAINING CONTENT

Functional:
* How to inspect/test/maintain internal communications equipment and general alarm system.
* Understanding of the function and operation of general alarm system equipment.

Specific:
* Knowledge of the type and location of internal communication equipment and general alarm system controls and bells on own OSV.
* Knowledge of the procedure to test general alarm system.

TASK CODE: MATE-I.A.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	1A	5	2A	55	2	2	2	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on the OSV.

TASK: Visually inspects and maintains all lines, hawsers, ground tackle, winch wire, etc., using own knowledge of marlinspike seamanship, in order to ensure all lines and wires aboard are in good condition.

PERFORMANCE STANDARDS

Descriptive:
* Ensures the good physical condition of all lines, wires and ground tackle.
* Thoroughly inspects all lines and wire rope.

Numerical:
* In 100% of the cases, repairs or replaces lines and wires that are no longer useable.

TRAINING CONTENT

Functional:
* Knowledge of ground tackle.
* Knowledge of methods for maintaining lines and wire rope.
* Understanding and experience in marlinspike seamanship.

Specific:
* Knowledge of types and location of all lines, wire ropes and ground tackle on own OSV.

TASK CODE: MATE-I.A.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	55	1A	5	2A	40	2	2	2	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on the OSV.

TASK: Inspects, maintains and tests the OSV navigation lights, ship's whistle, fog horn, search lights, signal lights, day shapes and flags, as required, in order to ensure proper operation, using own knowledge of the operation of the equipment.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly inspects and maintains the navigation lights, ship's whistle, fog horn, search light(s), signal lights, day shapes and flags.
* Ensures the physical condition is adequate for intended use.

Numerical:
* In 100% of the cases, arranges for equipment to be repaired or replaced if it is not operating properly.

TRAINING CONTENT

Functional:
* Familiarity with and knowledge of maintenance of navigation lights, ship's whistle, fog horn, search light(s), day shapes and flags.
* Understanding of the Rules of the Road pertaining to navigation lights and day shapes.

Specific:
* Knowledge of the types and location of all lights, horns and whistles on own OSV.

TASK CODE: MATE-I.A.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	40	2	10	2B	50	3	3	2	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on the OSV.

TASK: Visually inspects, maintains and operates with the chief engineer, deck machinery including the anchor windlass, towing winch, tugger, etc., using own knowledge of equipment, equipment manuals and company directives, in order to ensure proper operation and maintenance of the machinery in accordance with accepted standards.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly inspects deck machinery.
* Ensures deck machinery is operating properly.

Numerical:
* In 100% of the cases, deck machinery is repaired if it fails to function properly within accepted standards.

TRAINING CONTENT

Functional:
* Familiarity with and knowledge of the uses and maintenance of OSV deck machinery.
* How to read and interpret equipment manuals and schematics.

Specific:
* Knowledge of the types, location and operation of deck machinery on own OSV.

TASK CODE: MATE-I.A.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	45	3A	10	2A	45	3	3	2	4

GOAL: Performs necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items on the OSV.

TASK: Assists the master in preparing the OSV for scheduled inspections and surveys, including Coast Guard, classification society and company, in order to maintain the OSV above the minimally acceptable level, in accordance with government regulations, society standards and company policy/directives.

PERFORMANCE STANDARDS

Descriptive:
* Aids the master in ensuring the OSV is ready for all scheduled inspections and surveys.
* Ensures that all equipment failures or shortages are corrected.

Numerical:
* In 100% of the cases, the OSV is ready for all scheduled inspections and surveys.

TRAINING CONTENT

Functional:
* How to inspect and evaluate the material condition of the OSV and its equipment.
* Understanding of information included on the Certificate of Inspection.

Specific:
* Knowledge of own OSV's equipment, systems and general condition.
* Knowledge of Coast Guard inspection laws applicable to own OSV.
* Knowledge of company directives, guidelines and policy regarding inspections and surveys.

TASK CODE: MATE-I.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	70	5	25	1A	5	3	3	2	2

GOAL: Perform necessary maintenance, repairs and ship's business.

OBJECTIVE: Complete required maintenance and repair work to prepare the OSV for sea.

TASK: Assigns work to self and deckhands taking into account the weather, the OSV's schedule, crew size and experience, and supplies, using a prioritized listing, and own experience and judgement, in order to ensure the OSV is ready for sea.

PERFORMANCE STANDARDS

Descriptive:
* Correctly uses hand and power tools.
* Efficiently assigns work to be performed.
* Makes appropriate changes to assignments to ensure timely completion of work.

Numerical:
* In 100% of the cases, the required maintenance and repair items are assigned.

TRAINING CONTENT

Functional:
* Knowledge of OSV operations and systems.
* Knowledge of the time necessary to perform various maintenance and repair tasks.
* How to use hand and power tools and various construction materials.

Specific:
* Knowledge of the type and location on own OSV of hand and power tools, ship's stores and construction materials.

TASK CODE: MATE-I.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	10	5	65	2B	25	3	3	2	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete required maintenance and repair work to prepare the OSV for sea.

TASK: Supervises, instructs and assists the deckhands in the proper procedures for completing maintenance and repair work using own experience and accepted marine practices, in order to prepare the OSV for sea in accordance with company guidelines.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and correctly explains work tasks.
* Remains alert to unsafe situations that could result in personnel injuries or damage to the OSV.

Numerical:
* In 100% of the cases, maintenance items and repairs assigned to the deckhands are completed timely and safely.

TRAINING CONTENT

Functional:
* Knowledge of various procedures/methods of completing maintenance/repair items on an OSV.
* Understanding of the skills necessary to perform various tasks.
* How to explain tasks and procedures.
* How to supervise and direct the activities of others.
* Knowledge of the safety factors for shipboard work.

Specific:
* Knowledge of own OSV's equipment, systems and general condition.
* Knowledge of company guidelines for performing various maintenance and repair work.

TASK CODE: MATE-I.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	2	75	1A	5	2	2	2	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete required maintenance and repair work to prepare the OSV for sea.

TASK: Reports to master the completion or inability to complete specific maintenance or repair items using own experience in order to explain the reason for non-completion and suggested actions to complete the item(s) in accordance with accepted marine practices.

PERFORMANCE STANDARDS

Descriptive:
* Accurately details the completion or non-completion of maintenance or repair items.
* Work tasks are properly completed within accepted marine standards.

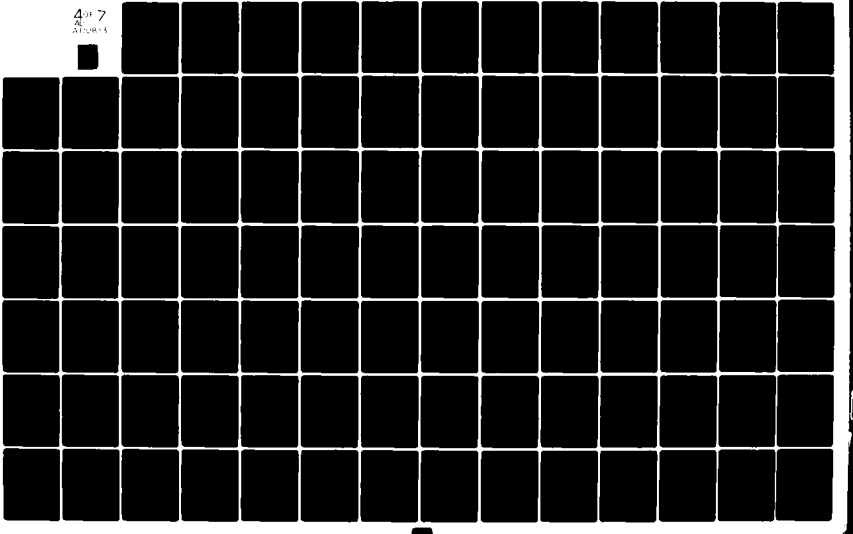
Numerical:
* In 100% of the cases, maintenance and work items are completed or suggestions provided the master as to the possible means for completing unfinished items.

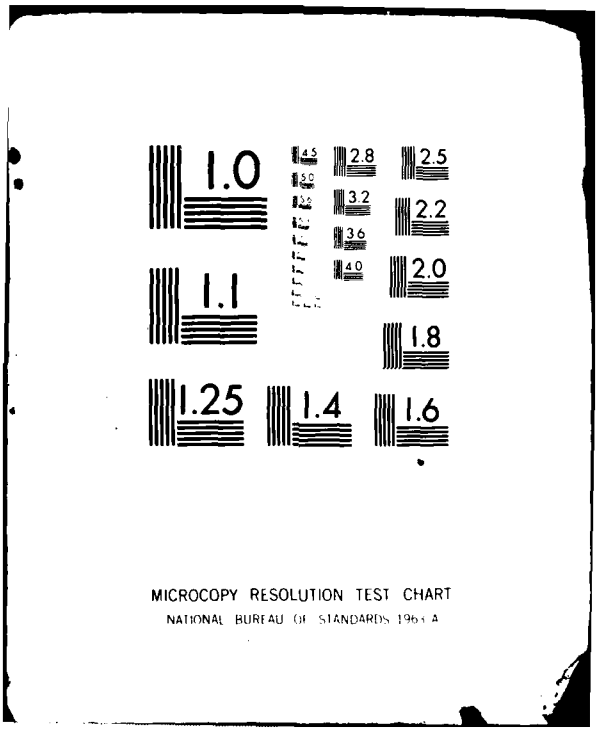
TRAINING CONTENT

Functional:
* Knowledge of OSV equipment and systems.
* Understanding of the material and tools required to perform various maintenance and repairs.

Specific:
* Knowledge of the capabilities of own crew to perform various maintenance and repair tasks given the tools and supplies available.

AD-A110 813 COAST GUARD DISTRICT (8TH) NEW ORLEANS LA F/G 5/1
FUNCTIONAL JOB ANALYSIS OF MARINE PERSONNEL EMPLOYED ON OFFSHOR--ETC(U)
JAN 82 H R PRZELOMSKI, A M BONNEAU
UNCLASSIFIED CGDSH-01-82 NL

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963 A

TASK CODE: MATE-II.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	90	2	5	1A	5	2	2	1	2

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Remain alert to changes in OSV status to prepare the OSV for sea.

TASK: Determines from the master pertinent information regarding upcoming trips in order to schedule deckhands' work and prepare the OSV for sea using own judgement and experience in OSV operations.

PERFORMANCE STANDARDS

Descriptive:
* Remains alert to changes in operating schedule.
* Accurately schedules maintenance and repair work to avoid conflicts with schedules.

Numerical:
* In 100% of the cases, maintenance and repair work is scheduled to ensure OSV is ready for sea without conflicting with operations.

TRAINING CONTENT

Functional:
* How to schedule work.
* Knowledge of OSV operations, equipment and systems.

Specific:
* Knowledge of own OSV's schedule and deployment times.

TASK CODE: MATE-II.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
2	90	5	1A	5	1A	3	2	3	3

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Remain alert to changes in OSV status to prepare the OSV for sea.

TASK: Reviews and studies the master's planned course and running time estimates for rigs/platforms serviced, using own knowledge and experience in order to be fully prepared to perform officer of the deck duties when the OSV is underway.

PERFORMANCE STANDARDS

Descriptive:
* Adequately studies courses, charts and publications.

Numerical:
* In 100% of the cases, familiarizes himself with the planned courses to rigs/platforms serviced.

TRAINING CONTENT

Functional:
* How to read and interpret navigational charts, block charts and publications.

Specific:
* Knowledge of particular water, land and atmospheric characteristics and conditions along the intended course.

TASK CODE: MATE-II.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	80	2	15	1A	5	2	2	2	2

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Remain alert to changes in OSV status to prepare the OSV for sea.

TASK: Plans for additional persons other than crew, i.e., anchor handling crew, service personnel, who may make the trip using information from the master, and own judgement, in order to arrange quarters, work space and meals in accordance with company policy and guidelines.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and smoothly plans for persons other than crew who are scheduled for a trip aboard.

Numerical:
* In 100% of the cases, necessary arrangements are made to berth, feed and provide work space for persons other than the crew.

TRAINING CONTENT

Functional:
* How to assign quarters and arrange for meals.
* Understanding of the needs of persons other than the crew, i.e., anchor handling crew.

Specific:
* Knowledge of company policy and guidelines regarding persons other than the crew.

TASK CODE: MATE-II.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	5	60	1A	25	2	2	2	3

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Assist in the safe loading of cargo.

TASK: Supervises the deckhands and roustabouts in the safe and proper stowage and securing of deck cargo, using own knowledge and experience, and within the guidelines of the master and company, in order to prevent damage to the OSV, cargo or personnel injuries.

PERFORMANCE STANDARDS

Descriptive:
* Ensures deck cargo is properly stowed and secured without blocking access to vents, fire fighting stations, life saving equipment, switches, valves, or doors and hatches.
* Is alert to take immediate action to prevent an unsafe act.

Numerical:
* In 100% of the cases, cargo is safely loaded and secured aboard the OSV.

TRAINING CONTENT

Functional:
* How to properly secure gear, cargo and equipment.
* Understanding of procedures for safely loading heavy equipment or gear on an OSV.
* Understanding of crane signals.
* How to direct/supervise the activities of others.

Specific:
* Knowledge of the ability of the crane on the rig/platform being serviced to reach different deck areas.
* Knowledge of cargo securing methods on own OSV.

TASK CODE: MATE-II.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	85	2	10	1A	5	1	1	1	2

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Assist in the safe loading of cargo.

TASK: Checks all deck cargo brought aboard the OSV, using the provided cargo manifest in order to identify missing items.

PERFORMANCE STANDARDS

Descriptive:
* Accurately confirms that the cargo brought aboard matches the provided cargo manifest.
* Promptly notifies the master of any discrepancies in the cargo manifest.

Numerical:
* In 100% of the cases, no discrepancy exists between the cargo loaded aboard and the cargo manifest.

TRAINING CONTENT

Functional:
* How to read and understand various types of manifests.

Specific:
* Knowledge of the particular cargo manifests used by the charterer and suppliers normally dealt with.

TASK CODE: MATE-II.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	15	1A	80	1	1	1	1

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Assist in the safe loading of cargo.

TASK: Assists the chief engineer in connecting/disconnecting transfer hoses using own experience and judgement, guidance from the chief engineer and applicable government regulations, in order to prepare to take aboard dry and liquid bulk cargoes.

PERFORMANCE STANDARDS

Descriptive:
* Correctly secures the proper hoses to the appropriate connections.

Numerical:
* In 100% of the cases, all transfer hoses are properly connected/disconnected.

TRAINING CONTENT

Functional:
* How to connect/disconnect transfer hoses.

Specific:
* Knowledge of the particular fitting characteristics on own OSV.

TASK CODE: MATE-II.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	60	2	30	1A	10	1	2	2	4

GOAL: Prepare for trip and supervise the safe loading of cargo.

OBJECTIVE: Assist in the safe loading of cargo.

TASK: Provides stability information to the master during loading using stability and trim data, cargo weights, draft marks and loadline readings, and own experience and judgement, in order to ensure the seaworthiness of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Accurately determines drafts and loadline readings.

Numerical:
* In 100% of the cases, stability information is provided to the master.

TRAINING CONTENT

Functional:
* How to read draft and loadline marks.
* How to use a stability letter or Trim and Stability Book.

Specific:
* Knowledge of own OSV's trim and stability data.

TASK CODE: MATE-III.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
5B	50	2	25	2A	25	5	6	4	3

GOAL: Berth/unberth the OSV.

OBJECTIVE: Make final preparations to berth/unberth the OSV.

TASK: Performs master tasks if instructed to berth/unberth the OSV as in MASTER-III.B/C/D.

PERFORMANCE STANDARDS

Descriptive:
* Meets the standards as listed in MASTER-III.B/C/D.

Numerical:
* In 100% of the cases, the standards as listed in MASTER-III.B/C/D are performed accurately and effectively.

TRAINING CONTENT

Functional:
* Training as required in the tasks of MASTER-III.B/C/D.

Specific:
* Knowledge of the tasks required in MASTER-III.B/C/D.

TASK CODE: MATE-III.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	80	1A	15	1	2	1	2

GOAL: Berth/unberth the OSV.

OBJECTIVE: Make final preparations to berth/unberth the OSV.

TASK: Ensures that the deckhands bring aboard and secure/deploy the gang plank in order to berth/unberth the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Sees that the gang plank is properly secured/deployed.
* Ensures the gang plank is in good materiel condition.

Numerical:
* In 100% of the cases, the gang plank is secured/deployed properly.

TRAINING CONTENT

Functional:
* How to secure/deploy a gang plank.
* How to inspect a gang plank for materiel condition.

Specific:
* Knowledge of own OSV's arrangement for securing/deploying a gang plank.

TASK CODE: MATE-III.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	5	75	1A	5	1	2	1	2

GOAL: Berth/unberth the OSV.

OBJECTIVE: Make final preparations to berth/unberth the OSV.

TASK: Assigns crew members to handle and tend the mooring lines, using own judgement, in order to berth/unberth the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Assigns the required number of crew members to handle mooring lines.

Numerical:
* In 100% of the cases, adequate crew members are available to handle the lines.

TRAINING CONTENT

Functional:
* Understanding of the procedures for handling mooring lines.
* Knowledge of deck fittings, i.e., cleats, bits, chocks, etc.
* How to coordinate the activities of others.

Specific:
* Knowledge of the type and location of deck fittings on own OSV.
* Knowledge of mooring line arrangement on own OSV.

TASK CODE: MATE-III.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	5	50	1A	30	2	2	1	2

GOAL: Berth/unberth the OSV.

OBJECTIVE: Make final preparations to berth/unberth the OSV.

TASK: Directly supervises and assists the deckhands in the casting-off, tending and securing of mooring lines using own judgement and experience in order to safely berth/unberth the OSV as determined by weather, current and berthing arrangement under the direction of the master.

PERFORMANCE STANDARDS

Descriptive:
* Safely and expeditiously casts-off/tends/secures mooring lines.
* Is alert to take immediate action to prevent any unsafe act.
* Provides prompt, clear and correct instructions to deckhands.

Numerical:
* In 100% of the cases, mooring lines are handled properly and safely to berth/unberth the OSV.

TRAINING CONTENT

Functional:
* Understanding of the procedures for handling mooring lines.
* How to use deck fittings, i.e., cleats, bits, chocks, etc.
* Knowledge of safety considerations when handling mooring lines.
* How to direct the activities of others.

Specific:
* Knowledge of the type and location of deck fittings on a own OSV.
* Knowledge of the affects of prevailing environmental conditions and current on mooring.
* Knowledge of planned berthing arrangement.

TASK CODE: MATE-III.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	5	1A	65	1	2	1	2

GOAL: Berth/unberth the OSV.

OBJECTIVE: Make final preparations to berth/unberth the OSV.

TASK: Re-checks that all loose cargo, equipment and gear have been secured for sea using own judgement and accepted methods of making objects fast on own OSV, in order for the OSV to make the transit to the planned destination(s) without shifting cargo, equipment and gear.

PERFORMANCE STANDARDS

Descriptive:
* Accurately checks the method(s) used to secure various cargo, gear and equipment on deck.

Numerical:
* In 100% of the cases, deck cargo, gear and equipment are secured so as to make the trip without shifting or breaking loose.

TRAINING CONTENT

Functional:
* How to properly secure gear, cargo and equipment.
* Understanding of the importance of properly securing items on deck.

Specific:
* Knowledge of own OSV's configuration for securing gear, cargo and equipment on deck.

TASK CODE: MATE-III.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3	45	2	40	1C	15	2	2	1	2

GOAL: Berth/unberth an OSV.

OBJECTIVE: Make final preparations to berth/unberth an OSV.

TASK: Monitors the radios and remains alert to conditions forward using own experience and communications equipment in order to allow the master to safely maneuver the OSV from the after control station while berthing/unberthing the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and accurately monitors and operates communications equipment.
* Remains alert to the berthing/unberthing evolution.
* Immediately advises the master of potentially dangerous situations.

Numerical:
* In 100% of the cases, the master is allowed to berth/unberth the OSV without added distractions.

TRAINING CONTENT

Functional:
* How to operate communications egguipment.
* Knowledge of the Rules of the Road.
* Knowledge of berthing/unberthing procedures.
* Knowledge of proper radio procedures.

Specific:
* Knowledge of the type and location of own OSV's communications equipment.

TASK CODE: MATE-III.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	20	5	75	1A	5	2	2	2	2

GOAL: Berth/unberth the OSV.

OBJECTIVE: Ensure the OSV is secured while underway.

TASK: Assigns deckhands to a watch rotation using own judgement of the experience and knowledge of the deckhands aboard, and guidance from the master in order to set the sea watch rotation in accordance with company policy/guidelines and government regulations.

PERFORMANCE STANDARDS

Descriptive:
* Accurately assigns deckhands within provided guidelines.

Numerical:
* In 100% of the cases, the sea watch rotation is promptly set.

TRAINING CONTENT

Functional:
* Knowledge of OSV operations and missions.
* Understanding of watch standing requirements on an OSV.
* Knowledge of training/experience needed to stand watches on an OSV.

Specific:
* Knowledge of the particular master's policy, company's policy and guidelines, and government regulations on watch standing.

TASK CODE: MATE-III.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	10	1A	60	1	2	1	2

GOAL: Berth/unberth the OSV.

OBJECTIVE: Ensure that the OSV is secured while underway.

TASK: Ensures that the watertight doors, hatches and vents are secured and dogged down, using own experience in accordance with guidance from the master and company policy in order to provide watertight integrity on the OSV while underway.

PERFORMANCE STANDARDS

Descriptive:
* Promptly inspects watertight doors, hatches and vents after the OSV is underway.

Numerical:
* In 100% of the cases, all required hatches, doors and vents are secured and dogged down.

TRAINING CONTENT

Functional:
* How to secure and dog down watertight hatches, doors and vents.
* Understands the potential danger of not securing watertight doors, hatches and vents when underway.

Specific:
* Knowledge of the type and location of all watertight doors, hatches and vents aboard own OSV.
* Knowledge of the master's instructions and company policy regarding watertight fittings.

TASK CODE: MATE-III.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	5	50	1A	40	2	1	1	2

GOAL: Berth/unberth an OSV.

OBJECTIVE: Ensure the OSV is secured while underway.

TASK: Directly supervises and assists the deckhands in the securing of mooring lines and hoses by coiling or stowing in racks in order to avoid personnel injuries, prevent unnecessary wear on the lines or hoses, and to avoid line(s) fouling the wheel(s) or other underwater appendages.

PERFORMANCE STANDARDS

Descriptive:
* Properly secures lines and hoses by lashing with small stuff and securing in racks.

Numerical:
* In 100% of the cases, all lines and hoses are secured to avoid injuries to personnel and possible damage to the OSV.

TRAINING CONTENT

Functional:
* How to secure lines and hoses.
* Knowledge of the proper method(s) for maintaining lines and hoses.

Specific:
* Knowledge of method(s) for securing lines and hoses on own OSV.

TASK CODE: MATE-IV.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	2	25	2A	25	5	6	4	3

GOAL: Navigate through (maneuver in) restricted waters as required to reach a destination safely and expeditiously.

OBJECTIVE: Carry out duties of the officer of the deck in restricted waters.

TASK: Performs MASTER-IV.A/B/C duties within the constraints placed upon him by the master in order to carry out the officer of the deck duties.

PERFORMANCE STANDARDS

Descriptive:
* Accurately and effectively performs the duties as listed in MASTER-IV.A/B/C.

Numerical:
* In 100% of the cases, the standards listed in MASTER-IV.A/B/C are met.

TRAINING CONTENT

Functional:
* Training as required in the tasks as listed in MASTER-IV.A/B/C.

Specific:
* Knowledge of the tasks and duties required in MASTER-IV.A/B/C.

TASK CODE: MATE-IV.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	45	2	25	2A	30	3	4	3	3

GOAL: Navigate through (maneuver in) restricted waters are required to reach the destination safely and expeditiously.

OBJECTIVE: Carry out duties of the officer of the deck in restricted waters.

TASK: Advises the master by voice or via internal communications system using own judgement of changes in the prevailing weather situation, and potential navigational or collision hazards in order to allow for the continued safe operation of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Immediately advises the master of significant weather changes and potential navigational or collision hazards.

Numerical:
* In 100% of the cases, the master is kept advised of significant changes.

TRAINING CONTENT

Functional:
* Knowledge of the Rules of the Road.
* Understanding of the significance of changes in the weather.
* How to operate internal communications systems.
* How to recognize hazardous situations.
* How to read and interpret navigation charts.

Specific:
* Knowledge of own OSV's internal communications equipment.
* Knowledge of local operating area and navigational hazards.

TASK CODE: MATE-IV.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	2	3	1	3

GOAL: Navigate through (maneuver in) restricted waters as required to reach the destination safely and expeditiously.

OBJECTIVE: Ensure that the daily routine is followed aboard the OSV.

TASK: Conducts routine safety rounds throughout the OSV using own experience of normal OSV operations, and guidance from the master in order to ensure the safe operation of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Completes all routine safety rounds.
* Remains alert for equipment malfunctions and hazardous situations.

Numerical:
* In 100% of the cases, major equipment malfunctions and safety hazards are indentified during safety rounds.
* In 100% of the cases, completes all routine safety rounds.

TRAINING CONTENT

Functional:
* Knowledge of normal OSV operations.
* Understanding of normal operations in the engine room.
* Knowledge of the types of safety hazards to be alert for.

Specific:
* Knowledge of own OSV's layout and equipment.
* Knowledge of the master's requirements for conducting safety rounds.

TASK CODE: MATE-IV.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	25	5	70	1A	5	2	2	1	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Ensure daily routine is followed aboard the OSV.

TASK: Supervises the deckhands in the performance of routine maintenance, repairs and housekeeping using own judgement and experience in order to maintain the OSV and ensure sanitary conditions aboard.

PERFORMANCE STANDARDS

Descriptive:
* Routinely assigns deckhands to perform necessary maintenance, repairs and housekeeping.

Numerical:
* In 100% of the cases, the OSV is maintained at the acceptable minimum level.

TRAINING CONTENT

Functional:
* Knowledge of daily routines aboard an OSV.
* Understanding of the types of routine maintenance, repairs and housekeeping that can be performed underway.
* Understanding of the importance of maintaining sanitary conditions aboard an OSV.

Specific:
* Knowledge of the material condition of own OSV.

TASK CODE: MATE-V.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
5B	50	2	25	2A	25	5	6	4	3

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Carry out duties of the officer of the deck in non-restricted waters.

TASK: Performs the duties of MASTER-V.A/B within the constraints placed upon him by the master in order to carry out the officer of the deck duties.

PERFORMANCE STANDARDS

Descriptive:
Accurately and effectively performs to the standards listed in MASTER-V.A/B.

Numerical:
* In 100% of the cases, the standards listed in MASTER-V.A/B are met.

TRAINING CONTENT

Functional:
* Training required in the tasks assigned under MASTER-V.A/B.

Specific:
* Knowledge as required in MASTER-V.A/B.

TASK CODE: MATE-V.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	45	2	25	2A	30	3	4	3	3

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Carry out duties of the officer of the deck in non-restricted waters.

TASK: Advises the master by voice or via internal communications system using own judgement, of changes in the prevailing weather situation, and potential navigational or collision hazards in order to allow for the continued safe operation of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Immediately advises the master of significant weather changes and potential navigational or collision hazards.
* Correctly identifies navigational and collision hazards.

Numerical:
* In 100% of the cases, the master is kept advised of significant changes.

TRAINING CONTENT

Functional:
* Knowledge of the Rules of the Road.
* Understanding of the significance of changes in the weather.
* How to operate internal communications system.
* How to recognize hazardous situations.
* How to read interpret navigational charts.

Specific:
* Knowledge of own OSV's internal communications systems.
* Knowledge of the local operating area and navigational hazards.

TASK CODE: MATE-V.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	2	3	1	3

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Ensure daily routine is followed aboard the OSV.

TASK: Conducts routine safety rounds throughout the OSV using own experience of normal OSV operations and guidance from the master in order to ensure the safe operation of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Completes all routine safety rounds.
* Remains alert for equipment malfunctions and hazardous conditions.

Numerical:
* In 100% of the cases, major equipment malfunctions and safety hazards are identified during safety rounds.
* In 100% of the cases, completes all routine safety rounds.

TRAINING CONTENT

Functional:
* Knowledge of normal OSV operations.
* Understanding of normal operations in the engine room..
* Knowledge of the types of safety hazards to be alert for.

Specific:
* Knowledge of own OSV layout and equipment.
* Knowledge of the master's requirements for conducting safety rounds.

TASK CODE: MATE-V.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	25	5	70	1A	5	2	2	1	2

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Ensure that the daily routine is followed aboard the OSV.

TASK: Supervises the deckhands in the performance of routine maintenance, repairs and housekeeping, using own judgement and experience, in order to maintain the OSV and ensure sanitary conditions aboard the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Routinely assigns deckhands to perform necessary maintenance, repairs and housekeeping.

Numerical:
* In 100% of the cases, the OSV is maintained at the acceptable minimum level.

TRAINING CONTENT

Functional:
* Knowledge of the daily routine aboard an OSV.
* Understanding of the types of routine maintenance, repairs and housekeeping that can be performed underway.
* Understanding of the importance of maintaining sanitary conditions aboard the OSV.

Specific:
* Knowledge of the material condition of own OSV.

TASK CODE: MATE-VI.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	5	50	1A	30	2	2	1	2

GOAL: Conduct transfer operations between OSV and drilling and production rigs/ platforms.

OBJECTIVE: Safely transfer cargo to rig/platform.

TASK: Supervises and assists the deckhands in the method of mooring/unmooring (tied alongside, off mooring buoy, off own anchor) determined by the master using own judgement and experience in order to safely position the OSV for cargo transfer in accordance with prevailing environmental conditions.

PERFORMANCE STANDARDS

Descriptive:
* Safely and expeditiously casts-off/tends/secures mooring lines.
* Is alert to take immediate action to prevent any unsafe act.
* Provides prompt, clear and correct instructions to deckhands.

Numerical:
* In 100% of the cases, mooring lines are handled properly and safely to position the OSV for cargo transfer.

TRAINING CONTENT

Functional:
* Understanding of procedures for handling mooring lines.
* Knowledge of procedures for mooring an OSV to an offshore rig/platform.
* Knowledge of safety considerations when handling mooring lines.
* How to direct the activities of others.
* How to use deck fittings.
* Knowledge of safety procedures when working under cranes on moving decks.

Specific:
* Knowledge of type and location of deck fittings on own OSV.
* Knowledge of the affects fo prevailing environmental conditions on mooring and handling lines.
* Knowledge of the particular rig/platform mooring configuation.

TASK CODE: MATE-VI.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	15	1A	80	2	1	1	1

GOAL: Conduct transfer operations between OSV and drilling and production rigs/platforms.

OBJECTIVE: Safely transfer cargo to rig/platform.

TASK: Assists the chief engineer in connecting/disconnecting transfer hoses using own judgement and experience, guidance from the chief engineer, and government regulations in order to prepare to transfer dry and liquid bulk cargoes.

PERFORMANCE STANDARDS

Descriptive:
* Accurately and expeditiously connects/disconnects the proper hoses to the appropriate connctions.

Numerical:
* In 100% of the cases, all transfer hoses are properly connected/disconnected.

TRAINING CONTENT

Functional:
* How to connect/disconnect transfer hoses.
* Understanding of government pollution prevention regulations.
* Knowledge of safety procedures when working under cranes on moving decks.

Specific:
* Knowledge of the particular fitting characteristics on own OSV.

TASK CODE: MATE-VI.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	45	2	40	1C	15	2	2	1	2

GOAL: Conduct transfer operations between OSV and drilling and production rigs/platforms.

OBJECTIVE: Safely transfer cargo to rig/platform.

TASK: Monitors the radios and remains alert to potential hazardous situations during the transfer operations, using own experience and communications equipment, in order to safely transfer cargoes to the rig/platform.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and accurately monitors and operates communications equipment.
* Remains alert to the transfer operation.
* Immediately advises the master of potentially dangerous situations.

Numerical:
* In 100% of the cases, the communications equipment is properly monitored during transfer operations.

TRAINING CONTENT

Functional:
* How to operate communications equipment.
* Knowledge of proper radio procedures.
* Knowledge of safety considerations when transferring cargo.

Specific:
* Knowledge of the type and location of own OSV's communications equipment.

TASK CODE: MATE-VI.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	2	15	2B	75	2	2	2	2

GOAL: Conduct transfer operations between OSV and drilling and production rigs/platforms.

OBJECTIVE: Safely anchor the OSV.

TASK: Operates controls and hand brake of anchor windlass using own experience and proper procedures in order to let go/raise the anchor in accordance with communications from the master.

PERFORMANCE STANDARDS

Descriptive:
* Safely and accurately operates the anchor windlass.

Numerical:
* In 100% of the cases, the anchor windlass is properly operated to let go/raise the anchor.

TRAINING CONTENT

Functional:
* How to operate the anchor windlass controls and hand brakes.
* How to use stoppers.
* Knowledge of the procedure for anchoring an OSV.

Specific:
* Knowledge of the operation of the anchor windlass on own OSV.

TASK CODE: MATE-VI.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	2	85	1A	5	1	1	1	2

GOAL: Conduct transfer operations between OSV and drilling or production rigs/platforms.

OBJECTIVE: Safely anchor the OSV.

TASK: Communicates continually to the bridge the amount of chain that is out, which way the chain is tending and the amount of strain, using voice communications and hand signals in order to safely anchor the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Continually passes accurate information to the bridge regarding the anchor and chain.
* Clearly expresses self.

Numerical:
* In 100% of the cases, the bridge is kept advised of the condition of the anchor and chain.

TRAINING CONTENT

Functional:
* How to tell the amount of anchor chain out.
* How to report which way chain is tending and the amount of strain.
* Understanding of proper terminology for anchoring an OSV.
* How to use hand signals to convey the condition of the anchor and chain.

Specific:
* Knowledge of procedure for anchoring own OSV.

TASK CODE: MATE-VI.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	60	2	10	1C	30	3	3	1	2

GOAL: Conduct transfer operations between OSV and drilling and production rigs/platforms.

OBJECTIVE: Safely anchor an OSV.

TASK: Check the anchor and position of the OSV and monitor the radios, while standing radio and anchor watch using own experience, instructions from the master, standard procedure and communications equipment in order to identify potential hazards and to keep the master advised.

PERFORMANCE STANDARDS

Descriptive:
* Immediately notifies the master of potentially hazardous conditions.
* Remains alert to radio traffic for own OSV.
* Accurately carrys out instructions of the master.

Numerical:
* In 100% of the cases, all potentially hazardous conditions are recognized.
* In 100% of the cases, the master's instructions are followed.

TRAINING CONTENT

Functional:
* How to operate communications equipment.
* How to recognize worsening environmental conditions.
* How to determine if the anchor is dragging.
* How to determine the risk of collision with other vessels.

Specific:
* Knowledge of own OSV's communication equipment.

TASK CODE: MATE-VII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1A	10	3A	60	1A	30	2	2	1	1

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Prepare for anchor handling trip.

TASK: Supervises and assists the deckhands in clearing the work deck of unnecessary loose gear, using own experience and guidance from the master, lines, and chaffing gear, in order to provide space for the loading of an anchoring system, if required, and the anchor handling crew's equipment and gear.

PERFORMANCE STANDARDS

Descriptive:
* Ensures that loose gear on the work deck is secured and excess gear and equipment is removed.
* Ensures adequate deck space is provided for anchor handling gear and equipment.

Numerical:
* In 100% of the cases, the back deck is cleaned so as to facilitate the anchor handling operation.

TRAINING CONTENT

Functional:
* How to secure gear and equipment.
* How to direct/supervise the activities of others.
* Understanding of anchor handling procedures and gear.

Specific:
* Knowledge of the configuation of own OSV's work deck area.

TASK CODE: MATE-VII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	45	2	30	1C	25	2	2	2	2

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Handle anchors and buoys safely.

TASK: Monitors and operates radios and radar, and remains alert ahead using own experience, communications equipment and radar in order to allow the master to safely maneuver the OSV from the after control station while running or lifting anchors.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and accurately monitors and operates communications equipment.
* Selects the optimum combinations of range scales, intensity, etc., for the most accurate and prompt detection of other vessels.
* Remains alert to the anchoring evolution.
* Immediately advises the master of potentially dangerous situations.

Numerical:
* In 100% of the cases, the master is allowed to maneuver the OSV without added distractions.

TRAINING CONTENT

Functional:
* How to operate communications equipment.
* How to manipulate radar unit, i.e., vary range scales, intensity, range and bearing circles and lines, etc.
* Knowledge of proper radio procedures.
* Knowledge of the Rules of the Road.

Specific:
* Knowledge of the type and location of own OSV's communications equipment.
* Knowledge of own OSV's radar unit.

TASK CODE: MATE-VII.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	90	1A	1	1	1	1	1

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Handle anchors and buoys safely.

TASK: Makes himself available to the master during the anchor handling job to perform tasks assigned in order to ensure a safe operation.

PERFORMANCE STANDARDS

Descriptive:
* Promptly completes tasks assigned by the master during the anchor handling operation.

Numerical:
* In 100% of the cases, performs the assigned tasks.

TRAINING CONTENT

Functional:
* Knowledge of the anchor handling procedures.
* How to use anchor handling gear.
* How to operate and check out the anchor handling winch.
* Understanding of winch signals.

Specific:
* Knowledge of own OSV's anchor handling winch's operation.

TASK CODE: MATE-VII.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	40	5	30	2A	30	4	4	3	3

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Perform anchor handling foreman duties when anchor handling crew is not utilized.

TASK: Directs all work on the back deck during the anchor handling operation using own experience and judgement, and accepted industry methods in order to safely run out lift anchors.

PERFORMANCE STANDARDS

Descriptive:
* Anchors are handled safely and expeditiously.
* Remains alert to situation changes that could affect the safety of the crew on the work deck.

Numerical:
* In 100% of the cases, work on the back deck during anchor handling operations is done safely and expeditiously.

TRAINING CONTENT

Functional:
* Knowledge of anchor handling methods, procedures and safety considerations.
* Understanding of winch signals.
* Knowledge of anchor handling gear, i.e., winch, pelican hooks, stoppers, shackles, work wires, pennants, welding equipment, grapnel, chain chasing hook, etc.

Specific:
* Knowledge of anchor handling gear and equipment on own OSV.

TASK CODE: MATE-VIII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	3A	30	1A	55	1	2	1	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Prepare for taking a vessel or rig in tow.

TASK: Directs and assists deckhands in breaking out towing gear using own knowledge of towing operations and guidance from the master in order to ensure that necessary gear is aboard in good condition and in position.

PERFORMANCE STANDARDS

Descriptive:
* Accurately evaluates condition of towing gear.
* Immediately advises the master of gear shortages or deficiencies.

Numerical:
* In 100% of the cases, towing gear is available and in good condition.

TRAINING CONTENT

Functional:
* Knowledge of towing winches.
* Knowledge of towing gear, i.e., tow bar, towing pod, nylon towing spring, chaffing gear and plate, shackles, etc.
* Experience in evaulating the condition of towing gear.

Specific:
* Knowledge of the type, number and location of towing gear on own OSV.
* Knowledge of own OSV's towing capabilities and gear.

TASK CODE: MATE-VIII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	3A	35	2D	55	2	2	1	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely connect/disconnect to or from a vessel or rig to be towed.

TASK: Directs and assists deckhands in bringing aboard the towing pennant or towing bridle using own experience, guidance from the master, pelican hooks and drum end on towning winch, in order to position the pennant or towing bridle for connection.

PERFORMANCE STANDARDS

Descriptive:
* Quickly and safely retrieves the towing pennant or bridle.
* Remains alert to situation changes that could endanger personnel on the work deck.
* Makes appropriate changes to assignments to assure the timely completion of the task.

Numerical:
* In 100% of the cases, the towing pennant or bridle is retrieved without personnel injuries or damage to the OSV.

TRAINING CONTENT

Functional:
* Knowledge of the procedures for receiving a towing pennant or bridle.
* How to operate a towing winch.
* Knowledge of towing gear.
* Knowledge of safety considerations in handling a towing pennant or bridle and working under cranes.
* How to direct the activities of others.

Specific:
* Knowledge of own OSV's towing winch.

TASK CODE: MATE-VIII.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	3A	30	2D	55	2	2	2	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely connect/disconnect to/from the vessel or rig to be towed.

TASK: Directs and assists deckhands in rigging the towing pennant or towing bridle using own experience, guidance from the master, accepted industry practices, pelican hooks, nylon spring line, chaffing gear and plate, tow bar, tow pod, and towing winch in order to prepare for the tow.

PERFORMANCE STANDARDS

Descriptive:
* Towing pennant or bridle are rigged correctly.
* Remains alert to situation changes that could endanger personnel on the work deck.

Numerical:
* In 100% of the cases, the towing pennant or bridle is properly and safely rigged to commence towing the vessel or rig/platform.

TRAINING CONTENT

Functional:
* Knowledge of and use of towing gear.
* Understanding of various procedures for rigging the towing pennant or bridle.
* How to operate the towing winch.
* Knowledge of winch signals.

Specific:
* Knowledge of the method decided upon for rigging the particular tow.
* Knowledge of own OSV's towing winch.

TASK CODE: MATE-VIII.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	15	3A	30	2D	55	2	2	2	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely connect/disconnect to/from the vessel or rig to be towed.

TASK: Directs and assists deckhands in disconnecting the towing pennant or bridle using own experience, guidance from the master, and towing gear in order to safely complete the towing job.

PERFORMANCE STANDARDS

Descriptive:
* Quickly and safely disconnects the towing pennant or bridle.
* Remains alert to situation changes that could endanger personnel on the work deck.

Numerical:
* In 100% of the cases, the towing pennant or briddle is diconnected without personnel injuries or damage to the OSV.

TRAINING CONTENT

Functional:
* Knowledge of the procedure for disconnecting the towing pennant or bridle.
* How to operate a towing winch.
* Knowledge of towing gear.
* Knowledge of safety considerations in handling a towing pennant or bridle.

Specific:
* Knowledge of own OSV's towing winch.

TASK CODE: MATE-VIII.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	3A	25	2D	65	2	2	2	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely tow vessel or rig to a new location.

TASK: Directs and assists deckhands in adjusting the length of the tow wire and positioning of chaffing gear using own experience, towing winch and chaffing gear in order to provide a good catenary on the wire in accordance with the master's instructions.

PERFORMANCE STANDARDS

Descriptive:
* Accurately adjusts the length of the tow wire as directed by the master.
* Remains alert to tow wire and sees to it that it is properly protected with chaffing gear.

Numerical:
* In 100% of the cases, a good catenary is maintained in the tow wire depending on the particular situation.
* In 100% of the cases, the chaffing gear is positioned to protect the tow wire.

TRAINING CONTENT

Functional:
* Knowledge of and reason for chaffing gear.
* How to operate towing winch.
* Understanding of catenary.
* How to adjust the length of the tow wire safely.

Specific:
* Knowledge of own OSV's towing winch.

TASK CODE: MATE-VIII.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	30	2	50	2C	20	3	4	3	3

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely tow vessel or rig to a new location.

TASK: Observes operation and makes himself available to the master during the towing job to perform tasks assigned in order to learn as much as possible about shiphandling while towing and the operation in general.

PERFORMANCE STANDARDS

Descriptive:
* Promptly completes tasks assigned by the master during the towing operation.
* Gains experience and knowledge of shiphandling during a tow.

Numerical:
* In 100% of the cases, performs assigned tasks.
* In 100% of the cases, gains shiphandling experience.

TRAINING CONTENT

Functional:
* Knowledge of towing procedures.
* Understanding of environmental factors as they relate to controllability of an OSV.

Specific:
* Knowledge of the handling characteristics of own OSV.

TASK CODE: MATE-IX.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effect of fire aboard the OSV.

TASK: Manipulates buttons, switches, levers of alarm and/or communications system in order to sound alarm and/or to issue and OSV-wide alert, using knowledge of the characteristics of internal communication equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for fire aboard.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of alarm device(s) and internal communications system.
* Acts calmly in emergency situation.
* Correctly follows applicable procedure
* Clearly sounds signal or message so that it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sounds the alarm immediately upon seeing or hearing about the emergency situation.

TRAINING CONTENT

Functional:
* How to operate the internal communications system, i.e., sound-powered phone, PA system, etc.
* How to operate the emergency alarm system.
* Understands emergency procedures and communicates them to others.

Specific:
* Knowledge of the type and location of the internal communications and alarm systems on own OSV.
* Knowledge of the emergency alert procedures, including standard signals and messages.

TASK CODE: MATE-IX.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	5	45	2A	25	4	4	2	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Proceeds to the location of the fire and commences directing and assisting available crew members in their efforts to control and extinguish the fire using knowledge of the possible classes of fires, appropriate portable fire extinguishers, fire hoses, fire axes, etc., in order to contain and extinguish the fire.

PERFORMANCE STANDARDS

Descriptive:
* Properly evaluates the effectiveness of various fire extinguishing agents for a particular type of fire.
* Remains calm while directing the actions of others.
* Correctly performs emergency procedures.

Numerical:
* In 100% of the cases, selects the appropriate fire fighting method and equipment for the situation at hand.
* In 100% of the cases, remains alert to the situation to decide if directives to crew members should be modified.

TRAINING CONTENT

Functional:
* Understanding of shipboard fire fighting techniques.
* Understanding of the characteristics of various classes of fires.
* Understanding of the types of extinguishing agents/equipment appropriate for various classes of fire.
* Understanding of the type and number of personnel and equipment needed to combat fires of varying severity.
* Ability to direct/supervise the actions of others.

Specific:
* Knowledge of the types and locations of extinguishing agents/equipment available on own OSV.
* Knowledge of any specified emergency procedures used on own OSV.

TASK CODE: MATE-IX.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	2	50	1C	20	2	2	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Communicates to the master the effectiveness of the fire fighting activities, using internal communications systems, voice, visual signals or messenger, in order to continually provide information on the situation/severity of the fire.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately communicates the severity and ability to contain or extinguish the particular fire.

Numerical:
* In 100% of the cases, the master is provided with the information needed to determine a course of action.

TRAINING CONTENT

Functional:
* How to operate the internal communications equipment.
* How to evaluate the ability to contain/extinguish the fire.
* Ability to clearly and accurately describe the situation.
* Knowledge of fire fighting terminology.

Specific:
* Knowledge of own OSV's internal communications equipment.
* Knowledge of specified emergency procedures used on own OSV.

TASK CODE: MATE-IX.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	3A	60	2A	10	2	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of a fire aboard an OSV.

TASK: Directs deckhands in overhauling the fire and setting a reflash watch after the fire has been extinguished using knowledge of fire fighting procedures in order to ensure that the fire is completely extinguished and will not reflash.

PERFORMANCE STANDARDS

Descriptive:
* Ensures that a fire is properly overhauled.
* Remains alert to the need for a reflash watch to be set after a fire has been overhauled.

Numerical:
* In 100% of the cases, an overhauled fire does not reflash.

TRAINING CONTENT

Functional:
* How to overhaul a fire and the gear required.
* Understanding of the importance of setting a reflash watch
* How to direct/supervise the activities of others.

Specific:
* Knowledge of the type and location of gear on own OSV that can be used to overhaul a fire.

TASK CODE: MATE-IX.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Manipulates buttons, switches, levers of alarm and/or communications system in order to sound alarm and/or issue and OSV-wide alert, using knowledge of the characteristics of the internal communications equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for collision, flooding or grounding emergency.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of alarm device(s) and internal communications system.
* Acts calmly in an emergency situation.
* Correctly follows applicable procedure.
* Clearly sounds signal or message so that it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sounds the alarm immediately upon seeing or hearing about the emergency situation.

TRAINING CONTENT

Functional:
* How to operate the internal communications systems, e.g., sound-powered phone, PA system, intercoms, etc.
* How to operate the emergency alarm systems.
* Understands emergency procedures and communicates them to others.

Specific:
* Knowledge of the type and location of internal communication and alarm systems on own OSV.
* Knowledge of the emergency alert procedures, including standard signals and messages.

TASK CODE: MATE-IX.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	5	45	2A	25	4	4	2	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Proceeds to the location of the collision and/or flooding and commences directing available crew members, using knowledge of standard damage control procedures, in order to minimize the flooding.

PERFORMANCE STANDARDS

Descriptive:
* Effectively directs personnel while remaining calm in the emergency situation.
* Directs personnel in method(s) most appropriate for the particular situation.

Numerical:
* In 100% of the cases, remains alert to the situation to decide if directives to crew members should be modified.

TRAINING CONTENT

Functional:
* Understanding of the types of procedures used to control flooding.
* Understanding of the equipment and personnel needed to control flooding.
* How to determine the extent of the flooding.

Specific:
* Knowledge of personnel, equipment and materials available to curb flooding on own OSV.
* Knowledge of the emergency procedures used on own OSV.

TASK CODE: MATE-IX.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	2	50	1C	20	2	2	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Communicates to the master the effectiveness of the damage control activities using internal communication equipment, voice, or messenger in order to provide imformation on the flooding situation.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately communicates the severity and ability to control the particular flooding situation.

Numerical:
* In 100% of the cases, the master is provided with the information needed to determine a course of action.

TRAINING CONTENT

Functional:
* How to operate internal communication equipment.
* How to evaluate the ability to control flooding with available personnel, equipment and materials.
* How to clearly and accurately describe the situation.

Specific:
* Knowledge of own OSV's internal communications equipment.
* Knowledge of specified emergency procedures used on own OSV.

TASK CODE: MATE-IX.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
4	20	2	70	2A	10	4	3	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Coordinates with the chief engineer all damage control activities and emergency repairs using knowledge of damage control procedures, stability, and available materials, in order to minimize and contain the flooding and maintain the OSV's stability.

PERFORMANCE STANDARDS

Descriptive:
* Smoothly coordinates damage control activities and emergency repairs.
* Remains calm while directing personnel in the emergency situation.

Numerical:
* In 100% of the cases, a coordinated effort is made to control flooding and perform emergency repairs.

TRAINING CONTENT

Functional:
* Knowledge of various damage control techinques.
* Ability to work with others.

Specific:
* Knowledge of the materials and tools available to perform emergency repairs on own OSV.
* Knowledge of the design and layout of own OSV.

TASK CODE: MATE-IX.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	90	1A	5	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Responds to a man overboard situation.

TASK: Hails and passes "man overboard port (starboard) side" to the bridge using voice in order to alert personnel of a man overboard emergency.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and loudly passes the warning to the bridge.

Numerical:
* In 100% of the cases, personnel are immediately alerted to a man overboard emergency.

TRAINING CONTENT

Functional:
* Understanding of the importance of passing the information to the bridge.
* Ability to clearly shout a warning.

Specific:
* Knowledge of the specified emergency procedure on own OSV.

TASK CODE: MATE-IX.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	1A	5	1A	85	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Responds to a man overboard situation.

TASK: Throws a life ring and float light overboard upon hearing the signal "man overboard" in order to provide floatation material to the person in the water.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and accurately throws a life ring and float light overboard.

Numerical:
* In 100% of the cases, a life ring is thrown near the person in the water.

TRAINING CONTENT

Functional:
* How to detach and throw a life ring and float light overboard.

Specific:
* Knowledge of the types and locations of life rings and float lights aboard own OSV.

TASK CODE: MATE-IX.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	55	1A	5	1C	40	5	5	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Responds to a man overboard situation.

TASK: Maneuvers the OSV, if the officer of the deck, initially to clear the man in the water and remain in navigable waters, using a Williamson turn or other accepted maneuver depending on the situation, until relieved by the master, in order to safely recover the man in the water.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and precisely maneuvers the OSV to clear the person in the water.
* Navigates the OSV to remain in navigable waters and avoid other vessels.

Numerical:
* In 100% of the cases, the OSV clears the person in the water, remains in navigable waters and avoids other vessels.

TRAINING CONTENT

Functional:
* How to perform a Williamson turn.
* Knowledge of the procedures for maneuvering an OSV to avoid a person overboard.

Specific:
* Knowledge of the handling characteristics of own OSV.

TASK CODE: MATE-IX.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1A	10	3A	70	1A	20	2	2	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Responds to a man overboard situation.

TASK: Directly supervises the deckhands in preparing to recover the person in the water using own judgement, life ring, ladder, heaving line, etc., in order to safely bring the person aboard.

PERFORMANCE STANDARDS

Descriptive:
* Safely and expeditiously recovers the person in the water.
* Effectively directs the activities of the deckhands.

Numerical:
* In 100% of the cases, remains alert to the situation to decide if directives to crew members should be modified.
* In 100% of the cases, the person overboard is safely recovered.

TRAINING CONTENT

Functional:
* Knowledge of the methods for recovering a person overboard.
* Knowledge of the gear available to assist the person overboard, i.e., life ring, heaving line, ladder, etc.
* How to direct/supervise the activities of others.

Specific:
* Knowledge of the location of gear available aboard own OSV to assist the person overboard.

TASK CODE: MATE-IX.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	5	1A	5	1A	90	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandons the OSV safely and expeditiously.

TASK: Manipulates clips and straps of a life preserver, using experience and accepted method of securing in order to properly don the life preserver.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and correctly dons the life preserver.
* Remains calm and alert while donning the life preserver.

Numerical:
* In 100% of the cases, the life preserver is donned properly.

TRAINING CONTENT

Functional:
* How to properly don a life preserver.
* Knowledge of life preserver stowage.

Specific:
* Knowledge of the location and number of life preservers on own OSV.

TASK CODE: MATE-IX.D.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	35	2	55	1A	10	2	2	2	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandons the OSV safely and expeditiously.

TASK: Musters personnel aboard with life preservers at the life raft station(s) using voice commands in order to account for personnel and equipment for abandoning the OSV in accordance with specified emergency procedures.

PERFORMANCE STANDARDS

Descriptive:
* Ensures that all personnel are mustered quickly and safely.
* Ensures all equipment for abandoning the OSV is at the life raft station(s).
* Remains calm while mustering personnel.

Numerical:
* In 100% of the cases, all personnel and equipment are accounted for.

TRAINING CONTENT

Functional:
* Knowledge of abandon ship signal(s).
* Understanding of abandon ship procedures.
* How to direct the actions of others.

Specific:
* Knowledge of the number of personnel aboard own OSV.
* Knowledge of all crew members emergency procedure assignments.

TASK CODE: MATE-IX.D.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	3A	65	1C	30	2	3	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandons the OSV safely and expeditiously.

TASK: Directs and assists deckhands in preparing life raft(s), using own judgement, master's guidance and accepted practices in order to safely launch the life raft(s) when commanded to do so.

PERFORMANCE STANDARDS

Descriptive:
* Effectively directs and coordinates the activities of others.
* Correctly and safely prepares the life raft(s) for launching.
* Acts calmly in the emergency situation.

Numerical:
* In 100% of the cases, life rafts are prepared for launching.
* In 100% of the cases, the OSV is quickly and safely abandoned after the command has been given.

TRAINING CONTENT

Functional:
* How to launch a life raft.
* How to direct the actions of others.
* How to inflate a life raft.

Specific:
* Knowledge of the procedure for launching a life raft from own OSV.

TASK CODE: MATE-IX.E.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	60	1A	5	1A	35	1	2	2	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensures the OSV is prepared for heavy weather.

TASK: Rechecks all deck spaces for loose cargo, gear, tools and equipment by checking lashings, dunnage, chains, cables, ropes, lines, padeyes and turnbuckles for secure condition, using own experience and guidance from the master, in order to identify potentially hazardous conditions.

PERFORMANCE STANDARDS

Descriptive:
* All cargo, gear, tools and equipment are properly secured and rechecked.

Numerical:
* In 100% of the cases, all loose cargo, gear, tools and equipment are identified and secured.

TRAINING CONTENT

Functional:
* How to recognize when cargo, gear, tools and equipment are secured.

Specific:
* Knowledge of own OSV's configuration and cargo.

TASK CODE: MATE-IX.E.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	3A	50	1A	40	2	2	2	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensures the OSV is prepared for heavy weather.

TASK: Supervises and assists deckhands in the securing of identified items and all watertight door, hatches and vents, using own experience and judgement, master's guidance and accepted practices, in order to prevent injuries and damage from missile hazards and shifting cargo and ensure watertight integrity.

PERFORMANCE STANDARDS

Descriptive:
* Potential missile hazards are removed or eliminated.
* Promptly and correctly secures all watertight doors, hatches and vents.
* Clearly and effectively instructs deckhands in actions to be performed.

Numerical:
* In 100% of the cases, potential missile hazards and shifting cargo are secured.
* In 100% of the cases, all watertight hatches, doors and vents are secured.

TRAINING CONTENT

Functional:
* Knowledge of the methods of securing various gear, cargo, tools and equipment.
* How to secure watertight doors, hatches and vents.
* How to direct/supervise the activities of others.

Specific:
* Knowledge of own OSV's configuration and means for securing gear, cargo, tools and equipment.
* Knowledge of the type, number and location of watertight doors, hatches and vents on own OSV.

TASK CODE: MATE-IX.F.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	30	4C	50	1A	20	3	4	2	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Responds to personnel injuries, illnesses or deaths.

TASK: Provides first aid to victims from disaster/accident scene if possible or feasible, and obtains additional assistance if necessary in order to give immediate care and prevent further injury to victim(s), using knowledge of first aid procedures for various kinds of injuries, of available medical kits and manuals, and giving evidence of the willingness to aid, reassure and encourage injured person(s).

PERFORMANCE STANDARDS

Descriptive:
* Correctly uses first aid kits, procedures and manuals.
* Uses good judgement in moving injured personnel.
* Promptly provides first aid and calls for required additional medical attention.
* Promotes confidence in the victim(s) by demonstrating competence and acting calmly.

Numerical:
* In 100% of the cases, medical attention is given in all cases where required.
* In 100% of the cases, never moves an injured person until an examination has been made of all injuries.

TRAINING CONTENT

Functional:
* Understanding of the procedures used to treat various kinds of injuries, including the rules for moving injured personnel.
* How to read and interpret first aid/medical manuals.
* How to use first aid equipment, e.g., stimulants, tourniquets, bandages, splints, etc.
* How to reassure and encourage the victim(s).

Specific:
* Knowledge of the location and contents of first aid/medical kits and manuals on own OSV.
* Knowledge of company guidelines for obtaining additional assistance.

TASK CODE: MATE-IX.F.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	70	2	25	1A	5	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Responds to personnel injuries, illnesses or deaths.

TASK: Provides all pertinent information/circumstances of any injury, accident, illness or death to master in order to enable him to document in the rough log the incident and complete all reports in accordance with government regulations, company's and charterer's policies.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately describes the circumstances surrounding an injury, illness or death.

Numerical:
* In 100% of the cases, information required to document an accident, injury, illness or death is provided the master.

TRAINING CONTENT

Functional:
* Knowledge of the information required, i.e., name of person, date, time, circumstances, etc.

Specific:
* Knowledge of the company's policy and guidelines on personnel injuries, illnesses and deaths.

TASK CODE: MATE-IX.F.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	1	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Responds to personnel injuries, illnesses or deaths.

TASK: Ascertains the accuracy of the master's entry in the rough log of any accident, injury or illness involving one's self in order to make additional comments in the log to clarify any errors.

PERFORMANCE STANDARDS

Descriptive:
* Accurately describes the circumstances surrounding an injury, illness, accident or death.
* Entry in the rough log is legible.

Numerical:
* In 100% of the cases, the rough log entry of an injury, illness, accident or death is accurate and legible.

TRAINING CONTENT

Functional:
* Understanding of entries to be made in a rough log.
* How to make an entry in a log.

Specific:
* Knowledge of the rough log kept on own OSV.

TASK CODE: MATE-X.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	4B	50	2B	20	4	4	2	3

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Imparts knowledge of OSV operations through on-the-job training (OJT).

TASK: Instructs deckhands through OJT in inspection/maintenance/operation of deck machinery, lifesaving and fire fighting equipment, deck maintenance, seamanship and use of power/hand tools, by using own judgement and experience, company guidelines, training aids and written material, in order to develop skills above the minimum in the deckhands.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately instructs/demonstrates the proper inspection, maintenance and operation of deck equipment, gear and tools.
* Stresses safety procedures and the wearing of protective clothing.
* Is sensible in the selection of the time and place for OJT so as not to disrupt OSV operations.

Numerical:
* In 100% of the cases, OJT is provided the deckhands to develop their skills above the minimum.

TRAINING CONTENT

Functional:
* How to instruct/demonstrate various methods of inspection, maintenance and operation procedures for deck equipment, gear and tools.
* Knowledge of deck machinery, lifesaving and fire fighting equipment, deck maintenance, marlinspike seamanship and power/hand tools.
* Knowledge of the safety procedures for deck work on an OSV.

Specific:
* Knowledge of the tasks, procedures, equipment performance standards, etc. characteristic of own OSV operations.
* Knowledge of the experience of the deckhands on own OSV.

TASK CODE: MATE-X.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	4B	65	1A	5	4	4	2	3

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Imparts knowledge of OSV operations through on-the-job training (OJT).

TASK: Trains/instructs deckhands in proper watchstanding procedures, damage control techniques, emergency response procedures, first aid, towing and anchor handling operations, and shipboard routines, using own judgement and experience within established company policy and guidelines in order to prepare the deckhands for OSV operations.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately demonstrates and explains operations and procedures.
* Is sensible in selecting time and place for training so as not to disrupt OSV operations.

Numerical:
* In 100% of the cases, practical training is held as required for deckhands.

TRAINING CONTENT

Functional:
* Knowledge of deckhands' responsibilities and content of tasks that go with those responsibilities.
* Knowledge of safety procedures.
* Knowlege of first aid procedures, equipment and manuals.
* Understanding of emergency response procedures and damage control techniques.
* Understanding of towing and anchor handling operations.

Specific:
* Knowledge of the procedures and equipment used on own OSV to handle emergencies.
* Knowledge of the backgrounds and capabilities of the deckhands.

TASK CODE: MATE-X.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	3B	80	1A	5	2	2	1	2

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conducts an ongoing safety program.

TASK: Stresses the importance of common sense and personal/preventive safety to the deckhands by instructing, correcting and setting an example, in order to prevent personnel injuries and identify potentially hazardous situations.

PERFORMANCE STANDARDS

Descriptive:
* Impresses the importance of being safety conscious on the deckhands.
* Reinforces personal and preventive safety by setting the example.

Numerical:
* In 100% of the cases, safety consciousness of the deckhands is increased.
* In 100% of the cases, safety procedures are followed at all times.

TRAINING CONTENT

Functional:
* Understanding of the types of hazards common to OSV's.
* Knowledge of protective clothing, i.e., safety shoes, work gloves, safety goggles, ear protection, etc.

Specific:
* Knowledge of established company policy on personal and preventive safety.
* Knowledge of OSV operations.

TASK CODE: MATE-X.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	2	50	2A	30	1	2	2	2

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conducts an ongoing safety program.

TASK: Reports to the master and takes prompt action to correct potential safety hazards using necessary tools, materials and own experience, in order to prevent personnel injuries.

PERFORMANCE STANDARDS

Descriptive:
* Remains alert to potential safety hazards.
* Promptly reports potential hazards to the master.
* Immediately takes corrective action to eliminate the hazardous situation/condition.

Numerical:
* In 100% of the cases, the master is made aware of potentially hazardous situations.
* In 100% of the cases, potential hazards are corrected.

TRAINING CONTENT

Functional:
* Understanding of the importance of reporting and correcting of potentially hazardous conditions.
* How to use hand/power tools.
* Knowledge of the characteristics of various materials, i.e., wood, aluminum, steel, etc.

Specific:
* Knowledge of OSV operations and the inherent dangers of offshore work.
* Knowledge of the types and locations of tools and materials for making repairs.

TASK CODE: ENGINEER-I.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	65	2	30	1A	5	3	4	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Relieve/be relieved of chief engineer.

TASK: Communicate with the off-going chief engineer to determine the status of the machinery plant and any problems concerning fuel, oil, water, equipment or upcoming maintenance to appraise himself of problems or maintenance that may develop during his hitch.

PERFORMANCE STANDARDS

Descriptive:
* The status of the machinery plant is accurately communicated.

Numerical:
* The amount of fuel, water and oil aboard is accurately communicated.
* All problems are accurately communicated.
* All maintenance to be performed and upcoming is accurately communicated.

TRAINING CONTENT

Functional:
* Knowledge of machinery plant and operating characteristics regarding fuel usage, operating parameters, water usage, etc., to forecast problems or maintenance required.
* Knowledge of maintenance required for various pieces of equipment.

Specific:
* Knowledge of own OSV's maintenance schedule and required maintenance for OSV's equipment.
* Knowledge of operating characteristics of own OSV.

TASK CODE: ENGINEER-1.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	70	1A	5	1A	20	3	3	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Relieve/be relieved of the chief engineer.

TASK: Inspects engineering spaces and equipment to determine the general condition of the machinery plant and to appraise himself of problems or maintenance that may occur during his hitch.

PERFORMANCE STANDARDS

Descriptive:
Accurately assesses the status of the machinery plant.

Numerical:
* In 100% of the cases, all observable deficiencies and needed maintenance are noted.

TRAINING CONTENT

Functional:
* How to recognize between proper and improper operation of equipment.
* How to recognize delapidated equipment or components.
* Knowledge of the maintenance required for various equipment.
* Knowledge of the potential problems in various equipment or systems.

Specific:
* Knowledge of own OSV's equipment and systems characteristics.
* Knowledge of the maintenance required on own OSV's systems and equipment.

TASK CODE: ENGINEER-I.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	70	2	20	1A	10	4	3	2	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Relieve/be relieved of the chief engineer.

TASK: Examine logs and required reports to determine if these are complete and accurate and perform corrections as necessary.

PERFORMANCE STANDARDS

Descriptive:
* Notes deficiencies in the logs and reports and corrects same.

Numerical:
* In 100% of the cases, all required logs and reports are completed and accurate.

TRAINING CONTENT

Functional:
* How to reflect maintenance performed in written form and vice-versa.
* How to record readings, soundings, etc., in written form.

Specific:
* Knowledge of the requirements for logs and reports on own OSV.
* Knowledge of what information is required in logs and reports and how to obtain same.

TASK CODE: ENGINEER-I.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	60	2	10	2A	30	4	4	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Relieve/be relieved of the chief engineer.

TASK: Familiarizes himself with the OSV's machinery and systems by tracing piping systems, reviewing operating manuals, inspecting equipment, talking with other crew members and calling upon own knowledge of machinery and systems in order to perform all required operations.

PERFORMANCE STANDARDS

Descriptive:
* Accurately learns the location of valves and piping to determine flow patterns and system capabilities.
* Accurately learns the location and operations of equipment controls.

Numerical:
* In 100% of the cases, famariliarizes himself with machinery systems and controls adequately to perform all required operations.

TRAINING CONTENT

Functional:
* Knowledge of equipment controls normally installed on various equipment and how to operate same.
* How to operate piping systems and piping components, i.e., pumps, valves, check valves, etc.
* How to recognize various components, i.e., compressors, heat exchangers, switches, etc.
* Knowledge of equipment requirements for fuel, water, oil, etc.

Specific:
* Knowledge of equipment's controls and components operation on own OSV.

TASK CODE: ENGINEER-I.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	70	1A	5	1A	25	3	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance and repair items and prepare a worklist.

TASK: Visually inspects and checks engineering spaces and equipment to locate leaks, worn hose, loose fittings and fasteners, dirty or dilapidated conditions, operational or other maintenance items, using own judgment and experience to determine if repair and/or upkeep are needed.

PERFORMANCE STANDARDS

Descriptive:
* Identifies promptly items requiring maintenance.

Numerical:
* In 100% of the cases, all items requiring maintenance are identified.

TRAINING CONTENT

Functional:
* Knowledge of maintenance required for various equipment and spaces.
* How to recognize between proper and improper condition or operation.

Specific:
* Knowledge of maintenance requirements for equipment on own OSV.
* Knowledge of the proper condition and operation of equipment on own OSV.

TASK CODE: ENGINEER-I.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	4	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance/repair items and prepare a worklist.

TASK: Reviews logs, operating manuals and company policy to determine any scheduled maintenance required by these.

PERFORMANCE STANDARDS

Descriptive:
* Accurately surveys all sources containing scheduled maintenance items and extracts the applicable data.

Numerical:
* In 100% of the cases, all scheduled maintenance items are identified.

TRAINING CONTENT

Functional:
* How to relate written descriptions to actual conditions.
* How to interpret written instructions into work to be performed.

Specific:
* Knowledge of the sources of scheduled maintenance items for own OSV's equipment.
* Knowledge of the condition of own OSV (engine hours, time since last maintenance, etc.).

TASK CODE: ENGINEER-I.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	90	1A	5	1A	5	4	4	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance/repair items and prepare a worklist.

TASK: Reviews logs for trends indicating faulty operation or any documented faulty operation and recalls from last underway period any faulty operation, to determine any maintenance or repair needed.

PERFORMANCE STANDARDS

Descriptive:
* Accurately determines problems indicated by trends.
* Accurately determines the parameters indicated by faulty operations.

Numerical:
* In 100% of the cases, all trends and faulty operations are identified.
* In 100% of the cases, all maintenance or repair to items indicated by trends or faulty operations are identified.

TRAINING CONTENT

Functional:
* How to recognize trends and faults these may indicate.
* How to recognize between proper and improper operation.
* How to interpret written descriptions to actual conditions.
* How to recognize faults that maybe indicated by various abnormal operating parameters.

Specific:
* Knowledge of normal operating parameters for the equipment on own OSV.
* Knowledge of faults that may be indicated by abnormal operating parameters on own OSV.

TASK CODE: ENGINEER-I.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	85	2	10	1A	5	5	4	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Identify maintenance/repair items and prepare a worklist.

TASK: Develops a prioritized worklist either mentally or in written form, from maintenance and repair items previously identified, considering schedule, input from the master, personnel, supplies, tools and company policy.

PERFORMANCE STANDARDS

Descriptive:
* Ensures that a doable worklist is developed.

Numerical:
* In 100% of the cases, all work required to be done to maintain operation of the machinery plant within the capabilities of the ship's crew is reflected in the worklist.

TRAINING CONTENT

Functional:
* Knowledge of the time required for various tasks.
* How to evaluate the importance of various maintenance items with regard to the overall performance of the machinery.
* Knowledge of the tools and resources required for various tasks.

Specific:
* Knowledge of the skill level of the personnel available to perform maintenance.
* Knowledge of the resources available to perform maintenance or repairs (tools, spares, supplies, etc.).
* Knowledge of the company's policy regarding repairs/maintenance to be completed by the OSV's crew.
* Knowledge of upcoming or planned trips and OSV operations.

TASK CODE: ENGINEER-I.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	40	2	20	1B	40	2	4	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and troubleshoots equipment to identify or isolate problems.

TASK: Uses circuit breakers, switches, ground detectors, etc., to locate the branch circuit containing a ground.

PERFORMANCE STANDARDS

Descriptive:
* Accurately locates the branch circuit containing the ground.
* Does not secure power to any vital OSV control circuit while underway without the permission of the master.

Numerical:
* In 100% of the cases, locates all grounds.

TRAINING CONTENT

Functional:
* How to check for grounds.
* How to isolate various circuits from the ground detector.
* How to operate circuit breakers, switches and ground detecting equipment.

Specific:
* Knowledge of the electrical distribution system on own OSV.

TASK CODE: ENGINEER-I.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	60	2	5	2C	35	3	4	2	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and troubleshoots equipment to identify or isolate problems.

TASK: Troubleshoots pumping systems to determine the cause of faulty operation, using hand tools, monitoring pumps and gauges, and operating valves and controls.

PERFORMANCE STANDARDS

Descriptive:
* Checks pumps for proper suction and discharge pressure.
* Checks to see if system is properly alined.
* Identifies problems which cause lack of suction (strainer clogged, air leaks, air bound, etc.).
* Checks for electrical problems and pump speed.
* Checks for proper pump operation.

Numerical:
* In 100% of the cases, all problems are isolated and identified.

TRAINING CONTENT

Functional:
* How to recognize between proper and improper pump operation.
* How different types of pumps work and what problems produce various responses.
* How to check electrical circuits for power.
* How to check pump speed.
* How to check strainers and valves.
* How to check electric motors for proper operation.

Specific:
* Knowledge of the systems and controls on own OSV.
* Knowledge of the normal operating parameters of the various systems and components of own OSV.

TASK CODE: ENGINEER-I.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	50	1A	5	2B	45	4	4	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and troubleshoots equipment to identify or isolate problems.

TASK: Troubleshoots dry bulk system in order to determine the cause of slow transfer.

PERFORMANCE STANDARDS

Descriptive:
* Checks for proper operation of valves and controls.
* Checks for clogged or restricted lines or valves.
* Checks for proper operation of tank slides or areation pad.
* Checks for proper operation of air system and safety valves.
* Checks the condition of gaskets or for the presence of water.

Numerical:
* In 100% of the cases, the problem is located accurately and promptly.

TRAINING CONTENT

Functional:
* How the various components of the dry bulk system work and how to test these for proper operation and condition.
* How to recognize slow or improper transfer from a normal operation.

Specific:
* Knowledge of the controls and components of the dry bulk system for own OSV, and their characteristics, operation and location.

TASK CODE: ENGINEER-I.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	55	2	10	3B	35	4	4	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and troubleshoots equipment to identify or isolate problems.

TASK: Troubleshoots engines to isolate starting problems to the specific system causing the problem, i.e., starting system, governor, air system, alarms and interlocks, mechanical failure, etc., in order to get the proper mechanic or spares aboard or to complete the repair personally using own judgment and knowledge of diesel engines and operating manuals.

PERFORMANCE STANDARDS

Descriptive:
* Accurately isolates the system causing the starting problem.

Numerical:
* In 100% of the cases, eliminates the following systems as the cause of the problem: starting system, fuel system, alarms and interlock system, or mechanical damage to the engine.

TRAINING CONTENT

Functional:
* How to check various engine systems and interlocks.
* Knowledge of proper operation of various engine systems.
* How to recognize faulty operation of various engine systems.
* Knowledge of common causes of starting problems.

Specific:
* Knowledge of engine systems on own OSV.
* Knowledge of information available in the operating manuals for own OSV.

TASK CODE: ENGINEER-I.C.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	55	2	10	3B	35	4	4	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and troubleshoots equipment to identify or isolate problems.

TASK: Troubleshoots and diagnoses engine running problems to the specific system causing the problem, i.e., fuel system, fuel filters, governor, turbocharger, air filters, mechanical adjustment or failure, etc., using own judgment and knowledge of diesel engine operation and operating manuals in order to get the proper mechanic or spares aboard or to complete the repair personally.

PERFORMANCE STANDARDS

Descriptive:
* Accurately and promptly isolates the running problem.

Numerical:
* In 100% of the cases, eliminates the following systems as the cause of the problem: fuel system, fuel filters, governor, turbocharger, air filters, or mechanical maladjustment or failure.

TRAINING CONTENT

Functional:
* How to check various engine systems or interlocks.
* Knowledge of proper operation of various engine systems and the engine as whole.
* Hbw to recognize faulty operation of various engine systems.
* Knowledge of common causes of running problems.

Specific:
* Knowledge of engine systems on own OSV.
* Knowledge of information available in operating manuals for own OSV.
* Knowledge of proper operation of own OSV's engines.

TASK CODE: ENGINEER-I.C.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	60	2	10	2B	30	3	4	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and troubleshoots equipment to identify or isolate problems.

TASK: Troubleshoots the steering system in order to isolate the cause of faulty steering system operation by using standard procedures for testing hydraulic equipment and controls and using own judgement as to the extent of tests required.

PERFORMANCE STANDARDS

Descriptive:
* Checks to see if pumps are operating properly.
* Checks system for proper system alignment.
* Ensures power to the system and that controllers and switches are operable.
* Checks for physical damage.
* Ensures system operates on local controls.
* Checks suction strainer.

Numerical:
* In 100% of the cases, the problem is limited to the motor pump, hydraulic system, electrical system or controls.

TRAINING CONTENT

Functional:
* How to check for proper operation of the hydraulic pump.
* How to check the electrical system and components for proper operation.
* How to check controls for proper operation.
* General knowledge of hydraulics.

Specific:
* Knowledge of the characteristics of own OSV's steering system.

TASK CODE: ENGINEER-I.C.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	60	1A	5	2B	35	4	3	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and troubleshoots equipment to identify or isolate problems.

TASK: Test/troubleshoot alarms in order to determine proper operation and to find faults, and adjust points, using hand tools and installed gauges, in accordance with company policy and operating manuals.

PERFORMANCE STANDARDS

Descriptive:
* Properly tests circuits with installed test switch.
* Accurately determines actual set point where doing so will not damage the equipment.
* Accurately and promptly adjusts the set point to the desired level.
* Determines if sensor is working properly.

Numerical:
* In 100% of the cases, faults are accurately and promptly located.
* In 100% of the cases, properly adjusts set point.

TRAINING CONTENT

Functional:
* How to check alarm sensors.
* How to adjust set points.
* How to read gauges, dials, etc.
* How to control the various parameters the sensors measure.

Specific:
* Knowledge of what set points for alarms are on own OSV.
* Knowledge of the location of the sensors on own OSV.
* Knowledge of how to control the various parameters the sensors measure on own OSV.

TASK CODE: ENGINEER-I.C.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	70	2	5	2A	25	3	3	1	4

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and troubleshoots equipment to identify or isolate problems.

TASK: Tests/troubleshoots the air control system in order to identify malfunctioning valves or isolate the problem according to company's or manufacturer's test procedure.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and accurately locates air supply faults.
* Promptly and accurately locates transfer valve problems.
* Promptly and accurately identifies faults outside the air control system.

Numerical:
* In 100% of the cases, all faults within the scope of the test procedure are identified.

TRAINING CONTENT

Functional:
*How to test the air supply system.
* How to recognize between normal and abnormal operation of the air control system.

Specific:
* Knowledge of the operation of the various controls in the test procedure.
* Knowledge of the location and identity of the valves specified in the test procedure.
* Knowledge of how the system operates on own OSV under normal circumstances.

TASK CODE: ENGINEER-I.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
4	55	5	45	1A	5	4	4	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Using the worklist as a guide to assign work to self and assistant engineer/oiler, deckhands available or other available personnel taking into account personnel abilities and available time, communicating these assignments to the personnel involved.

PERFORMANCE STANDARDS

Descriptive:
* Assigns tasks within applicable personnel skill levels and time constraints.
* Clearly and accurately communicates assignments.

Numerical:
* In 100% of the cases, the best use is made of available manpower and time.

TRAINING CONTENT

Functional:
* Knowledge of the time and number of personnel required to complete various tasks.
* How to communicate clearly and accurately a description of the work to be performed.
* How to supervise/direct the activities of others.

Specific:
* Knowledge of the skill levels of personnel who will perform the tasks at hand.
* Knowledge of the personnel available to perform the tasks at hand.

TASK CODE: ENGINEER-I.D.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	45	3A	50	1A	5	3	3	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Communicates to the port engineer required maintenace or repair items that are beyond the capabilities of the OSV's personnel to complete, in order to arrange for the work to be done or provide the resources (tool, spares, etc.) to allow the OSV personnel to perform the work.

PERFORMANCE STANDARDS

Descriptive:
* Clearly communicates to the port engineer the reasons for, and which work or problems beyond the OSV personnel's capabilities to correct.

Numerical:
* In 100% of the cases, all work or problems which are beyond the OSV personnel's capabilites to correct are communicated to the port engineer.

TRAINING CONTENT

Functional:
* Knowledge of what maintenance and repairs are necessary and the skills and resource needed to complete them.

Specific:
* Knowledge of the skill levels of the personnel aboard own OSV.
* Knowledge of the resources available aboard own OSV (tools, spares, etc.).

TASK CODE: ENGINEER-I.D.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	10	5	85	1A	5	3	3	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Supervises, instructs and assists the oiler in the proper procedures for completing maintenance and repair work using own experience and accepted marine practices, in order to ensure the machinery plant operates as required.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and correctly explains work tasks.
* Remains alert to unsafe situations that could result in personnel injuries or OSV damage.

Numerical:
* In 100% of the cases, maintenance and repair items are assigned to the oiler and completed timely and safely.

TRAINING CONTENT

Functional:
* Knowledge of the various procedures/methods of completing maintenance/repairs on an OSV.
* Understanding of the skills necessary to perform various tasks.
* How to explain tasks and procedures.
* How to supervise and direct the activities of others.

Specific:
* Knowledge of own OSV's equipment, systems and general condition.
* Knowledge of the company's guidelines for performing various maintenance and repair tasks.

TASK CODE: ENGINEER-I.D.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Changes oil and oil filters at specified intervals, using hand tools, pumps and piping, buckets, etc. and cleans up any spills.

PERFORMANCE STANDARDS

Descriptive:
* Properly changes oil and oil filters at specified intervals.
* Ensures that minimal oil is spilt.
* Ensures that piping and pumps are properly aligned to discharge oil to dirty oil containment vessel.

Numerical:
* In 100% of the cases, the proper oil and oil filters are used.
* In 100% of the cases, all oil spills are promptly cleaned up.
* In 100% of the cases, all fittings are properly installed.

TRAINING CONTENT

Functional:
* How to figure engine hours.
* How to change oil filters.
* How to drain oil.
* How to clean up oil spills from deck plates, bilges and equipment.
* How to distinguish between types and grades of oil.

Specific:
* Knowledge of what grade and brand of oil to use in own OSV's equipment.
* Knowledge of what oil filters are used on own OSV's equipment.
* Knowledge of how to drain oil, add oil and how much to add on own OSV's equipment.
* Knowledge of how to check the oil level on own OSV's equipment.

TASK CODE: ENGINEER-I.D.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	35	1A	5	2A	60	2	2	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Keeps working surfaces, OSV equipment, OSV engineering spaces, bulkheads, etc., clean and painted, in order to prevent corrosion and general deterioration, using appropriate paints and corrosion inhibitors, surface preparation and application tools and knowledge of how to prepare surfaces and mix and apply paints and other protective coatings.

PERFORMANCE STANDARDS

Descriptive:
* Maintains working surfaces, equipment, spaces, etc., in good condition; stems corrosion before it becomes a serious problem.

Numerical:
* In 100% of the cases, prepares for and uses the proper protective covering for the area being protected.
* In 100% of the cases, all tools and equipment are properly stowed.

TRAINING CONTENT

Functional:
* Understands the characteristics of all types of paints and other corrosion inhibitors and why and where each is used.
* How to properly prepare surfaces to accept protective coverings.
* How to properly mix and apply all types of paints and corrosion inhibitors.
* How to dispose of trash and oily rags.
* How to clean up oil from machinery and deck plates.

Specific:
* Knowledge of the types and location on own OSV of paints, corrosion inhibitors, and all other types of protective coverings.

TASK CODE: ENGINEER-I.D.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	1A	85	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Operates valves and drain cocks to drain water from air receivers, p-tanks and various drain points in the air system at specified intervals or when in his judgement it is necessary.

PERFORMANCE STANDARDS

Descriptive:
* Properly and effectively blows down air receivers at specified intervals.

Numerical:
* In 100% of the cases, all tanks are adequately drained of water at specified intervals.

TRAINING CONTENT

Functional:
* How to operate valves.
* How to judge when tanks are adequately blown down.
* Recognizes when tanks require blowing down.

Specific:
* Knowledge of the location of drain valves on own OSV.
* Knowledge of the required intervals for draining water from the tanks on own OSV.

TASK CODE: ENGINEER-I.D.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	1A	85	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Operates valves and drain cocks to drain water from water traps in the fuel system, fuel filters and fuel tanks when in his judgement it is necessary.

PERFORMANCE STANDARDS

Descriptive:
* Properly drains water from the fuel system as necessary.
* Ensures that a minimum of fuel is spilt.

Numerical:
* In 100% of the cases, all water is drained from the tanks.
* In 100% of the cases, all water is drained from the fuel filters.
* In 100% of the cases, all water is drained from the water traps.
* In 100% of the cases, all spilt fuel is properly and promptly cleaned up.

TRAINING CONTENT

Functional:
* How to operate valves.
* How to drain water from tanks, filters and water traps.
* How to test for water in the fuel tanks.
* How to determine when water is adequately drained.
* Knowledge of the possible locations for water to collect in the fuel system.

Specific:
* Knowledge of the drain connections in own OSV's fuel system.
* Knowledge of the interval of draining on own OSV.

TASK CODE: ENGINEER-I.D.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	2	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Uses various hand tools as necessary to change or clean air filters on engines, ventilation systems and compressors according to specified intervals or when in his judgement is is necessary.

PERFORMANCE STANDARDS

Descriptive:
* Air filters are properly changed at specified intervals or as necessary.

Numerical:
* In 100% of the cases, all air filters are properly changed as specified intervals or as necessary.

TRAINING CONTENT

Functional:
* How to use hand tools.
* How to determine when air filters need changing or cleaning.
* How to clean non-disposable filters.
* How to distinguish between non-disposable and disposable filters.

Specific:
* Knowledge of the location of air filters on own OSV.
* Knowledge of how to remove and replace air filters on own OSV.
* Knowledge of how to clean non-disposable air filters on own OSV.
* Knowledge of the interval between changes on own OSV.
* Knowledge of which air filters are used on own OSV.

TASK CODE: ENGINEER-I.D.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	25	1A	5	2A	70	3	3	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete required maintenance.

TASK: Manipulate valves, plugs, tools, etc. to change fuel filters when operating parameters indicate clogged fuel filters and bleed air from the fuel system.

PERFORMANCE STANDARDS

Descriptive:
* Fuel filters are properly changed as necessary to maintain a clean fuel supply.
* Air is properly bled from the fuel system.

Numerical:
* In 100% of the cases, all air is bled from the fuel system.
* In 100% of the cases, all fuel spills are properly cleaned up.
* In 100% of the cases, all fuel filters requiring replacement are done properly.

TRAINING CONTENT

Functional:
* How to change fuel filters.
* How to bleed air from the fuel system.
* How to operate valves and hand tools.
* Understanding of static head pressure.
* How to recognize when fuel filters need replacement.

Specific:
* Knowledge of own OSV's fuel canisters and how to change elements.
* Knowledge of own OSV's engine operation parameters (fuel pressure, fuel system, etc.).

TASK CODE: ENGINEER-I.D.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	1A	5	2A	65	2	2	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Use grease guns, grease, oil and necessary tools to grease or lubricate machinery at specified intervals or as in own judgement required, according to operating manuals or standard parctices.

PERFORMANCE STANDARDS

Descriptive:
* Requirements for greasing or lubricating is accurately determined.
* Machinery is properly greased or lubricated at specified intervals.
* Proper grease or lubricant is selected.

Numerical:
* In 100% of the cases, all lubrication requirements are met at properly specified intervals with the correct grease or lubricant.

TRAINING CONTENT

Functional:
* How to determine when machinery needs lubrication.
* How to use grease guns.
* How to apply grease.
* How to differentiate between various lubricants.

Specific:
* Knowledge of what equipment on own OSV requires greasing, the interval between greasings and the lubricant to be used.
* Knowledge of where and how much grease to apply to own OSV's machinery.

TASK CODE: ENGINEER-I.D.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Operate valves, levers, hose, tools, etc. as necessary to shift (if duplex strainers) and clean strainers as indicated by deteriorating operating parameters to restore operations to normal.

PERFORMANCE STANDARDS

Descriptive:
* All strainers are properly and thoroughly cleaned.
* All duplex strainers are properly shifted.
* Promptly and accurate identifies deteriorating chonditions indicating clogged strainers.

Numerical:
* In 100% of the cases, all operating parameters affected by clogged strainers are recognized and corrected immediately.

TRAINING CONTENT

Functional:
* How to clean strainers.
* How to shift strainers.
* How to isolate pressure from strainers.
* How to recognize operating parameters that indicate clogged strainers.
* How to use hand tools.

Specific:
* Knowledge of the location and characteristics of own OSV's strainers.
* Knowledge of own OSV's systems and controls.

TASK CODE: ENGINEER-I.D.12

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	5	2B	75	2	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Operate necessary valves, controllers and equipment to run the fuel oil purifier (centrifuge, if installed) to maintain the level and purity of fuel oil in the day tanks.

PERFORMANCE STANDARDS

Descriptive:
* Day tanks are maintained at full within the limits of purified fuel.

Numerical:
* In 100% of the cases, all fuel oil is purified to within specified limits.

TRAINING CONTENT

Functional:
* How to operate the purifier.
* How to determine flow patterns to line up purifiers to transfer or recirculate fuel.
* How to "prime" purifier with water.

Specific:
* Knowledge of the location and specifics of own fuel oil purifying system and its characteristics on own OSV.

TASK CODE: ENGINEER-I.D.13

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Uses necessary hand tools, rags, etc. to clean fuel oil purifier (if installed) to within operating limits listed in equipment manuals.

PERFORMANCE STANDARDS

Descriptive:
* Efficiently cleans fuel oil purifiers.

Numerical:
* In 100% of the cases, fuel oil purifiers are cleaned within specified limits.
* In 100% of the cases, fuel oil purifiers are reassembled correctly.

TRAINING CONTENT

Functional:
* How to clean fuel oil purifier.
* How to reassemble fuel oil purifier.
* Knowledge of intervals required for cleaning fuel oil purifier.

Specific:
* Knowledge of the location and special characteristics of own OSV's fuel oil purifying system.

TASK CODE: ENGINEER-I.D.14

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	30	1A	5	1A	65	1	2	2	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Takes lube oil samples at prescribed intervals, following standard procedures and labels them following standard procedures, in order to provide laboratory samples for analysis.

PERFORMANCE STANDARDS

Descriptive:
* Properly and without contamination obtains lube oil samples.
* Properly and accurately labels all samples.

Numerical:
* In 100% of the cases, lube oil samples are taken at the prescribed intervals and properly labeled.

TRAINING CONTENT

Functional:
* How to figure engine hours.
* How to take and label lube oil samples.

Specific:
* Knowledge of the procedures for taking and labeling lube oil samples on own OSV.
* Knowledge of the prescribed intervals for sampling lube oil on own OSV.

TASK CODE: ENGINEER-I.D.15

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	1A	5	3A	65	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Checks batteries and battery chargers for proper operation and condition and adds water, cleans terminals or replaces fuses as necessary.

PERFORMANCE STANDARDS

Descriptive:
* Accurately checks acid for proper levels.
*Properly checks terminals for corrosion.
* Properly checks for charging operations.
* Accurately checks with a multimeter and replaces as necessary all fuses.

Numerical:
* In 100% of the cases, all faults in operation due to low water, loose or corroded terminals, switchers or fuses and circuit breakers are identified and corrected.

TRAINING CONTENT

Functional:
* Knowledge of the safety precautions required when working with batteries.
* How to add water to batteries.
* How to clean terminals.
* How to check and replace fuses.

Specific:
* Knowledge of the location and operating characteristics of own OSV's battery chargers and batteries.

TASK CODE: ENGINEER-I.D.16

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3A	20	1A	5	1A	75	2	2	2	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Completes required maintenance.

TASK: Uses appropriate hand tools to replace defective batteries with new ones.

PERFORMANCE STANDARDS

Descriptive:
* All batteries are properly replaced.
* All batteries are properly connected.

Numerical:
* In 100% of the cases, all batteries are properly replaced and correctly connected.

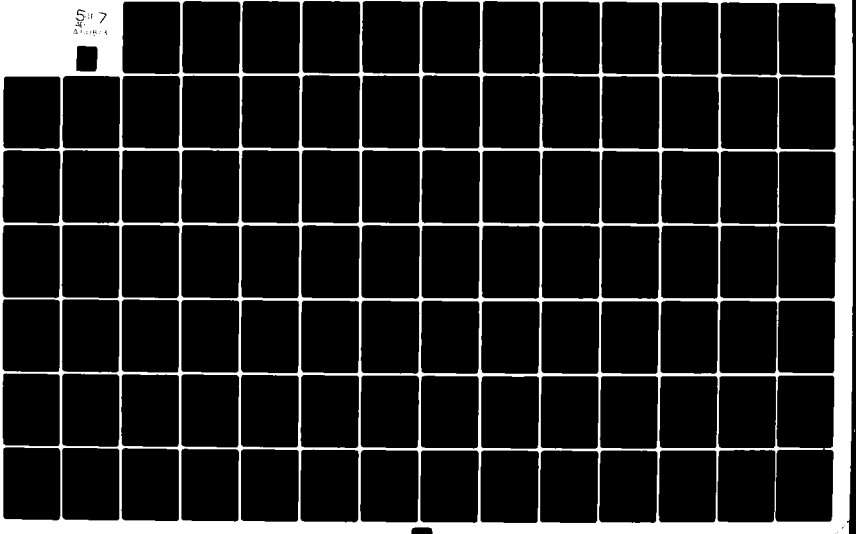
TRAINING CONTENT

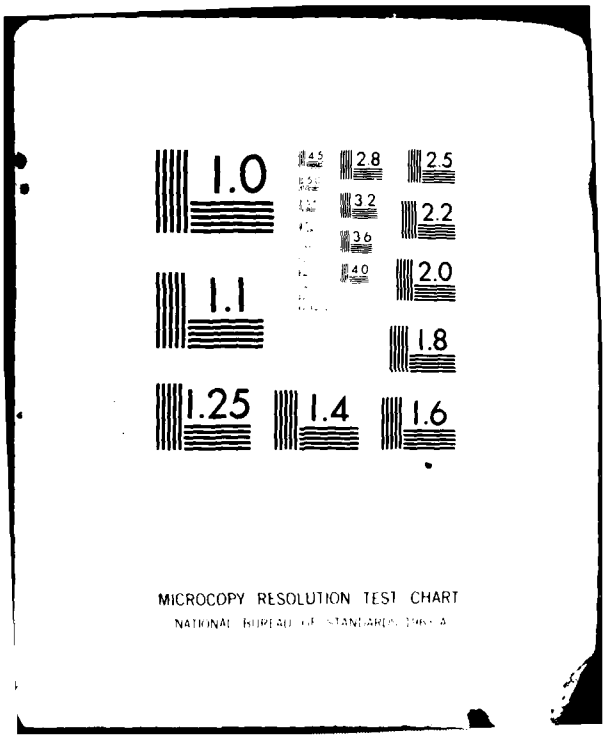
Functional:
* Knowledge of the safety precautions required when working with batteries.
* How to look-up batteries in parallel or series to obtain required voltage or capacity.

Specific:
* Knowledge of the location, voltage and capacity requirements of the batteries on own OSV.

AD-A110 813 COAST GUARD DISTRICT (8TH) NEW ORLEANS LA F/G 5/1
FUNCTIONAL JOB ANALYSIS OF MARINE PERSONNEL EMPLOYED ON OFFSHOR--ETC(U)
JAN 82 H R PRZELOMSKI, A M BONNEAU

UNCLASSIFIED C8D8M-01-82 NL

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

TASK CODE: ENGINEER-I.E.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	5	2A	75	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Repair equipment and piping.

TASK: Repairs leaks in hose and tubing using hose clamps, repair kits, etc. or replaces defective hoses and tubing using flaring and hand tools.

PERFORMANCE STANDARDS

Descriptive:
* Selects correct size, grade and type of hose, tube or fitting.
* Correctly operates flaring tool, tube cutter, hand tools, etc.
* Properly connects hose or tube to correct fittings.

Numerical:
* In 100% of the cases, all leaks in hose or tube are properly repaired.

TRAINING CONTENT

Functional:
* Knowledge of the pressure limits of hose and/or tube.
* How to use hand tools.
* How to recognize between various types of fittings (flare, pipe, compression, etc.).
* How to assemble hose or tube assembly.

Specific:
* Knowledge of the operating pressures on various systems aborad own OSV.
* Knowledge of the various locations of replacements identified as needed by the system check.

TASK CODE: ENGINEER-I.E.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	5	2A	75	2	2	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Repair equipment and piping.

TASK: Repairs leaks on equipment using hand tools, gaskets, sealant and pipe wrenches. (These repairs are limited to simple gasket changes and tightening that can be accomplished using wrenches, screwdrivers and pipe wrenches without torquing.)

PERFORMANCE STANDARDS

Descriptive:
* Accurately and correctly selects the proper replacement gasket.
* Correctly and accurately selects the proper sealant.
* Correctly reassembles the equipment.

Numerical:
* In 100% of the cases, all leaks are repaired.

TRAINING CONTENT

Functional:
* How to select gaskets using a manual.
* How to select gasket material and sealant.
* How to make gaskets.
* How to use wrenches, screwdrivers and pipe wrenches.
* How to apply sealant.
* Knowledge of the standard uses for various gasketing materials.

Specific:
* Knowledge of the location of gaskets and equipment manuals on own OSV.

TASK CODE: ENGINEER-I.E.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1A	5	2A	80	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Repair equipment and piping.

TASK: Tightens packing glands or valve stems, pumps, propellor shafts, rudder stocks, etc. or repacks as necessary to preven excessive leakage.

PERFORMANCE STANDARDS

Descriptive:
* Properly selects packing material.
* Packing is properly tightened without being overtightened.

Numerical:
* In 100% of the cases, all leaking packing glands are repaired promptly and correctly.

TRAINING CONTENT

Functional:
* How to tighten packing glands.
* How to select the proper packing material.
* Understanding of how packing glands work.

Specific:
* Knowledge of the location of packing glands and type of packing required on own OSV.

TASK CODE: ENGINEER-I.E.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	40	1A	5	2A	55	2	1	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Repair equipment and piping.

TASK: Using fuse pullers, screwdrivers, hand tools, etc. replaces fuses, industrial bulbs and motor overload heaters, in accordance with standard procedures and general electrical safety procedures.

PERFORMANCE STANDARDS

Descriptive:
* Selects the proper size fuse or heater.
* Correctly installs the fuse or heater.
* Correctly reassembles the panel.

Numerical:
* In 100% of the cases, the proper size fuse or heater is selected and installed correctly.

TRAINING CONTENT

Functional:
* How to select the proper size fuse or heater.
* How to install fuses and heaters.
* Knowledge of electrical safety procedures.

Specific:
* Knowledge of the location, types and sizes of fuses and heaters used on own OSV.

TASK CODE: ENGINEER-I.E.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	5	2A	65	2	3	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Repair equipment and piping.

TASK: Replace or rebuild defective valves in the air control system using hand tools, repair kits and/or replacement units using standard procedures.

PERFORMANCE STANDARDS

Descriptive:
* Properly selects from stores replacement valves or repair kits.
* Properly installs replacement valves or repair kits.

Numerical:
* In 100% of the cases, defective valves are repaired and/or replaced as needed.

TRAINING CONTENT

Functional:
* How to install a repair kit in an air control valve.
* How to identify and select the proper replacement valves or repair kits.
* How to use tools to loosen/tighten bolts, fittings, screws, circlips, etc.

Specific:
* Knowledge of the specific valves used on own OSV's air control system.

TASK CODE: ENGINEER-I.E.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1A	5	2A	80	3	3	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Repair equipment and piping.

TASK: Remove defective injectors and replace with new or serviced injectors using appropriate tools according to operating manuals.

PERFORMANCE STANDARDS

Descriptive:
* Injectors are removed and installed in accordance with machinery operating manuals.

Numerical:
* In 100% of the cases, defective injectors are replaced with new injectors which are properly installed.

TRAINING CONTENT

Functional:
* How to remove and install injectors.
* How to use various hand tools.
* How to apply technical instructions (either written, oral or diagramatic) to actual physical objects.
* How to identify defective injectors.

Specific:
* Knowledge of the type and location of injectors on own OSV.
* Knowledge of how to remove and install injectors in a diesel engine.

TASK CODE: ENGINEER-I.E.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3	30	1A	5	2A	65	3	2	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Repair equipment and piping.

TASK: Disassemble, inspect and clean valves and pipe associated with the dry bulk system to effect efficient operation of the system.

PERFORMANCE STANDARDS

Descriptive:
* Valves and pipe are removed and installed properly.
* Flow restrictions are promptly located and effectively cleared.

Numerical:
* In 100% of the cases, pipes and valves are cleared of flow restrictions promptly.

TRAINING CONTENT

Functional:
* How to use pipe wrenches and other hand tools.
* How to clean collected bulk deposits from the inside of valves and pipes.
* Knowledge of the possible locations of restrictions by system response.

Specific:
* Knowledge of own OSV's dry bulk system.

TASK CODE: ENGINEER-I.E.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3	30	1A	5	2A	65	2	3	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Repair equipment and piping.

TASK: Operate petcocks, loosen fittings and operate pumps to bleed air from the fuel and water systems on the diesel engines according to operating manuals until in own judgement the engine operates properly.

PERFORMANCE STANDARDS

Descriptive:
* Operates the engine properly.

Numerical:
* In 100% of the cases, the air is bled from the fuel and water systems.
* In 100% of the cases, all fittings are properly reinstalled.

TRAINING CONTENT

Functional:
* How to bleed air from fuel and water systems.
* How to determine if all air is bled from the fuel and the water.

Specific:
* Knowledge of the location of bleed points on own OSV's engines.
* Knowledge of how to operate fuel and water pumps on won OSV's engines.

TASK CODE: ENGINEER-I.E.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	20	1A	5	2A	75	2	3	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Repair equipment and piping.

TASK: Use wrenches and various hand tools (no torque wrenches) to perform bolt on replacement type repairs to machinery (replace starter, change fuel pump, etc.) requiring little or no adjustment after installation according to technical manuals taking into account own skills and the availability of spares.

PERFORMANCE STANDARDS

Descriptive:
* Defective parts are promptly identified and properly replaced.

Numerical:
* In 100% of the cases, parts are replaced efficiently and correctly.
* In 100% of the cases, all hook-ups and adjustments are properly made.

TRAINING CONTENT

Functional:
* How to use hand tools.
* Understanding of technical directions (either written, oral, diagramatic or demonstated).
* How to select or order replacement parts using technical manuals or parts lists.

Specific:
* Knowledge of the location and type of own OSV's technical manuals.
* Knowledge of the characteristics of own OSV's machinery and components.

TASK CODE: ENGINEER-II.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	60	1A	5	1C	35	2	2	2	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Maintain engineering supplies and spares.

TASK: Ascertains fuel, oil, water and other liquid levels in tanks, and as necessary, determines oil-water interface using sounding tapes, chalk, water finding paste, gauges, petcocks, sounding tables, etc. to determine the amounts of fluids in each tank, the total aboard, usage, etc. and records these in the log.

PERFORMANCE STANDARDS

Descriptive:
* Accurately ascertains liquid levels.
* Accurately ascertains amount of water in oil tanks.
* Accurately records soundings in the log at regular intervals.
* Accurately determines usage.

Numerical:
* In 100% of the cases, liquid levels are ascertained within reasonable accuracy limits considering tank design, gauge/tape accuracy and OSV and environmental conditions.

TRAINING CONTENT

Functional:
* How to calculate usage from soundings and meter readings.
* How to use sounding tapes to determine liquid levels.
* How to use sounding tables to convert soundings to quantities.
* How to use gauges, sight glasses, petcocks, etc. typically installed on tanks to determine levels.
* How to convert from units of quantities on sounding tables to the units desired.

Specific:
* Knowledge of the location and type of sounding tubes, gauges, tank openings, etc. on own OSV.

TASK CODE: ENGINEER-II.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	5	2	20	1A	5	3	2	2	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Maintain engineering supplies and spares.

TASK: Determine if there are sufficient amounts of fuel, oil and water aboard using own judgement and taking into account normal usage, OSV's schedule, additional personnel, etc. and inform the master of the same.

PERFORMANCE STANDARDS

Descriptive:
* Master is promptly informed as to any deficiencies in supplies of fuel, oil or water.
* Deficiencies in fuel, oil or water are accurately determined.

Numerical:
* In 100% of the cases, deficiencies in fuel, oil or water are promptly and accurately determined.

TRAINING CONTENT

Functional:
* Understanding of what is normal water usage per person.

Specific:
* Knowledge of the normal usages of fuel, oil and water on own OSV.
* Knowledge of upcoming trips and OSV's schedule.
* Knowledge of the amounts of water, oil and fuel aboard own OSV.

TASK CODE: ENGINEER-II.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	2	5	1A	5	3	3	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Maintain engineering supplies and spares.

TASK: Inventory spares and consumables (filters, rags, etc.) to determine if the amount aboard is sufficient for scheduled operations and maintenance.

PERFORMANCE STANDARDS

Descriptive:
* Accurately inventories all spares and consumables.
* Accurately identifies any deficiencies in spares and consumables.

Numerical:
* In 100% of the cases, all spares and consumables are inventoried and all deficiencies are noted.

TRAINING CONTENT

Functional:
* How to inventory items.
* How to anticipate demand for various items with knowledge of standard usage.

Specific:
* Knowledge of any requirements for spares and consumables on own OSV.
* Knowledge of what spares and consumables are required for various OSV operations and maintenance.
* Knowledge of what maintenance and operations are planned for own OSV.

TASK CODE: ENGINEER-II.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	85	2	5	1A	10	3	3	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Maintain engineering supplies and spares.

TASK: Inventory non-consumable items (tools, welding equipment, hoses, etc.) to determine if they are in good condition and of sufficient quantity for scheduled operations and maintenance of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Non-consumable items are accurately inventoried.
* Deficiencies in the quantity or condition of non-consumable items are accurately identified.

Numerical:
* In 100% of the cases, all deficiencies in the quanitity or condition of non-consumable items are accruately determined.
* In 100% of the cases, all non-consumables are correctly inventoried.

TRAINING CONTENT

Functional:
* How to inventory items.
* How to check the condition of various non-consumable items.

Specific:
* Knowledge of the requirements for non-consumables on own OSV.
* Knowledge of what non-consumables are required for various OSV operations or maintenance.
* Knowledge of what maintenance and operations are scheduled for own OSV.

TASK CODE: ENGINEER-II.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	40	2	50	1A	10	3	4	1	3

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Maintain engineering supplies and spares.

TASK: Communicate to the master all deficiencies in fuel, water, oil, spares, consumables and non-consumables, and assist the master in filling out requisitions and making arrangements with the port captain, port engineer, or dispatcher to obtain needed items.

PERFORMANCE STANDARDS

Descriptive:
* Accurately and clearly communicates to master the need for various supplies (fuel, water, consumables, etc.).
* Assists the master in making arrangements to obtain needed items.

Numerical:
* In 100% of the cases, all deficiencies are communicated to the master.
* In 100% of the cases, all required requisition forms are properly and accurately completed.
* In 100% of the cases, all plans and arrangements directed by the master to obtain items are completed.

TRAINING CONTENT

Functional:
* How to communicate OSV needs either orally or in writing.
* How to complete requisition forms.

Specific:
* Knowledge of completion of company requisition forms.
* Knowledge of who to communicate OSV needs to to obtain supplies (port engineer, port captain, master, dispatcher, etc.).
* Knowledge of how to communicate with the above (radio, letter, in person, etc.).

TASK CODE: ENGINEER-II.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	3	3	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Ascertains flow patterns and manipulates appropriate valves, switches, etc. as required, in order to ensure liquid transfer system is lined-up to discharge to/from desired aboard tanks.

PERFORMANCE STANDARDS

Descriptive:
* Ensures that tank-fill system is lined-up at appropriate time prior to transfer.

Numerical:
* In 100% of the cases, the tank-fill system is lined-up exactly as required.

TRAINING CONTENT

Functional:
* How to operate valves, switches, etc. to line-up liquid transfer system.

Specific:
* Knowledge of own OSV's specific arrangement of and procedure for liquid consumable cargo handling system.

TASK CODE: ENGINEER-II.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	5	1A	75	2	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Install portable containment under fuel/oil vents and connections as required by pollution regulations.

PERFORMANCE STANDARDS

Descriptive:
* Containment is properly located under vents and connections.

Numerical:
* In 100% of the cases, all connections requiring portable containment are provided with same.

TRAINING CONTENT

Functional:
* Knowledge of pollution regulation requirements for containment under vents and connections.

Specific:
* Knowledge of own OSV's venting arrangement.
* Knowledge of containment requirements for own OSV.

TASK CODE: ENGINEER-II.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	75	1A	5	1A	20	2	2	1	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Complete "Declaration of Inspection" and sign-off with another person in charge.

PERFORMANCE STANDARDS

Descriptive:
* Properly completes the "Declaration of Inspection".
* Ascertains that all required items of the "Declaration of Inspection" are properly completed.

Numerical:
* In 100% of the cases, all locations requiring entries or signatures are correctly completed.

TRAINING CONTENT

Functional:
* Knowledge of the contents of a "Declaration of Inspection" and how to perform these items.

Specific:
* Knowledge of the characteristics of own OSV as they relate to required inspections on the "Declaration of Inspection".

TASK CODE: ENGINEER-II.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	5	1C	90	2	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Passes transfer hoses from supply vessel and makes appropriate attachments to OSV's liquid manifolds/piping systems in order to prepare for loading/unloading of liquid consumables, e.g., potable water, drilling fluid, fuel oil, lube oil, etc. with the assistance of the oiler (if assigned) and the deckhands and the mate as applicable.

PERFORMANCE STANDARDS

Descriptive:
* Properly passes transfer hoses from the supply vessel.
* Accurately and expeditiously connects hoses to applicable transfer system.

Numerical:
* In 100% of the cases, hose connections are made in accordance with standard operating procedures for that system.

TRAINING CONTENT

Functional:
* Understanding of general procedures to pass hoses from supply vessels.
* How to connect transfer hoses for liquid consumables to proper tanks and tank-filling systems via manifolds/deck connections.

Specific:
* Knowledge of own OSV's specified procedure for liquid cargo handling operations.
* Knowledge of own OSV's liquid transfer systems.

TASK CODE: ENGINEER-II.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	10	2	55	1C	35	3	3	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Communicates with the rig/platform and deck personnel either directly or via the master, by radio, walkie-talkies, etc. and directs deployment and attachment or retrieval of appropriate hoses and fittings in order to prepare for or secure from transfer operations and maintain contact during the transfer.

PERFORMANCE STANDARDS

Descriptive:
* Properly and clearly communicates all directions.
* Accurately and expeditiously deploys and attaches or retrieves hoses and fittings.

Numerical:
* In 100% of the cases, the proper hoses are passed in the prescribed manner for the particular transfer evolution without damage to the rig/platform or the OSV.
* In 100% of the cases, communications on all levels are maintained at all times.

TRAINING CONTENT

Functional:
* Understanding of the general procedures to pass hoses to/from rig/platform.
* Understanding of safety procedures when working under cranes on moving decks.
* How to operate radio equipment, such as walkie-talkies, bridge-to-bridge radios, etc.

Specific:
* Knowledge of the particular porcedures and practices for passing hoses to/from rigs/platforms.
* Knowledge of radio equipment, walkie-talkies, etc. provided on own OSV.
* Knowledge of the transfer procedures on own OSV.

TASK CODE: ENGINEER-II.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	15	1A	5	2A	80	1	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Connect/disconnect ground wire, hoses, open/close valves and start/stop pumps in the correct sequence in order to begin/stop the transfer procdeures.

PERFORMANCE STANDARDS

Descriptive:
* Ground wire and hoses are connected/disconnected, valves are opened/closed and pumps are started/stopped in the proper and correct sequence.

Numerical:
* In 100% of the cases, operations to begin/stop transfer procedures are performed correctly in the proper sequence.

TRAINING CONTENT

Functional:
* How to operate valves.
* How to and where to connect ground wire.
* How to operate pumps.
* How to connect/disconnect hoses.
* Knowledge of safety procedures for transfer of flammable liquids.

Specific:
* Knowledge of the characteristics and transfer procedures for own OSV.

TASK CODE: ENGINEER-II.B.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2C	85	2	2	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Operates necessary equipment including motor controllers, engines, torque convertors, clutches, gear drives, valves, pressure regulators, etc. in order to adjust pump speed, pressure or rate to the desired value.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately manipulates the proper equipment to effect control/regulation of pumps.

Numerical:
* In 100% of the cases, all adjustments are made within specified operating limits.
* In 100% of the cases, pressure or rate are properly adjusted without causing damage to the pump or associated systems or losing suction.

TRAINING CONTENT

Functional:
* How to operate valves, motor controllers, pressure regulators, etc.
* Knowledge of the relationships between pump speed, flow restrictions, pressure, rate and pump type.

Specific:
* Knowledge of the location and characteristics of own OSV's pumps.

TASK CODE: ENGINEER-II.B.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	40	1A	5	1C	55	1	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Continuously monitor tank levels using sounding tapes, gauges or other tank gauging equipment.

PERFORMANCE STANDARDS

Descriptive:
* Accurately determines tank level.

Numerical:
* In 100% of the cases, tank level is known at all times within three inches while filling.

TRAINING CONTENT

Functional:
* How to sound tanks with sounding tapes.
* How to use other sounding equipment (if installed) e.g., gauge glasses, petcocks, etc.

Specific:
* Knowledge of the arrangement and operation of own OSV's tank gauging system.

TASK CODE: ENGINEER-II.B.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	3	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Continuously monitors OSV's trim and list so that timely action is taken to ensure adequate stability of the OSV and safely load liquid commodities.

PERFORMANCE STANDARDS

Descriptive:
Promptly recognizes and corrects abnormal or dangerous lists and trims.

Numerical:
* In 100% of the cases, all causes of list or trim are determined and corrected.

TRAINING CONTENT

Functional:
* How to recognize trim or list.
* Knowledge of stability to determine when certain list or trim conditions are hazardous and the causes of list or trim, i.e., free-surface effect, off-center weight, etc.
* Knowledge of how trim and list affect tank venting, filling and suction.

Specific:
* Knowledge of the tank arrangement on own OSV.
* Knowledge of the stability characterisitics of own OSV.

TASK CODE: ENGINEER-II.B.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	80	1A	5	1A	15	2	2	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Visually monitors hoses, joints, vents and piping continuously during the transfer to detect and correct leaks and other problems and they occur.

PERFORMANCE STANDARDS

Descriptive:
* Remains alert to transfer conditions.
* Notes any leaks or other problems in a timely manner.

Numerical:
* In 100% of the cases, all leaks and other problems are promptly identified.

TRAINING CONTENT

Functional:
* How to recognize bad hoses, valves, piping, etc.

Specific:
* Knowledge of the characteristics and arrangements of own OSV's liquid handling system.

TASK CODE: ENGINEER-II.B.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	20	2	40	2A	40	3	3	2	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Communicates with the other person in charge to slow the transfer when tanks are nearing full and to stop the transfer when the tanks are full or when the specified amount of a liquid commodity has been transferred in order to prevent spills.

PERFORMANCE STANDARDS

Descriptive:
* Timely and accurately passes information to the other person in charge.
* Transfer is slowed at the proper time or at the request of the other person in charge.
* Transfer is stopped at the proper time or at the request of the other person in charge.

Numerical:
* In 100% of the cases, liquids are transferred without spills.

TRAINING CONTENT

Functional:
* How to determine tank level.
* Knowledge of when to slow or stop transfer.
* How to operate valves, pumps, etc.
* How to operate radios (if applicable).
* How to read and determine amounts from in-line meters.

Specific:
* Knowledge of the maximum tank level of own OSV's tanks.
* Knowledge of how to determine tank levels on own OSV.
* Knowledge of own OSV's specific arrangement of and operating procedures for liquid commodity handling system.

TASK CODE: ENGINEER-II.B.12

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	3A	20	2A	70	2	2	1	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Stops pumps, drains hoses, secures all valves and disconnects and stores hoses in the proper sequence to complete transfer operations with the assistance of the oiler, deckhands, or mate as applicable.

PERFORMANCE STANDARDS

Descriptive:
* Securing operations are performed properly in the correct sequence.
* Personnel assisting are effectively directed and coordinated.

Numerical:
* In 100% of the cases, all hoses are properly drained.
* In 100% of the cases, all hoses are properly stowed.
* In 100% of the cases, all valves are secured.

TRAINING CONTENT

Functional:
* How to coordinate/direct the actions of others.
* How to drain hoses.
* How to operate valves and pumps.
* How to disconnect hoses.

Specific:
* Knowledge of the location and method of stowing hoses on own OSV.

TASK CODE: ENGINEER-II.B.13

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	90	1A	5	1A	5	2	2	4	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Converts soundings and meter readings from gallons to tons, barrels, pounds, cubic feet, liters (if foreign) or any combination of these, to keep proper records, verify vouchers and provide stability information to the master.

PERFORMANCE STANDARDS

Descriptive:
* Volumes are converted to the desired units accurately.

Numerical:
* In 100% of the cases, volumes are converted to the desired units precisely.

TRAINING CONTENT

Functional:
* How to perform multiplication and division to convert volumetric units.
* How to compute conversion factors of various units or where to locate these.

Specific:
* Knowledge of what unit volumes must be in to verify vouchers, make log entries and provide stability information to the master on own OSV.

TASK CODE: ENGINEER-II.B.14

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	60	2	10	1A	30	2	1	1	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Examines or completes vouchers, bill slips, etc. to verify their accuracy and completeness, by comparing them against tank soundings or meter readings and keep OSV's copy.

PERFORMANCE STANDARDS

Descriptive:
* All vouchers and bill slips are accurately verified.

Numerical:
* In 100% of the cases, all OSV's copies of vouchers and bill slips are verified as correct and retained properly.

TRAINING CONTENT

Functional:
* How to compare readings in written form.
* Understanding of the responsibility taken by signing vouchers.

Specific:
* Knowledge of what copies are required to be kept for own OSV.

TASK CODE: ENGINEER-II.B.15

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	1	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfer liquid commodities to/from the OSV.

TASK: Keeps a written record of all transfers to/from OSV in order to inform company personnel of transfers and to provide a permanent record should problems arise at a later date concerning these transfers.

PERFORMANCE STANDARDS

Descriptive:
* Accurately maintains records of all transfers.

Numerical:
* In 100% of the cases, all required data relating any transfer is logged.

TRAINING CONTENT

Functional:
* How to sound tanks, take meter readings and use sounding tables to determine amounts transferred.
* How to transcribe those quantitative data to logs.

Specific:
* Knowledge of own OSV's logging requirements for transfers.

TASK CODE: ENGINEER-II.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	3	1	3

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Supervise the loading of dry bulk.

TASK: Determines flow patterns and manipulates appropriate valves, valve operators, etc. within the dry bulk system in order to ensure that dry bulk is loaded in accordance with operating manuals.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains flow patterns for fill and vent systems.
* Accurately operates appropriate valves, valve operators, etc. to precisely achieve required flow patterns.

Numerical:
* In 100% of the cases, correct flow patterns are ascertained exactly as required.
* In 100% of the cases, valves, valve operators, etc. are operated in such a way that the system is lined-up in accordance with operating procedures.

TRAINING CONTENT

Functional:
* Understanding of the basic operating requirements in terms of filling and venting of P-tanks during loading.
* How to operate valves, valve actuators, etc. to line-up various systems.
* Understanding of the required flow patterns for fill lines and venting of P-tanks.

Specific:
* Knowledge of the arrangement and special characteristics of the P-tank fill and vent systems on own OSV.
* Knowledge of the P-tank operating procedures on own OSV.

TASK CODE: ENGINEER-II.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	80	2	10	1C	10	3	4	1	3

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Handle anchors and buoys for rigs/platforms safely and expeditiously.

TASK: Inspects the P-tank in the presence of the mud company representative in order to ensure the tank is in satisfactory condition to carry cargo and is not contaminated with other mud.

PERFORMANCE STANDARDS

Descriptive:
* Ensures that all P-tanks to be loaded are properly inspected.
* Notes any bad gaskets or cargo residue.

Numerical:
* In 100% of the cases, all deficiencies in the P-tank systems are noted.

TRAINING CONTENT

Functional:
* How to check gaskets.
* How to identify different muds visually.
* Knowledge of the arrangements and general causes of problems associated with P-tanks.

Specific:
* Knowledge of how to open P-tanks for inspection on own OSV.
* Knowledge of what cargo was last carried in each tank on own OSV.

TASK CODE: ENGINEER-II.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	20	1C	75	2	2	1	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Supervise the loading of dry bulk.

TASK: Handles the bulk hoses provided by the mud truck and either connects them to the proper vent and fill connections or directs the mud company employees in connecting the hoses to make final connections prior to loading.

PERFORMANCE STANDARDS

Descriptive:
* All hoses are handled properly.
* All connections are made properly to the correct fittings.

Numerical:
* In 100% of the cases, the hoses are connected to the proper fittings.

TRAINING CONTENT

Functional:
* How to handle hoses.
* How to connect transfer hoses to tanks and tank filling systems via deck connections.
* How to direct/supervise the activities of others.

Specific:
* Knowledge of own OSV's specified procedures for dry bulk cargo handling operations.
* Knowledge of own OSV's dry bulk system.

TASK CODE: ENGINEER-II.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	4	2	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Supervise the loading of dry bulk.

TASK: Monitors the loading operation to ensure the OSV is being properly loaded and ensure specified amounts are being transferred.

PERFORMANCE STANDARDS

Descriptive:
* All hazardous lists and trims are timely recognized.
* Remains alert to any hazardous or improper loading operation.
* Remains alert for dusting from/to vent to indicate tanks are full and to minimize the loss of cargo.

Numerical:
* In 100% of the cases, all hazardous or improper conditions are timely recognized.

TRAINING CONTENT

Functional:
* How to recognize list or trim.
* Knowledge of basic stability to determine when list or trim conditions are hazardous and causes of list or trim, i.e., off-center weight, weights added or removed, etc.

Specific:
* Knowledge of the arrangement and loading procedures for own OSV's dry bulk system.
* Knowledge of the stability characteristics of own OSV.

TASK CODE: ENGINEER-II.C.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	35	2	10	2A	55	2	2	1	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Supervise the loading of dry bulk.

TASK: Disconnects the hoses, caps the vent and fill lines, tags the vent and fill lines with the material loaded, secures all valves, and fills out or verifies any voucher, bill slip, etc. to complete the transfer.

PERFORMANCE STANDARDS

Descriptive:
* Hoses are properly disconnected.
* Lines are properly capped and tagged.
* Valves are properly secured.
* All vouchers, bill slips, etc. are properly completed and verified.

Numerical:
* In 100% of the cases, all steps to complete the transfer are taken properly and timely.

TRAINING CONTENT

Functional:
* How to operate valves.
* How to disconnect hoses from and connect caps to dry bulk system.
* How to fill out and verify vouchers, bill slips, etc.

Specific:
* Knowledge of the arrangement and operating procedures for own OSV's dry bulk system.

TASK CODE: ENGINEER-II.C.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	1	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Supervise the loading of dry bulk.

TASK: Keeps a written record of all transfers to/from OSV in order to inform company personnel of transfers and provide a permanent record should problems arise at a later date concerning the transfer.

PERFORMANCE STANDARDS

Descriptive:
* Accurately maintains records of all transfers.

Numerical:
* In 100% of the cases, all required data relating to the transfer is logged.

TRAINING CONTENT

Functional:
* How to determine or estimate the amount of dry bulk transferred to/from the OSV.
* How to transcribe those quantitative data to logs.

Specific:
* Knowledge of own OSV's logging requirements for transfers.

TASK CODE: ENGINEER-III/IV/V.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	4	3	3

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Determines flow patterns and manipulates appropriate valves, valve operators, etc., within the starting, lube oil, fuel oil, air cooling and exhaust systems, etc. in order to ensure that systems will have air, fuel oil, lube oil, water supply and discharge as required for starting and/or continuous operation in accordance with machinery operating manuals.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains flow patterns for all systems.
* Accurately operates appropriate valves, valve operators, etc. to precisely achieve required flow patterns for each system.

Numerical:
* In 100% of the cases, correct flow patterns are ascertained exactly as desired.
* In 100% of the cases, valves, valve operators, etc. are operated such that the system is lined up in accordance with machinery operating manual specifications or limits/ranges.

TRAINING CONTENT

Functional:
* Understanding of basic requirements in terms of supply, discharge and circulation for lube oil, fuel oil, air, cooling and exhaust systems for prime movers.
* How to operate valves, valve operators, etc. to line up various systems.
* Understanding of required flow patterns for air, lube oil, fuel oil, water system, as applicable.

Specific:
* Knowledge of the arrangement and special characteristics of the starting, lube oil, fuel oil, air, cooling and exhaust systems on own OSV.
* Knowledge of own OSV's machinery/operating manuals for prime movers and auxiliary systems.

TASK CODE: ENGINEER-III/IV/V.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2B	90	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Operates appropriate control mechanisms, following standard porcedures, while simultaneously ensuring that all necessary ancillary systems (i.e., lube oil, fuel oil, cooling, exhaust, etc.) are operating, in order to start/stop prime mover.

PERFORMANCE STANDARDS

Descriptive:
* Accurately and expeditiously manipulates start/stop control mechanisms.

Numerical:
* In 100% of the cases, the prime mover is started/stopped when required.

TRAINING CONTENT

Functional:
* Understanding of the procedure to start/stop the prime mover.
* How to operate various control mechanisms (mechanical, electrical, hydraulic, etc.) to start/stop prime movers.

Specific:
* Knowledge of the location and special characteristics of own OSV's prime movers and their start/stop features and controls.

TASK CODE: ENGINEER-III/IV/V.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2B	85	2	2	2	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Operates miscellaneous auxiliary motors and pumps as required.

PERFORMANCE STANDARDS

Descriptive:
* Properly operates miscellaneous auxiliary motors and pumps as required.

Numerical:
* In 100% of the cases, auxiliary motors and pumps are operated in accordance with operating instructions.

TRAINING CONTENT

Functional:
* How to operate (start/stop, line-up power to, open/close valves, etc.) other miscellaneous auxiliary motors and pumps as required.

Specific:
* Knowledge of the location, availablitiy and type of own OSV's auxiliary pumps and motors.
* Knowledge of the operating instructions for those various pumps and motors.

TASK CODE: ENGINEER-III/IV/V.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2B	90	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Engages and monitors friction clutches between prime movers and driven shaft, manipulating appropriate equipment and visually observing gauges and equipment responses, in order to transfer power from the prime mover to generators, compressors, pumps, shafts, etc.

PERFORMANCE STANDARDS

Descriptive:
* Accurately reads and surveys all instrumentation.
* Expeditiously and accurately manipulates friction clutches to effect engagement/disengagement of driven loads.
* Properly determines that friction clutches and driven loads are operating as required.

Numerical:
* In 100% of the cases, readings and observations are within specificed limits.
* In 100% of the cases, friction clutches are operating according to specifications.

TRAINING CONTENT

Functional:
* How to engage/disengage friction clutches between prime mover and driven shaft.
* Understanding of the function of friction clutches and how they operate.
* Understanding of principles of friction clutches and the various options of their activation through spring, hydraulic or pneumatic forces.
* Understanding of power take-off applications and options afforded by friction clutches.

Specific:
* Knowledge of the special characteristics of own OSV's friction clutches and driven loads including partial slippage tolerance at partial loads.

TASK CODE: ENGINEER-III/IV/V.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2C	90	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Engages and monitors hydraulic (fluid) couplings or hydraulic torque converters between prime movers and driven shaft, manipulating appropriate equipment and visually observing gauges and equipment responses, in order to transfer power from prime movers to generators, compressors, pumps, shafts, etc.

PERFORMANCE STANDARDS

Descriptive:
* Accurately reads and surveys all instrumentation.
* Expeditiously and accurately manipulates hydraulic coupling or torque converter to effect engagement/disengagement of driven loads.
* Properly determines that hydraulic couplings or torque converters and driven loads are operating as required.

Numerical:
* In 100% of the cases, readings and observations are within specified limits.
* In 100% of the cases, couplings/converters are operating to specifications.

TRAINING CONTENT

Functional:
* How to engage/disengage hydraulic couplings or torque converters between prime mover and driven shaft.
* Understanding of the function of the hydraulic couplings or torque converters adn how they operate.
* Understanding of how hydraulic coupling or torque converts transmit prime mover power without mechanical connections and absorb shock loads and torsional vibrations.
* Understanding of the principle of slippage and how it may be used for braking and for hovering loads as in crane operations.

Specific:
* Knowledge of the special characteristics of own OSV's hydraulic couplings or torque converters and driven loads.

TASK CODE: ENGINEER-III/IV/V.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2C	90	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Engages and monitors gear drives between prime movers and driven shaft, manipulating appropriate equipment and visually observing gauges and equipment responses, in order to transfer power from prime mover to generators, compressors, pumps, shafts, winches, etc.

PERFORMANCE STANDARDS

Descriptive:
* Accurately reads and surveys all instrumentation.
* Expeditiously and accurately manipulates drive gear equipment to effect engagement of driven loads.
* Properly determines that drive gears and driven loads are operating as required.

Numerical:
* In 100% of the cases, readings and observations are within specified limits.
* In 100% of the cases, drive gears are operating according to specifications.

TRAINING CONTENT

Functional:
* How to engage drive gears between prime movers and driven shaft.
* Understanding of the fuction of drive gears and how they operate.
* Understanding of speed change gearing operations and the need for such, i.e., higher torque.
* Understanding of reverse gearing operations using constant mesh and clutches for rotational direction changes.

Specific:
* Knowledge of the special characteristics of own OSV's drive gears.

TASK CODE: ENGINEER-III/IV/V.A.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	55	1A	5	2A	40	3	4	3	3

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Surveys and reads various generator/switchboard instrumentation ascertaining generator speed, voltage, amperage, output and if alternating current, phase, frequency and power factor and maks necessary adjustments in order to ensure generator is functioning properly prior to placing generator under load.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains generator speed, voltage, amperage, output, phase (if alternating current), frequency (if alternating current), and power factor (if alternating current).
* Accurately makes adjustments to bring generator to proper operating condition prior to placing under load.

Numerical:
* In 100% of the cases, generator speed, voltage, amperage, output, phase (if alternating current), frequency (if alternating current), and power factor (if alternating current) are within or adjusted within allowable limits.

TRAINING CONTENT

Functional:
* How to determine generator speed, voltage, amperage, output, phase (if alternating current), frequency (if alternating current), and power factor (if alternating current).
* How to regulate various controls to adjust generator to proper conditon prior to placing under load.

Specific:
* Knowledge of the specific characteristics and requirements of own OSV's generator and switchboard.

TASK CODE: ENGINEER-III/IV/V.A.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	50	1A	5	2B	45	3	4	3	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Ascertains electrical load condition (i.e., surveys and reads appropriate switchboard instrumentation) and closes generator circuit breaker on switchboard, in order to connect/disconnect generator to/from the main bus bars and distribute power to loads.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains the electrical load condition.
* Properly connects generator to distribution board.

Numerical:
* In 100% of the cases, the generator is connedted to the switchboard without interrupting the electrical laod.

TRAINING CONTENT

Functional:
* How to read switchboard instrumentation to ascertain electrical load conditions.
* How to connect generator to switchboard.
* Understanding of the relationship between load condition and generator capacity to preclude initial generator "hunting" or tripout.

Specific:
* Knowledge of the special characteristics and arrangement of own OSV's switchboard and generator(s).

TASK CODE: ENGINEER-III/IV/V.A.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	50	1A	5	2B	45	3	4	3	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Ascertains electrical load condition (i.e., surveys and reads appropriate switchboard instrumentation), monitors synchroscope, makes necessary adjustments for correct rotation speed and phasing, and closes generator circuit breaker on switchboard in order to connect generator to the main bus bars in parallel with other generators and distribute power jointly to loads (where applicable).

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains the electrical load condition.
* Establishes that rotation speed and phasing are compatible for paralleling.
* Properly connects generators to switchboard in parallel.

Numerical:
* In 100% of the cases, the generator is connected to the switchboard without interrupting the electical load hor having one or more generators "run away" with the load.

TRAINING CONTENT

Functional:
* How to read switchboard instrumentation to ascertain electrical load condition.
* How to interpret synchroscope for rotation speed and phasing.
* How to adjust control equipment to manipulate rotation speed and phasing.
* How to connect generator to switchboard.
* Understanding of the relationships between load condition and generator capacity to preclude initial generator "hunting" or tripout.
* Understanding of the relationships between rotation speed and phasing for generator paralleling.

Specific:
* Knowledge of the special characteristics and arrangement of own OSV's switchboard(s) and AC generators.

TASK CODE: ENGINEER-III/IV/V.A.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2B	85	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Operates appropriate control mechanisms and visually observes gauges and equipment responses in order to adjust the speed of prime movers or generator frequency to the desired value.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately adjusts the prime mover to the desired value.
* Accurately reads and survey all instrumentation.

Numerical:
* In 100% of the cases, the prime mover is operated at the desired value.
* In 100% of the cases, readings and observations are within specified limits.

TRAINING CONTENT

Functional:
* How to operate various control mechanisms to adjust the speed of the prime movers or generator frequency.
* How to differentiate between proper and improper readings and responses.

Specific:
* Knowledge of the specific characteristics and location of own OSV's prime mover control mechanisms and the limits of responses.

TASK CODE: ENGINEER-III/IV/V.A.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2C	85	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Operates necessary equipment including motor controllers, engines, torque convertors, clutches, gear drives, valves, pressure regulators, etc. in order to adjust pump speed, pressure or rate to the desired value.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately manipulates the proper equipment to effect control/regulation of the pumps.

Numerical:
* In 100% of the cases, all adjustments are made within specified operating limits.
* In 100% of the cases, proper adjustment is made to pressure or rate without causing damage to the pump, or associated systems, or losing suction.

TRAINING CONTENT

Functional:
* How to operate valves, motor controllers, pressure regulators, etc.
* Knowledge of the relationships between pump speed, flow restrictions, pressure, rate and pump type.

Specific:
* Knowledge of the location and characteristics of own OSV's pumps.

TASK CODE: ENGINEER-III/IV/V.A.12

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	1A	5	2C	85	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Operates necessary equipment including rheostats, voltage regulators, synchroscopes, circuit breakers, bus transfer switches, emergency trips, etc., in order to control/regulate generators and transfer/connect/disconnect electrocal loads as required.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately manipulates equipment to effect control/regulation of generators.
* Properly transfers, adds or sheds loads to/from switchboards by manipulating bus transfer switches, emergency trips, circuit breakers, etc.

Numerical:
* In 100% of the cases, all adjustments are made within specified operating limits.
* In 100% of the cases, various power sources and loads are transferred, added or shed as required without tripping load or interrupting power supply.

TRAINING CONTENT

Functional:
* How to operate rheostats, synchroscopes, voltage regulators, circuit breakers, bus transfer switches, emergency trips, etc.

Specific:
* knowledge of the location and special characteristics of own OSV's switchboard mounted control, regulation, transfer and connection/disconnection equipment.

TASK CODE: ENGINEER-III/IV/V.A.13

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	45	1A	5	2C	50	3	3	2	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Ascertains liquid levels in bilges, and as required, manipulates appropriate equipment, (e.g., opens/closes valves, starts/stops pumps, etc.) in order to pump bilges free of all liquids without pumping any oil or other hazardous polluting substance overboard.

PERFORMANCE STANDARDS

Descriptive:
* Properly and expeditiously keeps bilges free of liquids.
* Correctly manipulates equipment to pump bilges.
* Does not cause any oil or other hazardous polluting substances to be discharged overboard from bilge pumping operations.

Numerical:
* In 100% of the cases, bilges are pumped with no discharge of oil or other hazardous polluting substances overboard.

TRAINING CONTENT

Functional:
* Understanding of bilge systems.
* How to start/stop bilge pumps.
* How to open/close appropriate bilge suction valves, pump inlet and discharge valves, overboard discharge valves, etc.
* Understanding of when not to pump bilges contaminated with oil or other hazardous polluting substances overboard.
* How to direct bilge pump discharge to the appropriate holding tank when necessary.

Specific:
* Knowledge of the special characteristics of own OSV's bilge system.

TASK CODE: ENGINEER-III/IV/V.A.14

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	45	1A	5	2C	50	3	3	2	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Ascertains fuel oil and lube oil levels and, as necessary, operates appropriate valves and pumps transferring fuel oil and lube oil from storage tanks to day tanks via centrifuges (if applicable) in order to maintain the necessary fuel and lube oil quantities from the operating situation.

PERFORMANCE STANDARDS

Descriptive:
* Accurately ascertains fuel oil and lube oil levels.
* Correctly operates valves and pumps to efficiently transfer fuel oil and lube oil.

Numerical:
* In 100% of the cases, the designated amount of oil is transferred within acceptable limits in accordance with the particular situation.
* In 100% of the cases, no tanks overflow as a result of the transfer operation.

TRAINING CONTENT

Functional:
* Understanding of the procedure to transfer fuel oil and lube oil between tanks.
* How to operate transfer systems' valves, pumps, level indicators, etc.

Specific:
* Knowledge of the location and special characteristics of valves, pumps level indicators, etc. to transfer fuel oil and lube oil from storage tanks to day tanks on own OSV.
* Knowledge of the fuel oil and lube oil consumption characteristics on own OSV's systems.

TASK CODE: ENGINEER-III/IV/V.A.14

TASK CODE: ENGINEER-III/IV/V.A.15

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	85	1A	5	1A	10	2	2	2	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operate prime movers and auxiliary systems.

TASK: Keeps written records of pertinent machinery operating data, e.g., various pressures, temperatures, flow rates, etc. and all maintenance done on machinery aboard in order to maintain machinery logs and to ensure that all machinery is routinely and adequately serviced.

PERFORMANCE STANDARDS

Descriptive:
* Accurately maintains records of all machinery operating data and all machinery maintenance.

Numerical:
* In 100% of the cases, all required data of and maintenance on machinery is logged.

TRAINING CONTENT

Functional:
* How to read various intstrumentation for obtaining machinery operating data (e.g., various pressures, temperatures, flow rates, etc.).
* How to transcribe those quantitative data to logs.
* Understanding of the maintenance required on machinery aboard.
* Understanding of how to reflect actual maintenance in written form.

Specific:
* Knowledge of the requirements for machinery maintenance on own OSV.
* Knowledge of own OSV's machinery operating data logging requirements.

TASK CODE: ENGINEER-III/IV/V.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	60	1A	5	1C	35	2	2	2	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Ascertains fuel, oil, water and other liquid levels in tanks and, as necessary, determines oil-water interface using sounding tapes, chalk, water finding paste, gauges, petcocks, sounding tables, etc. to determine the amount of fluids in each tank, the total aboard, usage, etc. and records this data in the logs.

PERFORMANCE STANDARDS

Descriptive:
* Accurately ascertains liquid levels.
* Accurately ascertains the amount of water in the oil tanks.
* Accurately records soundings in the log at regular intervals.
* Accurately determines usage.

Numerical:
* In 100% of the cases, liquid levels are ascertained within reasonable accuracy limits considering tank design, gauge/tape accuracy and OSV's and environmental conditions.

TRAINING CONTENT

Functional:
* How to calculate usage from soundings and meter readings.
* How to use sounding tapes to determine liquid levels.
* How to use sounding tables to convert soundings to quantities.
* How to use gauges, sight glasses, petcocks, etc. typically installed on tanks to determine levels.
* How to convert from units of quantities on sounding tables to the units desired.

Specific:
* Knowledge of the location of sounding tubes, gauges, tank openings, etc. on own OSV.

TASK CODE: ENGINEER-III/IV/V.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	80	1A	5	1C	15	2	2	2	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Visually observes appropriate gauging (monitoring) devices and machinery itself for temperature, pressure and various flow conditions of all prime mover systems, including lube oil, fuel oil, air, cooling and exhaust systems, in order to ensure proper functioning of the prime mover and associated auxiliary systems during operation or under test conditions.

PERFORMANCE STANDARDS

Descriptive:
* Correctly surveys and reads all instrumentation.
* Correctly test runs equipment at prescribed intervals.

Numerical:
* In 100% of the cases, readings and observations are within acceptable limits in accordance with specified deviations and particular situation.

TRAINING CONTENT

Functional:
* How to monitor temperature, pressure and various flow indicators typically found associated with diesel machinery.
* How to recognize and differentiate between proper and improper readings.
* How to recognize between proper and improper operation.

Specific:
* Knowledge of the location and special characteristics of own OSV's particular indicators/gauges.
* Knowledge of the specific tests required by company policies.
* Knowledge of the operating characteristics of own OSV's prime movers and auxiliary systems.

TASK CODE: ENGINEER-III/IV/V.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	65	1A	5	1C	30	3	3	3	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Monitors all switchboard instrumentation including voltage, wattage, amperage, and if alternating current, power factor, phase, frequency and ground detectors in order to ensure that generators are operating as required.

PERFORMANCE STANDARDS

Descriptive:
* Accurately surveys and reads all instrumentation.

Numerical:
* In 100% of the cases, readings and observations are within specified limits.

TRAINING CONTENT

Functional:
* How to compare and assess actual readings and desired readings of generator and rectifier operation instrumentation.

Specific:
* Knowledge of the arrangement and special characteristics of own OSV's switchboard(s) and generating equipment.

TASK CODE: ENGINEER-III/IV/V.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	80	1A	5	1C	15	1	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Cnecks the quality and quantity of oil in the engines or other equipment using dipsticks, gauges or sight glasses as applicable to determine if oil needs to be added or to identify potential problems.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains the level of oil in machinery and determines if this level is sufficient.
* Correctly ascertains if the quality of the oil is satisfactory.

Numerical:
* In 100% of the cases, the amount and condition of the oil is correctly ascertained.
* In 100% of the cases, correctly ascertains if oil needs to be added.

TRAINING CONTENT

Functional:
* How to use a dipstick, sight glasses, etc. to determine oil level.
* How to recognize "good" oil from "bad" oil.
* Knowledge of the potential causes of "bad" oil.
* General knowledge of the equipment requirements for oil.

Specific:
* Knowledge of the oil gauging devices on the equipment installed on own OSV.
* Knowledge of what condition the equipment on own OSV must be in (stopped, idle, running, etc.) to take accurate readings.

TASK CODE: ENGINEER-III/IV/V.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	80	1A	5	1C	15	1	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Checks the quality and quantity of the water and other fluids to determine if the level is sufficient or to identify potential problems.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains the level of water or other fluid and determines if this level is sufficient.
* Correctly identifies any degredation of the quality of the water or other fluid in the equipment.

Numerical:
* In 100% of the cases, correctly ascertains the amount and condition of the water or other fluid.
* In 100% of the cases, correctly ascertains if water or other fluid needs to be added.

TRAINING CONTENT

Functional:
* How to use various gauging devices normally installed on engines and other OSV equipment.
* How to recognize between contaminated and uncontaminated water and other fluids.
* Knowledge of the potential causes of contamination.
* General knowledge of the equipment requirements for water and other fluids on the OSV.

Specific:
* Knowledge of the location of oil gauging devices on the equipment on own OSV.
* Knowledge of what condition of the equipment on own OSV must be in (stopped, idle, runnung, etc.) to take accurate readings.

TASK CODE: ENGINEER-III/IV/V/.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	4	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Remains alert to sounds from the machinery that are out of the ordinary and may indicate a malfunction.

PERFORMANCE STANDARDS

Descriptive:
* Correctly distinguishes unusual noises from normal operating sounds.

Numerical:
* In 100% of the cases, correctly identifies all unusual noises.

TRAINING CONTENT

Functional:
* Knowledge of the potential causes of noises from the machinery.
* Knowledge of typical faulty noises.

Specific:
* Knowledge of the usual operating sound of various machinery on own OSV under various load conditions.

TASK CODE: ENGINEER-III/IV/V.B.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	1A	5	2A	55	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Physically inspects operating machinery in order to check bearing temperature, following standard procedures, and as necessary, takes preventative measures to control bearing temperature or minimize damage, e.g., adds oil, increases cooling medium flow rate, secures unit, etc.

PERFORMANCE STANDARDS

Descriptive:
* Properly and expeditiously checks bearing temperatures of machinery.
* Takes corrective preventative measures to control bearing temperatures.

Numerical:
* In 100% of the cases, bearing temperatures are maintained within allowable limits.

TRAINING CONTENT

Functional:
* How to ascertain bearing temperatures.
* Understanding of the method(s) to control bearing temperatures, i.e., add lubricant, increase cooling medium flow rate, etc.

Specific:
* Knowledge of the location and special characteristics of own OSV's machinery bearings and bearing lubrication and cooling systems.

TASK CODE: ENGINEER-III/IV/V.B.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	55	1A	5	2A	40	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Physically inspects all machinery, piping and the OSV for leaks or obvious physical damage or wear.

PERFORMANCE STANDARDS

Descriptive:
* Accurately locates leaks, damage or wear promptly.

Numerical:
* In 100% of the cases, all leaks or physical damage is located.

TRAINING CONTENT

Functional:
* Knowledge of the material being contained and its physcial characteristics.
* Knowledge of the ususal configuration of the OSV's equipment, engines and various components (gears, levers, wheels, valves, rails, etc.).

Specific:
* Knowledge of the specific configuration of the equipment on own OSV.
* Knowledge of what material is being contained and its physical characteristics on own OSV.

TASK CODE: ENGINEER-III/IV/V.B.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	40	2	20	2B	40	3	4	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Evaluates the data and proceeds on a course action to minimize the damage or correct the problem taking into account OSV location and operation, keeping the master informed as necessary.

PERFORMANCE STANDARDS

Descriptive:
* Correctly and expeditiously takes the appropriate course of action to minimize damage or correct the problem.
* Receives permission from the master before taking action when the situation dictates (approaching a rig/platform, docking, etc.).
* Informs the master of all unusual conditions in the engine room.

Numerical:
* In 100% of the cases, the best course of action is taken.
* In 100% of the cases, the master is informed at the proper times.

TRAINING CONTENT

Functional:
* Knowledge of machinery requirements for various fluids (fuel, water, oil, air, etc.), how to control these, their operating parameters and the effect the controls will have.
* Knowledge of what conditions are immediately detrimental to the machinery and those which may be wrong but are not as serious.
* Knowledge of the various controls normally installed on various equipment.

Specific:
* Knowledge of own OSV's machinery requirements for various fluids and the operating parameters for these.
* Knowledge of how to use various controls on own OSV.

TASK CODE: ENGINEER-VI.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	40	3A	10	2C	50	3	3	2	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer liquid commodities to the rig/platform safely without spills in accordance with regulations and company policies.

TASK: Tasks are the same as those listed under ENGINEER-II.B.

PERFORMANCE STANDARDS

Descriptive:
* See descriptions listed under ENGINEER-II.B.

Numerical:
* In 100% of the cases, the tasks listed under ENGINEER-II.B are completed.

TRAINING CONTENT

Functional:
* How to complete the activities required under ENGINEER-II.B.

Specific:
* Knowledge of the tasks required under ENGINEER-II.B for own OSV.

TASK CODE: ENGINEER-VI.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	3	1	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Determines flow patterns and manipulates appropriate valves, valve operators, etc. within the dry bulk system in order to ensure that dry bulk may be off-loaded in accordance with operating manuals.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains flow patterns for dry bulk discharge systems.
* Accurately operates appropriate valves, valve operators, etc. to precisely achieve required flow patterns.

Numerical:
* In 100% of the cases, correct flow patterns are ascertained exactly as required.
* In 100% of the cases, valves, valve operators, etc. are operated such that the system is lined up in accordance with operating procedures.

TRAINING CONTENT

Functional:
* Understanding of the basic operating requirements in terms of pressurizing and discharging P-tanks during off-loading.
* How to operate valves, valve actuators, etc. to line up various systems.
* Understanding of the required flow patterns for pressurizing and discharging of P-tanks.

Specific:
* Knowledge of the arrangement and special characteristics of the P-tank air and discharge systems on own OSV.
* Knowledge of P-tank operating procedures on own OSV.

TASK CODE: ENGINEER-VI.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	5	1C	90	2	1	1	2

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Passes transfer hoses from the OSV and makes the appropriate attachments to the OSV's dry bulk manifolds/piping systems, in order to prepare for unloading of dry bulk with the assistance of the oiler (if assigned), deckhands and the mate, as applicable.

PERFORMANCE STANDARDS

Descriptive:
* Properly passes transfer hoses from the OSV.
* Accurately and expeditiously connects hoses to applicable transfer system.
* Personnel assisting are effectively directed and coordinated.

Numerical:
* In 100% of the cases, hose connections are made in accordance with standard operating procedures for that system.

TRAINING CONTENT

Functional:
* Understanding of the general procedures to pass hoses from the OSV.
* How to connect transfer hoses for the dry bulk to the proper tanks and off-loading systems via manifolds/deck connections.
* How to direct and coordinate the activities of others.

Specific:
* Knowledge of own OSV's specific procedures for dry bulk handling operations.
* Knowledge of own OSV's dry bulk transfer systems.

TASK CODE: ENGINEER-VI.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	10	2	55	1C	35	3	3	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Communicates with rig/platform and deck personnel either directly or via the master by radio, walkie-talkies, etc. and directs deployment and attachment or retrieval of appropriate hoses and fittings in order to prepare for or secure from transfer operations and maintain contact during the transfer.

PERFORMANCE STANDARDS

Descriptive:
* Properly and clearly communicates all directions.
* Accurately and expeditiously deploys and attaches or retrieves appropriate hoses and fittings.

Numerical:
* In 100% of the cases, the proper hoses are passed in the prescribed manner for the particular transfer evolution without damage to the rig/platform or the OSV.
* In 100% of the cases, communication is maintained at all times.

TRAINING CONTENT

Functional:
* Understanding of general procedures to pass hoses to/from the rig/platform.
* Understanding of the safety procedures when working under cranes on moving decks.
* How to operate radio equipment, such as walkie-talkies, bridge-to-bridge radios, etc.

Specific:
* Knowledge of particular procedures and practices for passing hoses to/from rigs/platforms.
* Knowledge of radio equipment, walkie-talkies, etc. provided on own OSV.
* Knowledge of transfer procedures on own OSV.

TASK CODE: ENGINEER-VI.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2A	90	2	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Operates appropriate controls, valves, etc. to start the air compressor and pressurize the P-tank after venting compressor discharge to the atmosphere according to standard operating procedures.

PERFORMANCE STANDARDS

Descriptive:
* Properly operates and starts air compressor.
* Precisely and properly operates valves and valve actuators.
* Air is vented to the atmosphere until dry.

Numerical:
* In 100% of the cases, air is vented to the atmosphere for the specified amount of time according to operating procedures.
* In 100% of the cases, the air compressor is operated according to procedures.
* In 100% of the cases, P-tanks are pressurized to the specified pressure.

TRAINING CONTENT

Functional:
* How to operate valves, valve actuators, etc.
* How to operate air compressors.
* Knowledge of the operating requirements and procedures for dry bulk systems.

Specific:
* Knowledge of the operating requirements and procedures for dry bulk system on own OSV.
* Knowledge of own OSV's air system piping and controls.

TASK CODE: ENGINEER-VI.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2B	90	1	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Operate appropriate levers, valve actuators, controls, etc. located on the weather deck to discharge the dry bulk according to standard procedures.

PERFORMANCE STANDARDS

Descriptive:
* Controls and valve actuators are operated properly, accurately and efficiently.
* Air jet is activated prior to opening discharge valves.

Numerical:
* In 100% of the cases, discharge procedures are followed precisely.

TRAINING CONTENT

Functional:
* Knowledge of the dry bulk transfer procedures.
* Hbw to operate valves, valve actuators, controls, etc.

Specific:
* Knowledge of own OSV's dry bulk system and controls.
* Knowledge of the operating procedures to discharge dry bulk on own OSV.

TASK CODE: ENGINEER-VI.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2C	85	2	2	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Monitor the dry bulk system pressure and adjust the air jet as necessary to maintain system pressure at prescribed levels and to prevent clogging and fluidize the cargo.

PERFORMANCE STANDARDS

Descriptive:
* Accurately ascertains the system pressure.
* Properly operates air jet to maintain system pressure at prescribed levels.

Numerical:
* In 100% of the cases, system pressure is continuously monitored.
* In 100% of the cases, system pressure is maintained at the prescribed level.

TRAINING CONTENT

Functional:
* How to read pressure gauges.
* Knowledge of dry bulk transfer operation and pressure regulation during transfer operation.
* How to use valve actuators.

Specific:
* Knowledge of dry bulk transfer operation and pressure regulation on own OSV.
* Knowledge of the location and operation of valve actuators and gauges on own OSV.

TASK CODE: ENGINEER-VI.B.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	4	1	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Monitors the transfer operation in order to detect and correct any hazardous or abnormal conditions, such as abnormal lists or trims, clogged hoses and leaking connections.

PERFORMANCE STANDARDS

Descriptive:
* Hazardous or abnormal conditions are recognized and the proper corrective action is promptly and effectively taken.

Numerical:
* In 100% of the cases, all abnormal or hazardous lists or trims are detected and the proper corrective action is taken.
* In 100% of the cases, all problems with the transfer are detected and corrected.

TRAINING CONTENT

Functional:
* Knowledge of stability to recognize when trim, list, period of roll, etc. indicate a hazardous condition.
* Knowledge of dry bulk transfer operations.
* How to correct the usual problems associated with dry bulk transfers.

Specific:
* Knowledge of dry bulk transfer operations and system on own OSV.
* Knowledge of the stability characteristics of own OSV.

TASK CODE: ENGINEER-VI.B.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	5	2B	65	2	2	1	2

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Blows down the P-tank to ensure all cargo has been transferred, using standard procedures and own judgement that the tank is adequately emptied.

PERFORMANCE STANDARDS

Descriptive:
* P-tank is adequately emptied.
* P-tank is properly blown down.

Numerical:
* In 100% of the cases, the P-tank is emptied to within one sack of cargo.
* In 100% of the cases, the P-tank is blown down according to standard procedures.

TRAINING CONTENT

Functional:
* How to blow down P-tanks.
* Knowledge of P-tank operations as to what is happening inside the tank during completion of transfer and during blowing down.

Specific:
* Knowledge of blow down procedures on own OSV.
* Knowledge of P-tank operations on own OSV.

TASK CODE: ENGINEER-VI.B.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	2	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Secures the compressor and bleeds the pressure of the P-tank by operating the appropriate valves, controls, etc. according to stand procedures.

PERFORMANCE STANDARDS

Descriptive:
* Properly secures the compressor.
* Properly depressurizes the P-tank.
* All valves are returned to their closed position or set up to receive cargo.

Numerical:
* In 100% of the cases, the proper operating procedures are followed.

TRAINING CONTENT

Functional:
* How to operate valves, valve actuators, controls, etc.
* Knowledge of operational and safety procedures to bleed air from P-tanks.

Specific:
* Knowledge of how to secure compression on own OSV.
* Knowledge of how to bleed air pressure from P-tanks on own OSV.

TASK CODE: ENGINEER-VI.B.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	3A	20	1A	75	2	2	1	2

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Retrieves, disconnects and stows the transfer hoses with the assistance of the oiler (if assigned), deckhands and the mate as applicable in accordance with standard procedures.

PERFORMANCE STANDARDS

Descriptive:
* Properly retrieves hoses from the rig/platform.
* Properly handles, disconnects and stows hoses.
* Effectively directs/coordinates assisting personnel.

Numerical:
* In 100% of the cases, hoses are retrieved, disconnected, handled and stowed according to standard procedures.

TRAINING CONTENT

Functional:
* Understanding of general procedures to retrieve hoses from rigs/platforms.
* How to disconnect, handle and stow transfer hoses.
* How to direct/coordinate the activities of others.

Specific:
* Knowledge of own OSV's specific procedures for cargo handling operations.

TASK CODE: ENGINEER-VI.B.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	2	3	1	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Keeps a written record of all transfers to/from the OSV in order to inform company personnel of the transfers and to provide a permanent record should problems arise at a later date concerning these transfers.

PERFORMANCE STANDARDS

Descriptive:
* Accurately maintains records of all transfers.

Numerical:
* In 100% of the cases, all required or pertinent data is reflected in the log.

TRAINING CONTENT

Functional:
* How to estimate the amount of dry bulk transferred from the OSV.
* Knowledge of how to reflect transfer conditions in written form.

Specific:
* Knowledge of own OSV's logging requirements as this pertains to dry bulk transfers.

TASK CODE: ENGINEER-VII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
4	80	2	5	2C	15	4	4	1	3

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Ensure all anchor handling equipment is operating correctly.

TASK: Perfroms operational checks on anchor handling equipment similar to those performed in ENGINEER-III.B and perform any necessary repairs in order to ensure equipment will operate as required with the assistance of the oiler (if assigned), or the mate.

PERFORMANCE STANDARDS

Descriptive:
* All anchor handling equipment is operated and checked properly and efficiently.
* All necessary repairs or maintenance are promptly and properly completed.

Numerical:
* In 100% of the cases, all oil levels are checked.
* In 100% of the cases, all equipment is started, checked and operated according to standard procedures.
* In 100% of the cases, all brake pads, oil, fuel and water levels, and controls are checked.

TRAINING CONTENT

Functional:
* How to start and check engines and anchor handling equipment for proper operation.
* How to check winch controls.
* How to check hydraulic system operations.

Specific:
* Knowledge of the operating procedures and characteristics of own OSV's anchor handling equipment and components.

TASK CODE: ENGINEER-VII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	50	5	10	2C	40	3	4	4	3

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels.

TASK: Tasks are the same as for ENGINEER-III/IV/V.

PERFORMANCE STANDARDS

Descriptive:
* Properly completes all the tasks listed in ENGINEER-III/IV/V.

Numerical:
* In 100% of the cases, the tasks listed in ENGINEER-III/IV/V are completed.

TRAINING CONTENT

Functional:
* Knowledge of the tasks required in ENGINEER-III/IV/V.

Specific:
* Knowledge of the tasks required in ENGINEER-III/IV/V as they relate to own OSV.

TASK CODE: ENGINEER-VIII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	80	2	5	2C	15	4	4	1	3

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Ensure all towing equipment is operating correctly.

TASK: Performs operational checks on towing equipment similar to those performed in ENGINEER-III.B and perfroms the necessary repairs in order to ensure equipment operation as required with the assistance of the oiler (if assigned), or the mate.

PERFORMANCE STANDARDS

Descriptive:
* All towing equipment is operated and checked properly and efficiently.
* All necessary repairs or maintenance are promptly and properly completed.

Numerical:
* In 100% of the cases, all towing equipment is started, checked and operated according to standard procedures.
* In 100% of the cases, all controls are checked.
* In 100% of the cases, all fluid levels (oil, water, hydraulic, etc.), fuel levels and brake pads are checked.

TRAINING CONTENT

Functional:
* How to start and check engines and towing equipment for proper operation.
* How to check winch controls.
* How to check hydraulic systems for proper operation.

Specific:
* Knowledge of the operating procedures and characteristics of own OSV's towing equipment and components.

TASK CODE: ENGINEER-VIII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	75	2	20	1C	5	1	2	1	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels.

TASK: Monitor engine gauges and compare the readings against standard values listed in operating manuals to determine if the engines are overloaded and inform the master if they are in order to take steps to correct the situation.

PERFORMANCE STANDARDS

Descriptive:
* The master is promptly informed of all overload situations.
* Gauges are accurately read.
* Overload conditions are accurately ascertained.

Numerical:
* In 100% of the cases, all overload conditions are promptly recognized.
* In 100% of the cases, all operating parameters remain below prescribed maximums.

TRAINING CONTENT

Functional:
* How to recognize overload conditions in diesel engines.
* How to read gauges.
* How to reduce load conditions on engines.
* How to communicate overload conditions to the master or the officer of the deck.

Specific:
* Knowledge of the maximum operating parameters of own OSV's engines.

TASK CODE: ENGINEER-VIII.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	50	5	10	2C	40	3	4	4	3

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels.

TASK: Tasks are the same as listed for ENGINEER-III/IV/V.

PERFORMANCE STANDARDS

Descriptive:
* All the tasks listed in ENGINEER-III/IV/V are properly completed.

Numerical:
* In 100% of the cases, all the tasks listed in ENGINEER-III/IV/V are completed.

TRAINING CONTENT

Functional:
* Ability to complete all the tasks performed in ENGINEER-III/IV/V.

Specific:
* Knowledge of the tasks listed in ENGINEER-III/IV/V as they relate to own OSV.

TASK CODE: ENGINEER-IX.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Manipulates buttons, switches, levers of alarm and/or communications system in order to sound the alarm and/or issue an OSV-wide alert, using knowledge of the characteristics of internal communications equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for a fire aboard.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of alarm device(s) and internal communications system.
* Acts calmly in emergency situations.
* Correctly follows applicable procedures.
* Clearly sounds signal or message so that it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sounds the alarm immediately upon seeing or hearing about an emergency situation.

TRAINING CONTENT

Functional:
* How to operate internal communications systems, e.g., sound-power phone, PA system, etc.
* How to operate emergency alarm systems.
* Understanding of emergency procedures and ability to communicate these to others.

Specific:
* Knowledge of the type and location of internal communications and alarm systems on own OSV.
* Knowledge of emergency alert procedures, including standard signals and messages.

TASK CODE: ENGINEER-IX.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	5	2A	75	2	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Proceeds to the engine room and starts the fire pump, secures the power to the fire location, starts the bilge pump and checks fire main and bilge systems to provide firefighting pressure, bilge suction and ensure the systems are lined up properly.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and properly starts the fire pump with sea suction.
* Promptly and properly starts bilge pump.
* Accurately secures power to the affected area and maintains power to emergency equipment.
* Acts calmly in the emergency situation.

Numerical:
* In 100% of the cases, correct fire pressure is supplied.
* In 100% of the cases, bilge suction is provided to the fire location.
* In 100% of the cases, all power at the fire location is secured.

TRAINING CONTENT

Functional:
* How to operate pumps and determine flow patterns to line up systems.
* How to secure power to sections of the OSV by area.

Specific:
* Knowledge of own OSV's fire main and bilge systems.
* Knowledge of own OSV's electrical distribution system.

TASK CODE: ENGINEER-IX.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	10	1A	5	2B	85	2	2	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Opens control valves and activates various fire extinguishing systems (CO_2, Halon, etc.) in order to contain/extinguish the fire, using knowledge of the characteristics/capabilities of extinguishing systems, of the class of fire, and according to specified emergency procedures regarding the use of fire extinguishing equipment/systems.

PERFORMANCE STANDARDS

Descriptive:
* Effectively opens/activates fire extinguishing systems expeditiously to discharge extinguishing agent(s) on selected areas.
* Valves, motors, etc. are opened/activated promptly and in the correct sequence.
* Correctly follows emergency procedures.
* Ensures all personnel are vacated from space before activating system.
* Remains calm during emergency situation.

Numerical:
* In 100% of the cases, fire extinguishing system is activated in sufficinet time to contain the fire and protect the OSV.

TRAINING CONTENT

Functional:
* How to operate/energize fire extinguishing equipment and systems.
* Understanding of the characteristics/capabilities of fire extinguishing equipment and systems.
* Understanding of the types of extinguishing systems appropriate to various classes of fires.

Specific:
* Knowledge of the fire extinguishing equipment and systems used on own OSV.
* Knowledge of the emergency procedures regarding the use of fire extinguishing equipment/systems on own OSV.

TASK CODE: ENGINEER-IX.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	15	3B	15	1A	70	2	2	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Closes and/or seals hatches, doors, vents, ports, valves, etc. manually or remotely in order to maintain the watertight or gastight integrity, to confine the fire to a minimum area and decrease the fuel load using knowledge of the layout of the OSV and OSV spaces, systems and of closing devices, latches, etc. which allow for the closing/sealing of bulkheads in accordance with emergency procedures and designates specific areas/bulkheads as fire boundaries, all with the assistance of the oiler (if assigned).

PERFORMANCE STANDARDS

Descriptive:
* Quickly closes and/or seals all appropriate openings.
* Correctly follows emergency procedures.
* Personnel assisting are effectively directed/coordinated.
* Closes remote fuel shut-off to fire area (if applicable).
* Remains calm during emergency situation.

Numerical:
* In 100% of the cases, all doors, hatches, vents, ports, valves, etc. are closed and/or sealed as quickly as possible without jeopardizing personnel.
* In 100% of the cases, alerts master immediately if an opening can not be sealed or closed.

TRAINING CONTENT

Functional:
* How to close/seal doors, hatches, vents, ports, valves, etc. manually or remotely.
* How to coordinate/direct the activities of others.

Specific:
* Knowledge of the layout of own OSV and OSV spaces and systems.
* Knowledge of the type and location of doors, hatches, vents, ports, valves, etc. which will aid in maintaining the watertight or gastight integrity of the OSV.
* Knowledge of emergency procedures regarding the maintenance of the OSV's watertight or gastight integrity.

TASK CODE: ENGINEER-IX.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	30	1C	65	2	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Provides the necessary support as directed by the master including operation of pumps and pumping system, use of self-contained breathing apparatus, use of fire extinguishers and use of fire hose.

PERFORMANCE STANDARDS

Descriptive:
* All tasks assigned by the master are promptly and properly completed.
* Remains in communication with the master at all times.
* Remains calm during emergency situation.

Numerical:
* In 100% of the cases, all assigned tasks are completed.

TRAINING CONTENT

Functional:
* How to operate pumps.
* How to use self-contained breathing apparatus.
* How to use fire extinguishers.
* Understanding of emergency procedures.
* How to combat fires in closed spaces.

Specific:
* Knowledge of own OSV's internal communications system.
* Knowledge of own OSV's configuration and systems.

TASK CODE: ENGINEER-IX.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Manipulates buttons, switches, levers of alarm and/or commuications system in order to sound the alarm and/or issue an OSV-wide alert, using knowledge of the characteristics of internal communications equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for a collision or flooding emergency.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operate control switches of alarm device(s) and internal communications system.
* Acts calmly in emergency situation.
* Correctly follows applicable procedures.
* Clearly sound the signal or message so that it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sound the alarm immediately upon seeing or hearing about an emergency situation.

TRAINING CONTENT

Functional:
* How to operate internal communications systems, e.g., sound-powered phone, PA system, intercoms, etc.
* How to operate emergency alarm systems.
* Understanding of emergency procedures and ability to communicate these to others.

Specific:
* Knowledge of the type and location of internal communications and alarm systems on own OSV.
* Knowledge of emergency alert procedures, including standard signals and messages.

TASK CODE: ENGINEER-IX.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	3B	10	1A	75	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Closes/seals doors, hatches, vents, ports, valves, etc. manually or remotely in order to maintain watertight integrity and confine flooding to a minimum area, using knowledge of layout of OSV and OSV spaces and of closing devices, latches, etc. which allow for the closing/sealing of bulkheads, and in accordance with any emergency procedures designating specific areas/bulkheads to attend to, all with the assistance of the oiler (if assigned) and deckhands.

PERFORMANCE STANDARDS

Descriptive:
* Closes and/or seals all appropriate openings.
* Correctly follows emergency procedures.
* Effectively directs/coordinates assisting personnel.
* Remains calm during emergency situation.

Numerical:
* In 100% of the cases, alerts the master immediately of an opening (door, hatch, vent, etc.) cannot be closed or sealed.
* In 100% of the cases, all doors, hatches, ports, valves, etc. are closed and/or sealed as quickly as possible without jeopardizing personnel.

TRAINING CONTENT

Functional:
* How to close/seal doors, hatches, vents, ports, valves, etc. manually or remotely.
* How to coordinate/direct the activities of others.

Specific:
* Knowledge of the layout of own OSV and OSV spaces.
* Knowledge of the type and location of doors, hatches, vents, ports, valves, etc. which will aid in maintaining the watertight integrity of the OSV.
* Knowledge of the emegency procedures regarding maintenance of the OSV's watertight integrity.

TASK CODE: ENGINEER-IX.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	80	2	15	1A	5	3	2	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Inspects the OSV for structural damage and damage to engineering systems to determine the scope of the damage and to prevent further damage from occurring and informs the master of same.

PERFORMANCE STANDARDS

Descriptive:
* Accurately checks all spaces for damage.
* Checks engines and operational equipment for proper operation (loss of cooling water, misalignment, etc.).
* Accurately checks piping systems for damage.

Numerical:
* In 100% of the cases, all damage is identified and the master is promptly and properly informed.

TRAINING CONTENT

Functional:
* How to communicate descriptions of damage effectively and accurately.
* Knowledge of operating characteristics of various equipment and systems.
* Knowledge of general ship building structures and techniques.

Specific:
* Knowledge of construction and layout of own OSV.
* Knowledge of operating characteristics of own OSV's equipment and systems.

TASK CODE: ENGINEER-IX.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	90	2	5	1A	5	4	4	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Evaluates the data obtained on the severity of the damage, OSV's capability to contain or correct flooding or damage, OSV's stability and other pertinent data and recommends to the master the best course of action to minimize the effects of collision, flooding or grounding.

PERFORMANCE STANDARDS

Descriptive:
* Decision is made in a timely manner.
* Appropriate factors enter into the analysis.
* OSV personnel experience, material availability and safety considerations are given priority in decision making.

Numerical:
* In 100% of the cases, all pertinent variables are considered.
* In 100% of the cases, the best course of action is communicated to the master as well as any viable alternatives.

TRAINING CONTENT

Functional:
* Knowledge of damage control procedures.
* Understanding of the effects of grounding and flooding on OSV stability.

Specific:
* Knowledge of the abilities of OSV personnel relating to damage control activities.
* Knowledge of own OSV's stability characteristics.
* Knowledge of tools and material aboard the OSV that can be used for damage control activities and emergency repairs.
* Knowledge of the capabilities of OSV equipment and pumping systems.

TASK CODE: ENGINEER-IX.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	15	1A	5	1C	80	1	1	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Operates the necessary and available pumps to maintain the stability of the OSV or dewater as necessary.

PERFORMANCE STANDARDS

Descriptive:
* Bilge, ballast, fire pumps, etc. are correctly lined up to take suction from the affected space.
* Tanks are ballasted/deballasted as required and as directed by the master.

Numerical:
* In 100% of the cases, pumps are operated to capacity according to operating procedures.

TRAINING CONTENT

Functional:
* How to determine flow patterns and line up systems.
* How to operate pumps.
* Understanding of stability in regard to free surface effect, counter flooding, off center weight, etc. associated with flooding situations.

Specific:
* Knowledge of the characteristics, arrangement and capabilities of own OSV's pumps and pumping system.
* Knowledge of the stability characteristics of own OSV.

TASK CODE: ENGINEER-IX.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	30	5	20	2A	50	4	4	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Coordinate with the mate and direct the assistance of the oiler (if assigned) and deckhands in damage control activities and emergency repairs using knowledge of damage control, stability and available materials in order to minimize and contain the flooding, shore up weak structures and maintain OSV stability.

PERFORMANCE STANDARDS

Descriptive:
* Smoothly coordinates and directs damage control activities and emergency repairs.
* Effectively uses available tools and materials to maintain watertight integrity.
* Correctly follows emergency procedures.

Numerical:
* In 100% of the cases, performs all work as quickly as possible to maximize time available to control flooding.

TRAINING CONTENT

Functional:
* How to use hand tools and common building materials.
* Knowledge of various damage control techniques.

Specific:
* Knowledge of the type and location of tools and materials available to perform emergency repairs on own OSV.
* Knowledge of the design and layout of own OSV.
* Knowledge of the emergency procedures regarding the maintenance of watertight integrity on the OSV.

TASK CODE: ENGINEER-IX.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	5	2	90	1A	5	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to man overboard situation.

TASK: Hails and passes "man overboard port (starboard) side" to the bridge using voice in order to alert personnel of a man overboard emergency.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and loudly passes the warning to the bridge.

Numerical:
* In 100% of the cases, personnel are immediately alerted to a man overboard emergency.

TRAINING CONTENT

Functional:
* Understanding of the importance of passing information to the bridge.
* How to clearly shout a warning.

Specific:
* Knowledge of the specified emergency procedures on own OSV.

TASK CODE: ENGINEER-IX.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	1A	85	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to man overboard situation.

TASK: Throws life ring and float light overboard upon hearing the signal "man overboard" in order to provide floatation material to the person in the water.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and accurately throws a life ring and float light overboard.

Numerical:
* In 100% of the cases, a life ring is thrown near the person in the water.

TRAINING CONTENT

Functional:
* How to detach and throw a life ring and float light overboard.

Specific:
* Knowledge of the types and locations of life rings and float lights aboard own OSV.

TASK CODE: ENGINEER-IX.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	60	1A	10	2B	30	3	4	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to man overboard situation.

TASK: Proceeds to the engine room and monitors machinery plant operation and performs necessary operations and adjustments to ensure the continuous availability of power at required levels.

PERFORMANCE STANDARDS

Descriptive:
* Accurately monitors operating machinery and makes appropriate adjustments to keep operating parameters within prescribed limits.
* Promptly restarts any vital equipment upon its stopping.

Numerical:
* In 100% of the cases, makes no adjustments that result in loss of power, even temporarily.
* In 100% of the cases, all machinery provides the required power without interuption.

TRAINING CONTENT

Functional:
* How to operate engines and other vital equipment.
* Knowledge of operating parameters of engines and vital equipment and how to adjust these.

Specific:
* Knowledge of operating procedures of own OSV's machinery plant.
* Knowledge of operating parameters of own OSV's machinery and how to adjust these.

TASK CODE: ENGINEER-IX.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	3B	10	1A	75	1	1	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Closes and/or seals doors, hatches, vents, ports valves, etc. manually or remotely in order to maintain watertight integrity and confine flooding to a minimum area, using knowledge of layout of OSV and OSV spaces and of closing devices, latches, etc. which allow for the closing/sealing of bulkheads, and in accordance with any emergency procedures designating specific areas/bulkheads to attend to.

PERFORMANCE STANDARDS

Descriptive:
* Closes and/or seals all appropriate openings.
* Correctly follows emergency procedures.

Numerical:
* In 100% of the cases, alerts the master immediately if an opening (door, hatch, vent, etc.) cannot be closed or sealed.
* In 100% of the cases, all doors, hatches, vents, ports, valves, etc. are closed and/or sealed as quickly as possible without jeopardizing personnel.

TRAINING CONTENT

Functional:
* How to close/seal doors, hatches, vents, ports, valves, etc. mannually or remotely.

Specific:
* Knowledge of layout of OSV and OSV spaces.
* Knowledge of the type and location of doors, hatches, vents, ports, valves, etc. which will aid in maintaining the watertight integrity of the OSV.
* Knowledge of emergency procedures regarding the maintenance of the OSV's watertight integrity.

TASK CODE: ENGINEER-IX.D.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
4	30	2	10	2A	60	3	4	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Proceeds to the engine room and secures or stops all unnecessary equipment to prevent damage to the machinery as water fills the engine room using standard procedures and own judgement as to what gear must be left running.

PERFORMANCE STANDARDS

Descriptive:
* All unnecessary equipment is stopped expeditiously.
* All necessary operations continue uninterupted (fire fighting, pumping bilges, maneuvering, radio transmissions, etc.).

Numerical:
* In 100% of the cases, all engines are secured before leaving the OSV.

TRAINING CONTENT

Functional:
* How to stop and secure equipment.
* Knowledge of what prime movers must be in operation to perform various OSV operations.

Specific:
* Knowledge of what OSV operations are in progress or expected before abandoning the OSV.
* Knowledge of own OSV's systems, prime movers and standard operating procedures.

TASK CODE: ENGINEER-IX.D.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	1A	90	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Manipulates clips and straps of a life preserver, using experience and accepted method of securing, in order to properly don the life preserver.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and correctly dons the life preserver.
* Remains calm and alert while donning the life preserver.

Numerical:
* In 100% of the cases, life preservers are properly donned.

TRAINING CONTENT

Functional:
* How to properly don a life preserver.
* Knowledge of life preserver stowage aboard own OSV.

Specific:
* Knowledge of the location and number of life preservers aboard own OSV.

TASK CODE: ENGINEER-IX.D.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	2	20	1A	40	2	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Proceeds to the life raft station with the required gear using experience from drills/training in order to stand-by for orders to abandon the OSV in accordance with the Station Bill.

PERFORMANCE STANDARDS

Descriptive:
* Immediately proceeds to the life raft station.
* Promptly performs tasks assigned while standing-by.

Numerical:
* In 100% of the cases, required gear is provided at the life raft station.
* In 100% of the cases, assigned tasks are performed.

TRAINING CONTENT

Functional:
* Understanding of the Station Bill.

Specific:
* Knowledge of any specified emergency procedures for own OSV.
* Knowledge of any gear or logs that should be brought from the OSV (engineering logs, blankets, etc.).

TASK CODE: ENGINEER-IX.D.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	15	1A	75	2	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Launches life raft using a painter line and experience gained from drills/training in order to safely abandon the OSV in accordance with orders and directives from the master.

PERFORMANCE STANDARDS

Descriptive:
* Correctly prepares and safely launches the life raft(s).
* Ensures that the life raft is properly inflated in the water.

Numerical:
* In 100% of the cases, life rafts are launched and inflated properly.

TRAINING CONTENT

Functional:
* How to launch a life raft.
* How to secure the painter line when launching a life raft.
* How to inflate a life raft.

Specific:
* Knowledge of the procedures for launching a life raft from the OSV.

TASK CODE: ENGINEER-IX.E.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	20	3A	20	1A	60	2	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensure OSV is prepared for heavy weather.

TASK: Rechecks engineering spaces for loose gear, tools, deckplates and equipment by checking lashings, rails, bolts, pad eyes, etc. using own experience and guidance from the master in order to identify and secure potentially hazardous conditions with the assistance of the oiler (if assigned).

PERFORMANCE STANDARDS

Descriptive:
* Gear, tools, deckplates and equipment are checked for proper securing.
* Gear, tools, deckplates and equipment are properly secured for all expected weather.
* Personnel assisting are effectively directed/coordinated.

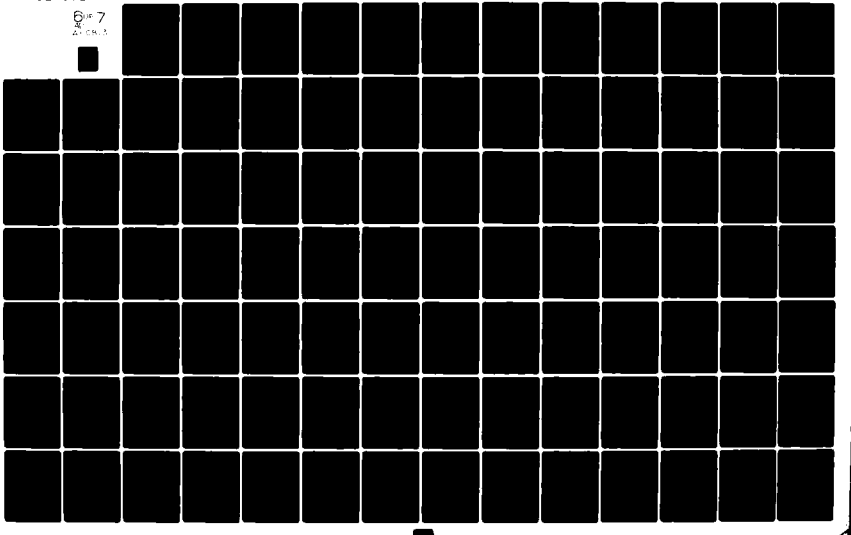
Numerical:
* In 100% of the cases, all potential missile hazards are eliminated.
* In 100% of the cases, all equipment is secured from shifting.

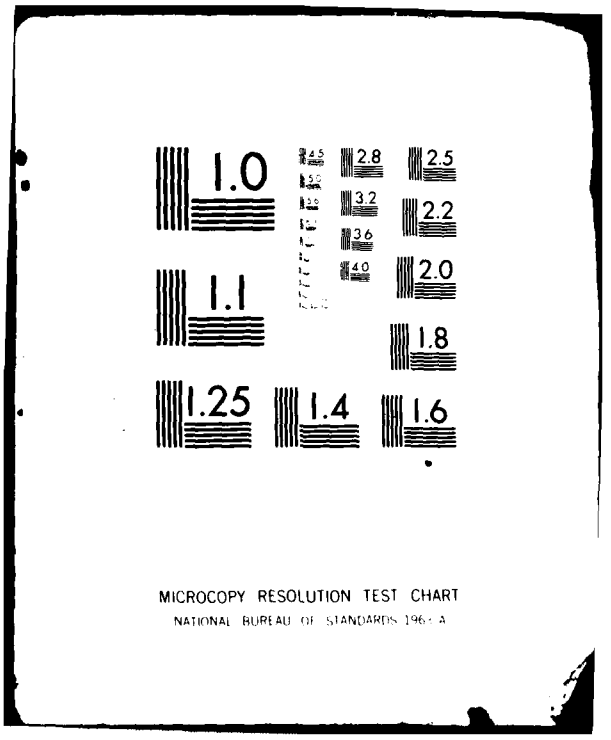
TRAINING CONTENT

Functional:
* Knowledge of the methods of securing gear, tools, deckplates and equipment.
* How to supervise/direct the activities of others.
* How to recognize potential missile hazards or potentially hazardous shifting gear or equipment.

Specific:
* Knowledge of own OSV's configuration and means for securing gear, tools, deckplates, and equipment.

AD-A110 813 COAST GUARD DISTRICT (8TH) NEW ORLEANS LA F/G 5/1
FUNCTIONAL JOB ANALYSIS OF MARINE PERSONNEL EMPLOYED ON OFFSHOR--ETC(U)
JAN 82 H R PRZELOMSKI, A M BONNEAU
UNCLASSIFIED CGD8M-01-82 NL

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

TASK CODE: ENGINEER-IX.E.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	3A	10	1A	75	1	1	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensure OSV is prepared for heavy weather.

TASK: Closes and/or seals doors, hatches, vents, ports, valves, etc. manually or remotely in order to maintain watertight integrity, using knowledge of the layout of the OSV and OSV spaces and of closing devices, latches, etc. which allow for the closing/sealing of bulkheads and stacks, in accordance with any emergency procedures designating specific areas/bulkheads to attend to, all with the assistance of the oiler (if assigned) and deckhands.

PERFORMANCE STANDARDS

Descriptive:
* Closes and/or seals all appropriate openings.
* Correctly follows emergency procedures.
* Effectively directs and coordinates assigned personnel.

Numerical:
* In 100% of the cases, alerts the master of an opening (door, hatch, vent, etc.) that cannot be closed or sealed.
* In 100% of the cases, all doors, hatches, vents, ports, valves, etc. are closed and/or sealed as quickly as possible without jeopardizing personnel.

TRAINING CONTENT

Functional:
* How to close/seal doors, hatches, vents, ports, valves, etc. manually or remotely.
* How to direct/coordinate the activities of others.

Specific:
* Knowledge of the layout of the OSV and OSV spaces and stacks.
* Knowledge of the type and locations of doors, hatches, vents, ports, valves, etc. which will aid in maintaining the watertight integrity of the OSV.
* Knowledge of emergency procedures regarding the maintenance of the OSV's watertight integrity.

TASK CODE: ENGINEER-IX.F.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	4C	50	1A	20	3	4	2	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Provides first aid to victims, moves victims from disaster/accident scene if possible or feasible, and obtains additional assistance if necessary in order to give immediate care and prevent further injury to victim(s), using knowledge of first aid procedures for various kinds of injuries, of available medical kits and manuals, and giving evidence of the willingness to aid, reassure and encourage injured person(s).

PERFORMANCE STANDARDS

Descriptive:
* Correctly uses first aid kits, procedures and manuals.
* Uses good judgement in moving injured personnel.
* Promptly provides first aid and calls for any required additional medical attention.
* Promotes confidence in the victim by demonstrating competence and acting calmly.

Numerical:
* In 100% of the cases, medical attention is given in all cases where required.
* In 100% of the cases, never moves an injured person until an examination has been made of all injuries.

TRAINING CONTENT

Functional:
* Understanding of the procedures used to treat various kinds of injuries, including the rules for moving injured personnel.
* How to read and interpret first aid/medical manuals.
* How to use first aid equipment, e.g., stimulants, tourniquets, bandages, splints, etc.
* How to reassure and encourage a victim.

Specific:
* Knowledge of the location and contents of first aid/medical kits and manuals on the OSV.
* Knowledge of the company guidelines for obtaining additional assistance.

TASK CODE: ENGINEER-IX.F.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	70	2	25	1A	5	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Provides all pertinent information/circumstances of any injury, accident, illness or death to the master in order to enable him to document in the rough log the incident and complete all reports in accordance with government regulations, company's and charterer's policies, etc.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately describes the circumstances surrounding an injury, illness or death.

Numerical:
* In 100% of the cases, information required to document an accident, injury, illness or death is provided to the master.

TRAINING CONTENT

Functional:
* Knowledge of the information required, i.e., name of person, date, time, circumstances, etc.

Specific:
* Knowledge of the company's policy and guidelines on personnel injuries, illness or deaths.

TASK CODE: ENGINEER-IX.F.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	1	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Ascertains the accuracy of the master's entry in the rough log of any accident, injury or illness involving one's self in order to make additional comments in the log to clarify any errors.

PERFORMANCE STANDARDS

Descriptive:
* Accurately describes the circumstances surrounding an injury, illness, accident or death.
* Ensures the entry into the rough log is legible.

Numerical:
* In 100% of the cases, the rough log entry of an accident, injury, illness or death is accurate and legible.

TRAINING CONTENT

Functional:
* How to make an entry in a log.
* Understanding of the requirements for entries into the rough log.

Specific:
* Knowledge of the rough log kept on the OSV.

TASK CODE: ENGINEER-X.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	4B	50	2B	20	4	4	2	3

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Impart knowledge about specific features, characteristics and procedures of OSV operations.

TASK: Instruct the oiler (if assigned) through OJT (on-the-job training) in the operation, inspection, maintenance and repair of engineering equipment, machinery and spaces, by using own experience and judgement, company guidelines, training aids and written material, in order to develop skills above the minimum in the oiler.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately instructs/demonstrates the proper operation, inspection, maintenance and repair of engineering equipment.
* Stresses safety procedures and the wearing of protective clothing.
* Sensibly selects the time and place for OJT so as not to disrupt OSV operations.

Numerical:
* In 100% of the cases, OJT is provided to the oiler to develop skills above the minimum.
* In 100% of the cases, reinforces training by example.

TRAINING CONTENT

Functional:
* How to instruct/demonstrate various methods of operation, inspection, maintenance and repair of engineering equipment, tools and spaces.
* Knowledge of engineering equipment operation, inspection, maintenance and repair.
* Knowledge of the safety procedures required and protective equipment.

Specific:
* Knowledge of the oiler's skill level on own OSV.
* Knowledge of the company's guidelines on training, equipment operation manuals and other training aids as they pertain to the specific OSV.
* Knowledge of the operating maintenance and repair procedures on own OSV.

TASK CODE: ENGINEER-X.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	5	60	2A	10	4	4	2	3

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Impart knowledge about specific features, characteristics and procedures of OSV operations.

TASK: Trains/instructs the oiler (if assigned) in proper watchstanding procedures and accurate record keeping, using own judgement and experience within the established company policy in order to prepare the oiler for OSV operations and watches.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately demonstrates experience.
* Adequately instructs the oiler in his duties as a watchstander.
* Sensibly selects the time and place for OJT so as not to disrupt OSV operations.
* Stresses the importance of accurate log and record keeping.

Numerical:
* In 100% of the cases, training is provided the oiler.

TRAINING CONTENT

Functional:
* Knowledge of the oiler's duties and responsibilities and the training required to complete these tasks.
* Knowledge of engine room and OSV procedures.
* Ability to communicate duties and responsibilities to others.

Specific:
* Knowledge of the duties of the oiler on own OSV.
* Knowledge of company's policy regarding an oiler's duties and safety procedures.
* Knowledge of the oiler's background, skills and experience level.

TASK CODE: ENGINEER-X.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	4B	65	1A	5	4	4	2	3

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Impart knowledge about specific features, characteristics and procedures of OSV operations.

TASK: Trains/instructs other members of the OSV crew in damage control procedures and techniques and emergency response procedures either formally or during drills in order to better protect the individuals and improve the level of safety on own OSV.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately demonstrates and explains damage control techniques and emergency procedures.
* Sensibly selects the proper time and place for OJT so as not to disrupt OSV operations.

Numerical:
* In 100% of the cases, practical training is provided as required for all hands.

TRAINING CONTENT

Functional:
* Knowledge of damage control techniques and procedures and emergency response procedures.
* Knowledge of first aid procedures, equipment and manuals.
* How to use self-contained breathing apparatus.

Specific:
* Knowledge of each crew member's damage control responsibilities and the knowledge required for these duties.
* Knowledge of the background and capabilities of each crew member.

TASK CODE: ENGINEER-X.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	3B	80	1A	5	2	2	1	2

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conduct an ongoing safety program.

TASK: Stresses the importance of common sense and personal and preventive safety to the oiler and deckhands by instructing, correcting and by setting the example, in order to prevent personal injuries and identify potentially hazardous situations.

PERFORMANCE STANDARDS

Descriptive:
* Impresses the importance of being safety conscious to the oiler and deckhands.
* Reinforces personal and preventative safety measures by setting the example.

Numerical:
* In 100% of the cases, the safety consciousness of the oiler and deckhands is increased.
* In 100% of the cases, ensures safety procedures are followed.

TRAINING CONTENT

Functional:
* Understanding of the types of hazards common to OSV's.
* Knowledge of protective clothing, i.e., safety shoes, work gloves, safety goggles, ear protection, etc.

Specific:
* Knowledge of established company policy on personal and preventive safety.
* Knowledge of own OSV operations.

TASK CODE: ENGINEER-X.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	2	50	2A	30	1	2	2	2

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Conduct an ongoing safety program.

TASK: Reports to the master and takes prompt corrective action on potential safety hazards discovered, using necessary tools, materials and own experience, in order to prevent injuries.

PERFORMANCE STANDARDS

Descriptive:
* Remains alert to potential safety hazards.
* Promptly reports potential hazards to the master.
* Takes immediate corrective action to eliminate hazardous conditions/situations.

Numerical:
* In 100% of the cases, the master is made aware of potentially hazardous situations/conditions.
* In 100% of the cases, potential hazards are corrected.

TRAINING CONTENT

Functional:
* Understanding of the importance of reporting and correcting potentially hazardous conditions/situations.
* How to use hand and power tools.
* Knowledge of the characteristics of various materials, i.e., wood, aluminum, steel, etc.

Specific:
* Knowledge of OSV operations and the inherent dangers of offshore work.
* Knowledge of the types and locations of tools and materials for making repairs on own OSV.

TASK CODE: OILER (AE)-I.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2A	60	1	1	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Keeps working surfaces, OSV equipment, OSV engineering spaces, bulkheads, etc. clean and painted in order to prevent corrosion and general deterioration, using appropriate paints and corrosion inhibitors, surface preparations and application tools, and knowledge of how to prepare surfaces and mix and apply paints and other protective coverings, under the direction of the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Maintains working surfaces, equipment, spaces, etc. in good condition; stems corrosion before it becomes a serious problem.

Numerical:
* In 100% of the cases, always prepares for and uses the proper protective covering for the area being protected.
* In 100% of the cases, all tools and equipment are properly cleaned and stowed.

TRAINING CONTENT

Functional:
* How to use and maintain cleaning and painting supplies.
* How to properly prepare surfaces to accept protective coverings.
* How to properly mix and apply all types of paints and corrosion inhibitors.
* How to dispose of trash and oily rags.
* How to clean up oil from machinery and deck plates.

Specific:
* Knowledge of the types and locations on own OSV of paints, corrosion inhibitors, and all other types of protective coverings.

TASK CODE: OILER (AE)-I.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	2	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Changes oil and oil filters using hand tools, pumps and piping, buckets, etc. and cleans up any spills as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Oil and filters are changed properly.
* A minimum of oil is spilled.
* Piping and pumps are properly lined up to discharge oil to the dirty oil container.

Numerical:
* In 100% of the cases, proper filters and the correct new oil are used.
* In 100% of the cases, all oil spills are promptly cleaned up.
* In 100% of the cases, all fittings are properly installed.

TRAINING CONTENT

Functional:
* How to change filters.
* How to drain oil.
* How to clean up oil spills from deckplates, bilges and equipment.
* How to distinguish between the types and grades of oil used.

Specific:
* Knowledge of what filters are used on own OSV's equipment.
* Knowledge of how to drain and add oil on own OSV's equipment.
* Knowledge of how much oil to add to own OSV's equipment.
* Knowledge of how to check oil levels in own OSV's equipment.

TASK CODE: OILER (AE)-I.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	1A	85	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Operates valves and drain cocks to drain water from air receivers, P-tanks and various drain points in the air system at specified intervals or when directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Air receivers are blown down properly and efficiently.

Numerical:
* In 100% of the cases, all tanks are adequately drained at specified intervals or as directed.

TRAINING CONTENT

Functional:
* How to operate valves.
* How to judge when tanks are adequately blown down.

Specific:
* Knowledge of the location of drain valves on own OSV.
* Knowledge of the required intervals for draining water from the tanks on own OSV.

TASK CODE: OILER (AE)-I.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	1A	85	1.	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Operates valves and drain cocks to drain water from traps in the fuel system, fuel filters and fuel tanks when directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Properly drains water from the fuel system as necessary.
* A minimum of fuel is spilled.

Numerical:
* In 100% of the cases, all water is drained from the tanks, fuel filters and water traps.
* In 100% of the cases, spilled fuel is promptly and properly cleaned up.

TRAINING CONTENT

Functional:
* How to operate valves.
* How to drain water from tanks, filters and water traps.
* How to determine when water is adequately drained.
* Knowledge of the possible locations for water to collect in the fuel system.

Specific:
* Knowledge of the locations of drain connections on own OSV's fuel system.

TASK CODE: OILER (AE)-I.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Uses various hand tools as necessary to change or clean air filters on engines, ventilation systems or compressors when directed and under the supervision of the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Air filters are properly changed.

Numerical:
* In 100% of the cases, all air filters are properly changed as directed by the engineer.

TRAINING CONTENT

Functional:
* How to use hand tools.
* How to clean non-disposable filters.
* How to distinguish between non-disposable and disposable filters.

Specific:
* Knowledge of location of air filters on own OSV.
* Knowledge of how to remove and replace air filters on own OSV.
* Knowledge of how to clean non-disposable air filters on own OSV.
* Knowledge of intervals between changes on own OSV.
* Knowledge of which filters are used on own OSV.

TASK CODE: OILER (AE)-I.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	1A	5	2A	65	1	2	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Uses grease guns, oil, grease and necessary tools to grease or lubricate machinery as directed by and under the supervision of the engineer, according to operating manuals and/or standard practices.

PERFORMANCE STANDARDS

Descriptive:
* Machinery is properly greased or lubricated.
* The proper grease or lubicant is used.

Numerical:
* In 100% of the cases, all machinery is lubricated as directed by the engineer.

TRAINING CONTENT

Functional:
* How to use grease guns.
* How to apply grease.
* How to differentiate between various lubricants.

Specific:
* Knowledge of what equipment on own OSV requires greasing and the lubricant to be used.
* Knowledge of where and how much grease to apply to own OSV's machinery.

TASK CODE: OILER (AE)-I.A.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Operates valves, levers, hose, tools, etc. as necessary to shift (if duplex strainers) and clean strainers as indicated by deteriorating operating parameters to restore them to normal and as instructed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Strainers are properly and thoroughly cleaned.
* Duplex strainers are properly shifted.
* Deteriorating conditions indicating clogged strainers are promptly recognized.

Numerical:
* In 100% of the cases, all operating parameters affected by clogged strainers are restored to normal.

TRAINING CONTENT

Functional:
* How to clean strainers.
* How to shift strainers.
* How to isolate pressure from strainers.
* How to recognize deteriorating operating parameters.
* How to use hand tools.

Specific:
* Knowledge of the location and characteristics of own OSV's strainers.
* Knowledge of own OSV's systems and controls.

TASK CODE: OILER (AE)-I.A.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Uses necessary hand tools, rags, etc. to clean fuel oil purifier (if installed) to within operating limits listed in the equipment manual under the supervision of the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Efficiently cleans fuel oil purifier.

Numerical:
* In 100% of the cases, fuel oil purifier is cleaned within specified limits.
* In 100% of the cases, fuel oil purifier is reassembled correctly.

TRAINING CONTENT

Functional:
* How to clean fuel oil purifier.
* How to reassemble fuel oil purifier.

Specific:
* Knowledge of the location and special characteristics of own OSV's fuel oil purifying system.

TASK CODE: OILER (AE)-I.A.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	30	1A	5	2A	65	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Checks batteries and battery chargers for proper operation and condition and adds water, cleans terminals or replaces fuses as necessary or as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Checks for proper acid levels.
* Checks terminals for corrosion.
* Checks for proper charging operation.

Numerical:
* In 100% of the cases, all faults in operation due to low water, loose or corroded terminals, switcher or fuses and circuit breakers are indentified and corrected.

TRAINING CONTENT

Functional:
* Knowledge of safety precautions when working with batteries.
* How to add water to batteries.
* How to clean terminals.

Specific:
* Knowledge of the operating characteristics of own OSV's battery chargers and batteries.

TASK CODE: OILER (AE)-I.A.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	20	1A	5	1A	75	2	2	2	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Uses appropriate hand tools to replace defective batteries with new batteries.

PERFORMANCE STANDARDS

Descriptive:
* Batteries are properly replaced.
* Batteries are properly hooked up.

Numerical:
* In 100% of the cases, all batteries are properly secured.
* In 100% of the cases, all batteries are properly hooked up.

TRAINING CONTENT

Functional:
* Knowledge of the safety precautions when working with batteries.
* How to hook up batteries in parallel or series to get desired voltage or capacity.

Specific:
* Knowledge of location, voltage and capacity requirements for batteries on own OSV.

TASK CODE: OILER (AE)-I.A.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	30	1A	5	1A	65	1	2	2	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Takes lube oil samples following standard procedures and labels them following standard procedures, in order to provide samples for laboratory analysis as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Lube oil samples are taken properly without contamination.
* Lube oil samples are properly labeled.

Numerical:
* In 100% of the cases, lube oil samples are taken at the prescribed intervals.
* In 100% of the cases, lube oil samples are properly labeled according to standard procedures.

TRAINING CONTENT

Functional:
* How to take lube oil samples.
* How to transcribe engine hours to labels.

Specific:
* Knowledge of the procedures for taking and labeling lube oil samples on own OSV.

TASK CODE: OILER (AE)-I.A.12

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	20	1A	70	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned maintenance.

TASK: Cleans out dry bulk tanks of excess material using brooms,shovels, buckets and respirators in order to prepare the tanks for the next load of material under the supervision of the engineer and the mate.

PERFORMANCE STANDARDS

Descriptive:
* Dry bulk tanks are properly cleaned of excess material.
* No damage result from cleaning the dry bulk tank.

Numerical:
* In 100% of the cases, dry bulk tanks are cleaned out and dry before new material is pumped in.

TRAINING CONTENT

Functional:
* Knowledge of the configuration of the dry bulk tanks on own OSV.
* How to don and use a respirator.

Specific:
* Knowledge of the type and location of the dry bulk tanks on own OSV.

TASK CODE: OILER (AE)-I.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	2	20	1B	40	2	4	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and/or troubleshoots equipment to identify or isolate problems.

TASK: Uses circuit breakers, switches, ground detectors, etc. to locate the branch circuit containing a ground.

PERFORMANCE STANDARDS

Descriptive:
* Locates the branch circuit containing the ground.
* Does not secure power to any vital OSV control circuit while underway without permission of the master.

Numerical:
* In 100% of the cases, locates all grounds.

TRAINING CONTENT

Functional:
* How to check for grounds.
* How to isolate various circuits from the ground detector.
* How to operate circuit breakers, switches and ground detecting equipment.

Specific:
* Knowledge of the electrical distribution system on own OSV.

TASK CODE: OILER (AE)-I.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	75	2	10	1A	15	1	1	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and/or troubleshoots equipment to identify or isolate problems.

TASK: Turns dials, pushes buttons and observes responses of audio and visual signals on the alarm panel in the engine room, in order to verify that audio and visual alarms are working following standard procedures and informs the engineer of any malfunctions.

PERFORMANCE STANDARDS

Descriptive:
* Correctly and accurately reads the alarm panel.
* Promptly informs the engineer of any malfunctions.

Numerical:
* In 100% of the cases, all malfunctions in the audio and visual alarms are detected.
* In 100% of the cases, standard procedures are followed precisely.

TRAINING CONTENT

Functional:
* How to recognize between functioning and non-functioning alarms and indicators.

Specific:
* Knowledge of the procedures to test the alarm panel on own OSV.

TASK CODE: OILER (AE)-I.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	20	2	40	2A	40	2	2	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and/or troubleshoots equipment to identify or isolate problems.

TASK: Assists the engineer in troubleshooting equipment as directed in order to expidite or facilitate the engineer's efforts in locating problems.

PERFORMANCE STANDARDS

Descriptive:
* The engineer's instructions are carried out promptly and accurately.

Numerical:
* In 100% of the cases, assistance is provided as directed.

TRAINING CONTENT

Functional:
* How to operate various pieces of equipment.
* How to read gauges and dials.
* Understanding of the basic operation and troubleshooting procedures of various pieces of equipment.

Specific:
* Knowledge of how to operate equipment on own OSV.
* Knowledge of the location of tools and supplies on own OSV.

TASK CODE: OILER (AE)-I.B.3

TASK CODE: OILER (AE)-I.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	5	2A	75	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and/or troubleshoots equipment to identify or isolate problems.

TASK: Repairs leaks in hoses and tubing using hose clamps, repair kits, etc. or replaces defective hoses and tubing using flaring tools, hand tools, etc. as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Selects the correct size, grade and type of hose, tube or fitting.
* Correctly operates flaring tools, tube cutter, hand tools, etc.
* Correctly connects hoses or tube to the proper fittings.

Numerical:
* In 100% of the cases, all leaks in hose or tube are properly repaired.

TRAINING CONTENT

Functional:
* Knowledge of the pressure limits of hoses and tubing.
* How to use hand tools.
* How to recognize between various types of fittings (flare, pipe, compression, etc.).
* How to assemble hose or tube assembly.

Specific:
* Knowledge of the operating pressures on various systems aboard own OSV.
* Knowledge of the location of replacements identifed by the system.

TASK CODE: OILER (AE)-I.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	5	2A	75	2	2	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and/or troubleshoots equipment to identify or isolate problems.

TASK: Repairs leaks on equipment using hand tools, gaskets, sealant and pipe wrenches as directed by the engineer. (These repairs are limited to simple gasket changes and tightening that can be accomplished using wrenches, screwdrivers and pipe wrenches without torquing.)

PERFORMANCE STANDARDS

Descriptive:
* Properly selects or makes gaskets.
* Properly selects the correct sealant.
* Correctly reassembles equipment.

Numerical:
* In 100% of the cases, leaks are repaired.

TRAINING CONTENT

Functional:
* How to select gaskets using a manual.
* How to select gasket material and sealant.
* How to make gaskets.
* How to use wrenches, screwdrivers, pipe wrenches, etc.
* How to apply sealant.
* Standard uses of various gasket materials.

Specific:
* Knowledge of gaskets and equipment manuals on own OSV.

TASK CODE: OILER (AE)-I.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1A	5	2A	80	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and/or troubleshoots equipment to identify or isolate problems.

TASK: Tightens packing glands on valve stems, pumps, propeller shafts, rudder stocks, etc. as necessary to prevent (excessive) leakage and as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Packing is properly tightened without being overtightened.

Numerical:
* In 100% of the cases, leaking packing glands are repaired.

TRAINING CONTENT

Functional:
* How to tighen packing glands.
* Understanding of how packing glands work.

Specific:
* Knowledge of the location of packing glands and the type of packing used on own OSV.

TASK CODE: OILER (AE)-I.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	40	1A	5	2A	55	2	1	1	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and/or troubleshoots equipment to identify or isolate problems.

TASK: Using fuse pullers, screwdrivers, hand tools, etc. replaces fuses, indicator lightbulbs and motor overload heaters in accordance with standard procedures and general electrical safety procedures as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* The proper size fuse or heater is selected.
* The fuse or heater is installed correctly.
* The panel is reassembled correctly.

Numerical:
* In 100% of the cases, the proper size fuse or heater is installed correctly as directed.

TRAINING CONTENT

Functional:
* How to select the proper size fuse or heater.
* How to install fuses and heaters.
* Knowledge of the procedures for electrical safety.

Specific:
* Knowledge of what size and type of fuses and heaters are used on own OSV.

TASK CODE: OILER (AE)-I.C.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	20	2	40	2A	40	2	2	1	3

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Tests and/or troubleshoots equipment to identify or isolate problems.

TASK: Assists the engineer in making repairs as directed in order to expedite and facilitate the engineer's efforts in making repairs.

PERFORMANCE STANDARDS

Descriptive:
* The engineer's instructions are carried out promptly and accurately.

Numerical:
* In 100% of the cases, assistance is provided as directed.

TRAINING CONTENT

Functional:
* How to read gauges and dials.
* How to use hand tools.
* Understanding of the basic operation and repair procedures of various pieces of equipment and systems on an OSV.

Specific:
* Knowledge of how to operate equipment on own OSV.
* Knowledge of the location of tools, supplies and spares on own OSV.

TASK CODE: OILER (AE)-II.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	60	1A	5	1C	35	2	2	2	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Maintains engineering supplies and spares.

TASK: Ascertains fuel, oil, water and other liquid levels in tanks and, as directed, determines oil-water interface using sounding tapes, chalk, water finding paste, gauges, petcocks, sounding tables, etc. to determine the amount of fluids in each tank, the total aboard, etc. and records this data in the logs.

PERFORMANCE STANDARDS

Descriptive:
* Accurately ascertains liquid levels.
* Accurately ascertains the amount of water in oil tanks.
* Accurately records soundings in the log.

Numerical:
* In 100% of the cases, liquid levels are ascertained within reasonable accuracy limits considering tank design, gauge/tape accuracy and OSV and environmental conditions.

TRAINING CONTENT

Functional:
* How to use sounding tapes to determine liquid levels.
* How to use sounding tables to convert soundings into quantities.
* How to use gauges, sight glasses, petcocks, etc. typically installed on tanks to determine levels of liquid.

Specific:
* Knowledge of the location of sounding tubes, gauges, tank openings, etc. on own OSV.

TASK CODE: OILER (AE)-II.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
2	85	2	10	1A	5	2	2	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Maintains engineering supplies and spares.

TASK: Inventories spares and consumables (filters, rags, etc.) to determine if the amount aboard is sufficient for the scheduled operations and maintenance as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Spares and consumables are accurately inventoried.
* Gross deficiencies in spares and consumables are identified.

Numerical:
* In 100% of the cases, all items directed to be inventoried are precisely counted.

TRAINING CONTENT

Functional:
* How to inventory items.

Specific:
* Knowledge of the requirements for spares and consumables on own OSV.

TASK CODE: OILER (AE)-II.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2B	80	2	10	1A	10	2	2	1	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Maintains engineering supplies and spares.

TASK: Inventories non-consumable items (tools, welding equipment, hoses, etc.) to determine if they are in good condition and the quantity aboard as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Accurately inventories non-consumable items.
* Gross deficiencies in the quantity or condition of non-consumable items are identified.

Numerical:
* In 100% of the cases, all deficiencies in the condition of non-consumable items are noted.
* In 100% of the cases, all items are precisely inventoried as directed.

TRAINING CONTENT

Functional:
* How to inventory items.
* How to check the condition of various non-consumable items.

Specific:
* Knowledge of requirements for non-consumables on own OSV.

TASK CODE: OILER (AE)-II.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	3	3	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Ascertains flow patterns and manipulates apppropriate valves, switches, etc. as required in order to ensure the liquid transfer system is lined up to discharge to/from the desired tanks aboard as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Ensures that tank-fill system is lined up at the appropriate time prior to transfer.

Numerical:
* In 100% of the cases, the tank-fill system is lined up exactly as required and directed.

TRAINING CONTENT

Functional:
* How to operate valves, switches, etc. to line up liquid transfer system.

Specific:
* Knowledge of own OSV's specific arrangement of and procedure for liquid consumable cargo handling system.

TASK CODE: OILER (AE)-II.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	5	1A	75	2	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Installs portable containment under fuel/oil vents and connections as required by pollution regulations and as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Containment is properly located under vents and connections.

Numerical:
* In 100% of the cases, all connections requiring portable containment are provided with such as directed.

TRAINING CONTENT

Functional:
* Knowledge of the pollution regulation requirements for containment under vents and connections.

Specific:
* Knowledge of own OSV's venting arrangement.
* Knowledge of the containment requirements for own OSV.

TASK CODE: OILER (AE)-II.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	1C	90	2	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Assists the engineer in passing transfer hoses from the supply vessel and making appropriate attachments to the OSV's liquid manifolds/piping systems in order to prepare for loading/unloading of liquid consumables, e.g., potable water, drilling fluid, fuel oil, lube oil, etc.

PERFORMANCE STANDARDS

Descriptive:
* Properly passes transfer hoses from the supply vessel.
* Accurately and expeditiously connects hoses to applicable transfer system as directed.

Numerical:
* In 100% of the cases, hose connections are made in accordance with standard operating procedures for that system as directed.

TRAINING CONTENT

Functional:
* Understanding of the general procedures to pass hoses from supply vessels.
* How to connect transfer hoses for liquid consumables to the proper tanks and tank-filling systems via the manifolds/deck connections.

Specific:
* Knowledge of own OSV's specified procedures for liquid cargo handling operations.
* Knowledge of own OSV's liquid transfer system.

TASK CODE: OILER (AE)-II.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	10	2	55	1C	35	3	3	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Communicates with the rig/platform and deck personnel either directly or via the master by radio, walkie-talkies, etc. and directs deployment and attachment or retrieval of appropriate hoses and fittings in order to maintain contact during the transfer when acting as the person in charge of the transfer.

PERFORMANCE STANDARDS

Descriptive:
* Properly and clearly communicates all directions.

Numerical:
* In 100% of the cases, communication is maintained at all times.

TRAINING CONTENT

Functional:
* How to operate radio equipment, such as walkie-talkies, bridge-to-bridge radios, etc.

Specific:
* Knowledge of the transfer procedures for own OSV.
* Knowledge of the radio equipment, walkie-talkies, etc, on own OSV.

TASK CODE: OILER (AE)-II.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	15	1A	5	2A	80	1	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Assist the engineer in connecting/disconnecting ground wires, hoses, opens/closes valves and starts/stops pumps in the correct sequence in order to begin/stop the transfer.

PERFORMANCE STANDARDS

Descriptive:
* Ground wires and hoses are connected/disconnected, valves are opened/closed and pumps are started/stopped properly and in the correct sequence.

Numerical:
* In 100% of the cases, operations to begin/stop transfers are performed correctly and in the proper sequence.

TRAINING CONTENT

Functional:
* How to operate valves.
* How to and where to connect ground wires.
* How to operate pumps.
* How to connect hoses.
* Knowledge of the safety procedures for transfers of flammable liquids.

Specific:
* Knowledge of the characteristics of and transfer procedures for own OSV.

TASK CODE: OILER (AE)-II.B.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	1A	5	1C	55	1	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Continuously monitors tank levels using sounding tapes, gauges or toher tank gauging equipment.

PERFORMANCE STANDARDS

Descriptive:
* Tank level is accurately determined.

Numerical:
* In 100% of the cases, the tank level is known at all times within three inches while filling.

TRAINING CONTENT

Functional:
* How to sound tanks with sounding tapes.
* How to use other sounding equipment (if installed) such as gauge glasses or petcocks.

Specific:
* Knowledge of the arrangement and operation of own OSV's tank gauging system.

TASK CODE: OILER (AE)-II.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	1A	5	2C	85	2	2	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Operates the necessary equipment including motor controllers, engines, torque convertors, clutches, gear drives, valves, pressure regulators, etc. in order to start/stop pumps or to adjust pump speed, pressure or rate to the desired value as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately manipulates the proper equipment to effect control/reguation of the pumps.

Numerical:
* In 100% of the cases, all adjustments are made within specified operational limits.
* In 100% of the cases, properly adjusts the presure or rate without causing damage to the pump or associated systems or losing suction.

TRAINING CONTENT

Functional:
* How to operate valves, motor controllers, pressure regulators, etc.
* Knowledge of the relationships between pump speed, flow restrictions, pressure, rate and pump type.

Specific:
* Knowledge of the location and characteristics of own OSV's pumps.
* Knowledge of how to operate own OSV's pumps.

TASK CODE: OILER (AE)-II.B.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	80	1A	5	1A	15	2	2	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Visually monitors hoses, joints, vents and piping continuously during the transfer to detect and correct leaks and other problems as they occur.

PERFORMANCE STANDARDS

Descriptive:
* Remains alert to transfer conditions.
* Notes any leaks or other problems in a timely manner.

Numerical:
* In 100% of the cases, all leaks and other problems are promptly identified.

TRAINING CONTENT

Functional:
* How to recognize bad hoses, valves, piping, etc.

Specific:
* Knowledge of the characteristics and arrangements of own OSV's liquid handling system.

TASK CODE: OILER (AE)-II.B.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	2	2	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Continuously monitors the OSV's trim and list so that timely action may be taken and to safely load liquid commodities.

PERFORMANCE STANDARDS

Descriptive:
* Abnormal or dangerous lists and trims are promptly recognized.

Numerical:
* In 100% of the cases, all causes of trim or list are determined.

TRAINING CONTENT

Functional:
* How to recognize trim or list.
* Knowledge of stability to determine causes of list or trim such as free-surface effect and off-center weights.
* Knowledge of how trim and list affects tank venting, filling and suction.

Specific:
* Knowledge of the tank arrangement on own OSV.
* Knowledge of the stability characteristics of own OSV.

TASK CODE: OILER (AE)-II.B.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	20	2	40	2A	40	3	3	2	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Communicates with the other person in charge to slow the transfer when tanks are nearing full and/or when the specified amount of liquid commodity is transferred in order to prevent spillage.

PERFORMANCE STANDARDS

Descriptive:
* Information is passed to the other person in charge timely and accurately.
* Transfer is slowed at the proper time or at the request of the other person.

Numerical:
* In 100% of the cases, liquids are transferred without any spills.

TRAINING CONTENT

Functional:
* How to determine tank levels.
* Knowledge of when to slow transfers.
* How to operate valves, pumps, etc.
* Knowledge of the maximum tank levels on OSV's.
* How to operate radios (if applicable).
* How to read and determine amounts from in-line meters.

Specific:
* Knowledge of the maximum tank levels on own OSV's tanks.
* Knowledge of own OSV's specific arrangement of and operating procedures for liquid commodity handling system.

TASK CODE: OILER (AE)-II.B.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	1B	10	1B	80	2	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Assists the engineer in stopping pumps, securing valves, draining and disconnecting hoses in the proper secquence in order to secure from the transfer following standard procedures as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* All tasks are performed efficiently and accurately.

Numerical:
* In 100% of the cases, all tasks are promptly performed as directed.

TRAINING CONTENT

Functional:
* Knowledge of safety procedures when working under cranes.
* Knowledge of transfer securing procedures.
* How to disconnect and handle hoses.

Specific:
* Knowledge of the location and operation of own OSV's pumps and valve controls.
* Knowledge of securing procedures on own OSV.

TASK CODE: OILER (AE)-II.B.12

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	20	1A	60	1	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Uses rags, pumps, sorbent powder, etc. to clean up oil spills on deck as necessary and as directed by the engineer or the mate.

PERFORMANCE STANDARDS

Descriptive:
* Oil is promptly and thoroughly cleaned up.

Numerical:
* In 100% of the cases, all oil is removed from the decks.

TRAINING CONTENT

Functional:
* How to clean up oil from decks and equipment.
* How to dispose of oily rags.

Specific:
* Knowledge of the location of clean up materials on own OSV.
* Knowledge of how to dispose of oily rags on own OSV.

TASK CODE: OILER (AE)-II.B.13

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	60	1A	10	1A	30	2	2	2	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Transfers liquid commodities to/from the OSV.

TASK: Assists the engineer in verifying bill slips or vouchers by sounding tanks, reading meters, etc. as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Tanks are sounded promptly and accurately.
* Meters are read promptly and accurately.

Numerical:
* In 100% of the cases, all information requested is promptly and accurately provided.

TRAINING CONTENT

Functional:
* How to read meters.
* How to sound tanks.

Specific:
* Knowledge of the location of in-line meters on own OSV.
* Knowledge of how to sound own OSV's tanks.

TASK CODE: OILER (AE)-II.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	3	1	3

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Load dry bulk on/off the OSV.

TASK: Determines flow patterns and manipulates appropriate valves, valve operators, etc. within the dry bulk system in order to ensure that dry bulk may be loaded according to the operating manual under the direction and supervision of the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains flow patterns for fill and vent systems.
* Accurately operates appropriate valves, valve operators, etc. to precisely achieve required flow patterns.

Numerical:
* In 100% of the cases, correct flow patterns are ascertained exactly as required and directed.
* In 100% of the cases, valves, valve operators, etc. are operated such that the system is lined up in accordance with operating procedures and as directed.

TRAINING CONTENT

Functional:
* Understanding of the basic operating requirements in terms of filling and venting of P-tanks during loading.
* How to operate valves, valve actuators, etc. to line up various systems.
* Understanding of required flow patterns for fill lines and venting of P-tanks.

Specific:
* Knowledge of the arrangement and special characteristics of the P-tank fill and vent systems on own OSV.
* Knowledge of P-tank operating procedures on own OSV.

TASK CODE: OILER (AE)-II.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	20	1C	75	1	1	1	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Load dry bulk on/off the OSV.

TASK: Handles the bulk hoses provided by the mud truck and connects them to the proper vent and fill connections to make final hook-ups prior to loading as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* All hoses are handled properly.
* All connections are made properly to the correct fittings.

Numerical:
* In 100% of the cases, the hoses are connected to the proper fittings.

TRAINING CONTENT

Functional:
* How to handle hoses.
* How to connect transfer hoses to tank and tank filling systems via deck connections.

Specific:
* Knowledge of own OSV's specified procedures for dry bulk cargo handling operations.
* Knowledge of own OSV's dry bulk system.

TASK CODE: OILER (AE)-II.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	3	2	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Load dry bulk on/off the OSV.

TASK: Monitors the loading operation to ensure the OSV is being properly loaded as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* All hazardous lists and trims are timely recognized.
* Remains alert to any hazardous or improper loading operations.
* Remains alert to dusting from vents to indicate tanks are full and to minimize the loss of cargo.

Numerical:
* In 100% of the cases, all hazardous or improper conditions are timely recognized.

TRAINING CONTENT

Functional:
* How to recognize list or trim.
* Knowledge of basic stability to determine when list or trim conditions are hazardous and causes of lists and trims such as off-center weight, weights added or removed, etc.

Specific:
* Knowledge of the arrangement and loading procedures for own OSV's dry bulk systems.
* Knowledge of the stability characteristics of own OSV.

TASK CODE: OILER (AE)-II.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	10	1A	20	2A	70	2	1	1	2

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Load dry bulk on/off the OSV.

TASK: Assists the engineer in disconnecting and stowing hoses, caping and tagging vent caps, verifying vouchers, etc. to secure from loading operations as directed.

PERFORMANCE STANDARDS

Descriptive:
* Hoses are properly disconnected and stowed.
* Lines are properly capped and tagged.
* Valves are secured properly.
* Information requested for vouchers is promptly and accurately provided.

Numerical:
* In 100% of the cases, all steps to secure from loading are taken promptly and properly.

TRAINING CONTENT

Functional:
* How to handle hoses.
* How to operate valves.

Specific:
* Knowledge of arrangement and operating procedures of own OSV's dry bulk system.

TASK CODE: OILER (AE)-III/IV/V.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	4	3	3

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Determines flow patterns and manipulates appropriate valves, valve operators, etc. within starting, lube oil, fuel oil, air, cooling, and exhaust systems, etc. in order to ensure that systems will have air, fueloil, lube oil, water supply, and discharge as required for starting and/or continuous operation in accordance with machinery operation manuals and as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains flow patterns for all systems.
* Accurately operates appropriate valves, valve operators, etc. to precisely achieve reguired flow patterns required for each system as directed.

Numerical:
* In 100% of the cases, correct flow patterns are ascertained exactly as directed.
* In 100% of the cases, valves, valve operators, etc. are operated such that the system is line up in accordance with machinery operation manual specifications and/or limits/ranges as directed.

TRAINING CONTENT

Functional:
* Understanding of basic requirements in terms of supply, discharge and circulation for lube oil, fuel oil, air, cooling and exhaust systems for prime movers.
* How to operate valves, valve operators, etc. to line up various systems.
* Understanding of required flow patterns for air, lube oil, fuel oil, water system, etc. as applicable.

Specific:
* Knowledge of the arrangement and special characteristics of the starting, lube oil, fuel oil, air, cooling and exhaust systems on own OSV.
* Knowledge of own OSV's machinery/operations manuals from prime movers and auxiliary systems.

TASK CODE: OILER (AE)-III/IV/V.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2B	90	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Operates the appropriate control mechanisms, following standard procedures and the directions of the engineer, while simultaneously ensuring that all necessary ancillary systems (i.e., lube oil, fuel oil, coooling, exhaust, etc.) are operating, in order to start/stop the prime mover.

PERFORMANCE STANDARDS

Descriptive:
* Accurately and expeditiously manipulates start/stop control mechanisms as directed.

Numerical:
* In 100% of the cases, the prime mover is stopped/started when required and as directed.

TRAINING CONTENT

Functional:
* Understanding of the procedure to start/stop prime mover.
* How to operate various control mechanisms (mechanical, electrical, hydraulic, etc.) to start/stop prime movers.

Specific:
* Knowledge of the location and special characteristics of own OSV's prime movers and their start/stop features and controls.

TASK CODE: OILER (AE)-III/IV/V.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2B	85	2	2	2	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Operates miscellaneous auxiliary motors and pumps as required and directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Properly operates miscellaneous auxiliary motors and pumps as required and directed.

Numerical:
* In 100% of the cases, auxiliary motors are operated in accordance with operating instructions and as directed.

TRAINING CONTENT

Functional:
* How to operat (start/stop, line-up power to, open/close valves, etc.) other miscellaneous auxiliary motors and pumps as required and directed.

Specific:
* Knowledge of the location, availability and type of own OSV's auxiliary pumps and motors.
* Knowledge of operating instructions for those various pumps and motors.

TASK CODE: OILER (AE)-III/IV/V.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2B	90	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Engages and monitors friction clutches between prime movers and driven shaft, manipulating appropriate equipment and visually observing gauges and equipment responses, in order to transfer power from the prime movers to the generators, compressors, pumps, shafts, etc. as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Accurately reads and surveys all instrumentation.
* Expeditiously and accurately manipulates friction clutches to effect engagement/disengagement of driven loads.
* Properly determines that friction clutches and driven load are operating as required and directed.

Numerical:
* In 100% of the cases, readings and observations are within specified limits.
* In 100% of the cases, friction clutches are operated according to specifications and directives.

TRAINING CONTENT

Functional:
* How to engage/disengage friction clutches between prime movers and driven shafts.
* Understanding of the function of friction clutches and how they operate.
* Understanding of the principles of friction clutches and the various options of their activation through spring, hydraulic or pneumatic forces.
* Understanding of power take-off applications and options afforded by friction clutches.

Specific:
* Knowledge of the special characteristics of own OSV's friction clutches and driven loads including partial slippage tolerance at partial loads.

TASK CODE: OILER (AE)-III/IV/V.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2C	90	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Engages and monitors hydraulic (fluid) couplings or hydraulic torque convertors between prime movers and driven shaft, manipulating appropriate equipment and visually observing gauges and equipment responses, in order to transfer power from the prime mover to the generators, compressors, pumps, shafts, etc. as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Accurately reads and surveys all instrumentation.
* Expeditiously and accurately manipulates hydraulic coupling or torque converter to effect engagement/disengagement of driven loads.
* Properly determines that hydraulic couplings or torque converters and driven loads are operating as required and directed.

Numerical:
* In 100% of the cases, readings and observations are within specified limits.
* In 100% of the cases, couplings/converters are operating according to specifications and directions.

TRAINING CONTENT

Functional:
* How to engage/disengage hydraulic couplings or torque converters between prime movers and driven shafts.
* Understanding of the function of the hydraulic couplings or torque converters and how they operate.
* Understanding of how hydraulic couplings or torque converters transmit prime mover power without mechanical connections and absorb shock loads and torsional vibrations.
* Understanding of the principle of slippage and how it may be used for braking and for hovering loads as in crane operations.

Specific:
* Knowledge of the special characteristics of own OSV's hydraulic couplings or torque converters and driven loads.

TASK CODE: OILER (AE)-III/IV/V.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2C	90	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Engages and monitors gear drives between prime movers and driven shafts, manipulating appropriate equipment and visually observing gauges and equipment responses, in order to transfer power from the prime mover to generators, compressors, pumps, safts, winches, etc. as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Accurately reads and surveys all instrumentation.
* Expeditiously and accurately manipulates drive gear equipment to effect engagement of driven loads.
* Properly determines that drive gears and driven loads are operating as required and directed.

Numerical:
* In 100% of the cases, readings and observations are within specified limits.
* In 100% of the cases, drive gears are operating according to specifications and directions.

TRAINING CONTENT

Functional:
* How to engage drive gears between prime movers and driven shafts.
* Understanding of the function of drive gears and how they operate.
* Understanding of speed change gearing operation and the need for such, i.e., higher torque.
* Understanding of reverse gearing operations using constant mesh and clutches for rotational direction changes.

Specific:
* Knowledge of the special characteristics of own OSV's drive gears.

TASK CODE: OILER (AE)-III/IV/V.A.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	55	1A	5	2A	40	3	4	3	3

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Surveys and reads various generator/switchboard instrumentation ascertaining generator speed, voltage, amperage, output, and if alternating current, phase, frequency and power factor, and makes necessary adjustments in order to ensure that the generator is functioning properly prior to placing generator under load as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains generator speed, voltage, amperage, output, phase (if alternating current, frequency (if alternating current), and power factors (if alternating current).
* Accurately makes adjustments to bring generator to proper operating condition prior to placing under load as directed.

Numerical:
* In 100% of the cases, generator speed, voltage, amperage, output, phase (if alternating current), frequency (if alternating current), and power factor (if alternating current) are within, or adjusted within allowable limits as directed.

TRAINING CONTENT

Functional:
* How to determine generator speed, voltage, amperage, ouput, phase (if alternating current), frequency (if alternating current), and power factor (if alternating current).
* How to regulate various controls to adjust generator to proper condition prior to placing under load.

Specific:
* Knowledge of the specific characteristics and requirements of own OSV's generator and switchboard.

TASK CODE: OILER (AE)-III/IV/V.A.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	50	1A	5	2B	45	3	4	3	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Ascertains electrical load condition (i.e., surveys and reads appropriate switchboard instrumentation) and closes generator circuit breaker on switchboard, in order to connect/disconnect generator to/from the main bus bars and distribute power to loads as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains the electrical load condition.
* Properly connects/disconnects the generator to the distribution board as directed.

Numerical:
* In 100% of the cases, the generator is connected/disconnected to the switchboard without interrupting the electrical load as directed.

TRAINING CONTENT

Functional:
* How to read switchboard instrumentation to ascertain electrical load conditions.
* How to connect/disconnect generator to switchboard.
* Understanding of the relationship between load conditions and generator capacities to preclude initial generator "hunting" or tripout.

Specific:
* Knowledge of the special characteristics and arrangements of own OSV's switchboards and generators.

TASK CODE: OILER (AE)-III/IV/V.A.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	50	1A	5	2B	45	3	4	3	3

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Ascertains electrial load condition (i.e., surveys and reads appropriate instrumentation), monitors synchroscope, makes necessary adjustments for correct rotation speed and phasing, and closes generator circuit breakers on switchboard in order to connect generators to the main bus bars in parallel with other generators and distribute power jointly to loads, when applicable under the direction of the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains the electrical load condition.
* Establishes that rotation speed and phasing are compatible for paralleling.
* Properly connects generators to switchboard in parallel.

Numerical:
* In 100% of the cases, the generator is connected to the switchboard without interrupting the electrical load or having one or more generators "run away" with the load as directed.

TRAINING CONTENT

Functional:
* How to read switchboard instrumentation to ascertain electrical load condition.
* How to interpret synchroscope for rotation speed and phasing.
* How to adjust control equipment to manipulate rotation speed and phasing.
* How to connect generator to switchboard.
* Understanding of the relationships between load condition and generator capacity to preclude initial generator "hunting" or tripout.
* Understanding of the relationships between rotation speed and phasing for generator paralleling.

Specific:
* Knowledge of the special characteristics and arrangement of own OSV's switchboard(s) and AC generators.

TASK CODE: OILER (AE)-III/IV/V.A.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2B	85	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Operates appropriate control mechanisms and visually observes gauges and equipment responses in order to adjust the speed of the prime movers or generator frequency to the desired value as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately adjusts the prime mover to the desired value.
* Accurately reads and surveys all instrumentation.

Numerical:
* In 100% of the cases, prime movers are operated at the desired values as directed.
* In 100% of the cases, readings and observations are within specified limits.

TRAINING CONTENT

Functional:
* How to operate various control mechanisms to adjust the speed of the prime movers or generator frequency.
* How to differentiate between proper and improper readings and responses.

Specific:
* Knowledge of the specific characteristics and location of own OSV's prime mover control mechanisms and limits of responses.

TASK CODE: OILER (AE)-III/IV/V.A.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2C	85	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Operates necessary equipment including motor controllers, engines, torque converters, clutches, gear drives, valves, pressure regulators, etc. in order to adjust pump speed, pressure or rate to the desired value as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* expeditiously and accurately manipulates the proper equipment to effect control/regulation of the pumps.

Numerical:
* In 100% of the cases, all adjustments are made within the specified operating limits as directed.
* In 100% of the cases, properly adjusts pressure or rate without causing damage to the pump or associated systems, or losing suction as directed.

TRAINING CONTENT

Functional:
* How to operate valves, motor controllers, pressure regulators, etc.
* Knowledge of the relationships between pump speed, flow restrictions, pressure rate and pump type.

Specific:
* Knowledge of the location and characteristics of own OSV's pumps.

TASK CODE: OILER (AE)-III/IV/V.A.12

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2C	85	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Operates necessary equipment including rheostats, voltage regulators, synchroscopes, circuit breakers, bus transfer switches, emergency trips, etc., in order to control/regulate generators and transfer/disconnect/connect electrical loads as required.

PERFORMANCE STANDARDS

Descriptive:
* Expeditiously and accurately manipulates equipment to effect control/regulation of generators.
* Properly transfers, adds, or sheds loads to/from switchboards by manipulating bus transfer switches, emergency trips, circuit breakers, etc.

Numerical:
* In 100% of the cases, all adjustments are made within specified operating limits.
* In 100% of the cases, various power sources and loads are transferred, added, or shed as required without trippping load or interrupting power supply.

TRAINING CONTENT

Functional:
* How to operate rheostats, synchroscopes, voltage regulators, circuit breakers, bus transfer switches, emergency trips, etc.

Specific:
* Knowledge of the location and special characteristics of own OSV's switchboard mounted control, regulation, transfer and connect/disconnect equipment.

TASK CODE: OILER (AE)-III/IV/V.A.13

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	45	1A	5	2C	50	3	3	2	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Ascertains liquid levels in bilges, and as required, manipulates appropriate equipment, (e.g., opens/closes valves, starts pumps, etc.) in order to pump bilges free of all liquids without pumping any oil or other

PERFORMANCE STANDARDS

Descriptive:
* Properly and expeditiously keeps bilges free of liquids.
* Correctly manipulates equipment to pump bilges.
* Does not cause any oil or other hazardous polluting substance to be discharged overboard from bilge pumping operation.

Numerical:
* In 100% of the cases, bilges are pumped dry with no discharge of oil or other hazardous polluting substance overboard.

TRAINING CONTENT

Functional:
* Understanding of of bilge systems.
* How to start/stop bilge pumps.
* How to open/close appropriate bilge suction valves, pump inlet and discharge valves, overboard discharge valves, etc.
* Understanding of when not to pump bilges contaminated with oil or other hazardous polluting substance overboard.
* How to direct bilge pump discharge to the appropriate holding tank when necessary.

Specific:
* Knowledge of the special characteristics of the bilge system on own OSV.

TASK CODE: OILER (AE)-III/IV/V.A.14

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	85	1A	5	1A	10	2	2	2	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Operates prime movers and auxiliary systems.

TASK: Keeps a written record of pertinent machinery operating data, e.g., various pressures, temperatures, flow rates, etc., and all maintenance done on aboard machinery in order to maintain machinery logs and to ensure that all machinery is routinely and adequately serviced.

PERFORMANCE STANDARDS

Descriptive:
* Accurately maintains record of all machinery operating data and all machinery maintenance.

Numerical:
* In 100% of the cases, all required operating data of and maintenance on machinery is logged.

TRAINING CONTENT

Functional:
* How to read various instrumentation for obtaining machinery operating data (e.g., various pressures, temperatures, flow rates, etc.).
* How to transcribe those quantitative data to logs.
* Understanding of the maintenance required on aboard machinery.
* Understanding of how to reflect actual maintenance in written form.

Specific:
* Knowledge of the requirements for machinery maintenance on own OSV.
* Knowledge of own OSV's machinery operating data logging requirements.

TASK CODE: OILER (AE)-III/IV/V.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3A	60	1A	5	1C	35	2	2	2	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Ascertains fuel, oil, water, and other liquid levels in tanks and, as necessary, determines oil-water interface using sounding tapes, chalk, water finding paste, gauges, petcocks, sounding tables, etc., to determine the amount of fluids in each tank, the total aboard, usage, etc. and records these data in the logs.

PERFORMANCE STANDARDS

Descriptive:
* Accurately ascertains liquid levels.
* Accurately ascertains the amount of water in the oil tanks.
* Accurately records soundings in the log at required intervals.
* Accurately determines usage.

Numerical:
* In 100% of the cases, liquid levels are ascertained within reasonable accuracy limits considering tank design and gauge/tape accuracy and OSV and environmental conditions.

TRAINING CONTENT

Functional:
* How to calculate usage from soundings and meter readings.
* How to use sounding tapes to determine liquid levels.
* How to use sounding tables to convert soundings to quantities desired.
* How to use gauges, sight glasses, petcocks, etc., typically installed on tanks to determine levels.
* How to convert from units of quantities on sounding tables to the units desired.

Specific:
* Knowledge of the location of sounding tubes, gauges, tank openings, etc., on own OSV.

TASK CODE: OILER (AE)-III/IV/V.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	80	1A	5	1C	15	2	2	2	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Visually observes the appropriate gauging (monitoring) devices and machinery itself for temperature, pressure, and various flow conditions of all prime mover systems, including lube oil, fuel oil, air, cooling and exhaust systems, in order to ensure the proper functioning of the prime mover and associated auxiliary systems.

PERFORMANCE STANDARDS

Descriptive:
* Correctly surveys and reads all instrumentation.

Numerical:
* In 100% of the cases, readings and observations are within accepted limits in accordance with specified deviations and the particular situation.

TRAINING CONTENT

Functional:
* How to monitor temperature, pressure, and various flow indicators typically found associated with diesel machinery.
* How to recognize and differentiate between proper readings.
* How to recognize between proper and improper operation.

Specific:
* Knowledge of the location and special characteristics of own OSV's particular indicators/gauges.
* Knowledge of the operating characteristics of own OSV's prime movers and auxiliary systems.

TASK CODE: OILER (AE)-III/IV/V.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	65	1A	5	1C	30	3	3	3	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Monitors all switchboard instrumentation including voltage, wattage, amperage, and, if alternating current, power factor, phase, and frequency and ground detectors in order to ensure that generators are operating as required.

PERFORMANCE STANDARDS

Descriptive:
* Accurately surveys and reads all instrumentation.

Numerical:
* In 100% of the cases, readings and observations are within specified limits.

TRAINING CONTENT

Functional:
* How to compare and assess actual readings and desired readings of generators and rectifier operation instrumentation.

Specific:
* Knowledge of the arrangement of and special characteristics of own OSV's switchboard(s) generating equipment.

TASK CODE: OILER (AE)-III/IV/V.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	80	1A	5	1C	15	1	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Checks the quality and quanitity of oil in the engines or other equipment using dipsticks, gauges or sight glasses as applicable to determine if oil needs to be added or to identify potential problems.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains the level of oil in the machinery and determines if this level is sufficient.
* Correctly ascertains if the quality of the oil is satisfactory.

Numerical:
* In 100% of the cases, the amount of and condition of the oil is correctly ascertained.
* In 100% of the cases, correctly ascertains if oil needs to be added.

TRAINING CONTENT

Functional:
* How to use a dip stick, sight glasses, etc., to determine oil level.
* How to recognize "good" oil from "bad" oil.
* Knowledge of the potential causes of "bad" oil.
* General knowledge of equipment requirements for oil.

Specific:
* Knowledge of the location of oil gauging devices on equipment installed on own OSV.
* Knowledge of the condition the equipment on own OSV must be in (stopped, ilde, running, etc.) to take accurate readings.

TASK CODE: OILER (AE)-III/IV/V.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	80	1A	5	1C	15	1	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Checks the qualilty and quantity of the water and other fluids to determine if the level is sufficient or to identify potential problems.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains the level of water or other fluid and determines if this level is sufficient.
* Correctly identifies any degradation of the quality of the water or other fluid in the equipment.

Numerical:
* In 100% of the cases, correctly ascertains the amount and condition of the water or other fluid.
* In 100% of the cases, correctly ascertains if water or other fluid needs to be added.

TRAINING CONTENT

Functional:
* How to use various gauging devices normally installed on engines and other OSV equipment.
* How to recognize between contaminated and uncontaminated water and other fluids.
* Knowledge of the potential causes of contamination.
* General knowledge of the equipment requirements for water and other fluids.

Specific:
* Knowledge of the location of oil gauging devices on equipment on own OSV.
* Knowledge of the condition equipment on own OSV must be in (stopped, idle, running, etc.) to take accurate readings.

TASK CODE: OILER (AE)-III/IV/V.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	4	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Remains alert to sounds from the machinery that are out of the ordinary and may indicate a malfunction and informs the engineer of any abnormal sounds.

PERFORMANCE STANDARDS

Descriptive:
* Correctly distinguishes unusual noises from normal operating sounds.

Numerical:
* In 100% of the cases, correctly identifies all unusual noises.
* In 100% of the cases, the engineer is informed of all unusual noises promptly.

TRAINING CONTENT

Functional:
* Knowledge of the potential causes of noises from machinery.
* Knowledge of the typical faulty noises.

Specific:
* Knowledge of the usual operating sound of various machinery on own OSV under various load conditions.

TASK CODE: OILER (AE)-III/IV/V.B.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	1A	5	2A	55	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Physically inspects operating machinery in order to check bearing temperature, following standard procedures, and as necessary, takes preventive measures to control bearing temperature or minimize damage, e.g., adds oil, increases cooling medium flow rate, secures units, etc.

PERFORMANCE STANDARDS

Descriptive:
* Properly and expeditiously checks bearing temperatures of machinery.
* Takes correct preventive measures to control bearing temperature.

Numerical:
* In 100% of the cases, bearing temperatures are maintained within allowable limits.

TRAINING CONTENT

Functional:
* How to ascertain bearing temperatures.
* Understanding of the method(s) to control bearing temperatures, i.e., adds lubricant, increases cooling medium flow rate, etc.

Specific:
* Knowledge of the location and special characteristics of own OSV's machinery bearings and bearing lubrication and cooling systems.

TASK CODE: OILER (AE)-III/IV/V.B.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	55	1A	5	2A	40	2	2	1	1

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Physically inspects all machinery, piping and the OSV for leaks or obvious physical damage or wear.

PERFORMANCE STANDARDS

Descriptive:
* Locates leaks, damage or wear promptly and accurately.

Numerical:
* In 100% of the cases, locates all leaks or physical damage.

TRAINING CONTENT

Functional:
* Knowledge of the material being contained and its physical characteristics.
* Knowledge of the usual configuration of the equipment, engines and their various components (i.e., gears, levers, wheels, valves, rails, etc.) on own OSV.

Specific:
* Knowledge of the specific configuration of the equipment on own OSV.
* Knowledge of what material is conveyed in the particular system in question.

TASK CODE: OILER (AE)-III/IV/V.B.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	40	2	20	2B	40	2	3	1	2

GOAL: Operate and monitor machinery plant in order to ensure continuous availability of power at required levels for all OSV operations.

OBJECTIVE: Check and monitor equipment and systems to identify faulty or abnormal conditions.

TASK: Evaluates the data obtained about abnormal conditions and either informs the engineer or takes appropriate casualty control actions when conditions are immediately detrimental to the machinery in order to minimize the damage and keeps the engineer informed of the condition of the machinery plant.

PERFORMANCE STANDARDS

Descriptive:
* Takes the appropriate course of action to minimize any damage.
* Receives permission from the master before taking any action when the situation dictates (approching a rig/platform, docking, etc.)

Numerical:
* In 100% of the cases, informs the engineer of all unusual conditions.

TRAINING CONTENT

Functional:
* Knowledge of machinery requirements for various fluids, such as fuel, water, oil, air, etc.
* Knowledge of what conditions are immediately detrimental to the machinery and those which are not as serious.

Specific:
* Knowledge of own OSV's operating parameters and requirements for various fluids.
* Knowledge of how to use the various machinery controls on own OSV.

TASK CODE: OILER (AE)-VI.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	30	2	10	2B	60	3	4	2	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer liquid commodities to the rig/platform safely and efficiently without spills in accordance with regulations and company policy.

TASK: Tasks are the same as for OILER (AE)-II.B.

PERFORMANCE STANDARDS

Descriptive:
See the requirements listed under OILER (AE)-II.B.

Numerical:
* In 100% of the cases, the requirements of OILER (AE)-II.B are met.

TRAINING CONTENT

Functional:
* How to perform the tasks listed for OILER (AE)-II.B.

Specific:
* Knowledge of the tasks and requirements of OILER (AE)-II.B as they apply to own OSV.

TASK CODE: OILER (AE)-VI.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	3	1	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Determines flow patterns and manipulates appropriate valves, valve operators, etc. within the dry bulk system in order to ensure that dry bulk may be off-loaded in accordance with the operating manuals.

PERFORMANCE STANDARDS

Descriptive:
* Correctly ascertains flow patterns for dry bulk discharge system.
* Accurately operates appropriate valves, valve operators, etc. to precisely achieve required flow patterns.

Numerical:
* In 100% of the cases, correct flow patterns are ascertained exactly as required.
* In 100% of the cases, valves, valve operators, etc. are operated such that the system is lined up in accordance with operating procedures.

TRAINING CONTENT

Functional:
* Knowledge of the basic operating requirements in terms of pressurizing and discharging of P-tanks during off-loading.
* How to operate valves, valve actuators, etc. to line up various systems.
* Knowledge of the required flow patterns for pressurizing and discharging of P-tanks.

Specific:
* Knowledge of the arrangement and special characteristics of the P-tank air and discharge systems on own OSV.
* Knowledge of the P-tank operating procedures on own OSV.

TASK CODE: OILER (AE)-VI.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	1C	90	2	1	1	2

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Assists the engineer in passing transfer hoses from the OSV and making the appropriate attachments to the OSV's dry bulk manifolds/piping systems in order to prepare for unloading of dry bulk.

PERFORMANCE STANDARDS

Descriptive:
* Properly passes the transfer hoses from the OSV.
* Accurately and expeditiously connects the hoses to the applicable transfer system.

Numerical:
* In 100% of the cases, hose connections are made in accordance with standard operating procedures for that system.
* In 100% of the cases, all directions are promptly carried out.

TRAINING CONTENT

Functional:
* Understanding of the general procedures to pass hoses from supply vessels.
* How to connect transfer hoses for dry bulk to proper tanks and off-loading systems via manifolds/deck connections.

Specific:
* Knowledge of own OSV's specific procedures for dry bulk handling operations.
* Knowledge of own OSV's dry bulk transfer system.

TASK CODE: OILER (AE)-VI.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	10	2	55	1C	35	3	3	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Communicates with the rig/platform personnel either directly or via the master by radio, walkie-talkies, etc., and directs deployment and attachment or retrieval of the appropriate hoses and fittings in order to maintain contact during the transfer when acting as the person in charge of the transfer.

PERFORMANCE STANDARDS

Descriptive:
* Properly and clearly communicates all directions.
* Accurately and expeditiously deploys and attaches or retrieves appropriate hoses and fittings.

Numerical:
* In 100% of the cases, the proper hoses are passed in the prescribed manner for the particular transfer evolution without damage to the rig/platform or the OSV or personnel injuries.
* In 100% of the cases, communications are maintained at all times.

TRAINING CONTENT

Functional:
* Understanding of the general procedures to pass hoses to/from the rig/platform.
* Understanding of the safety procedures when working under cranes on moving decks.
* How to operate radio equipment such as walkie-talkies, bridge-to-bridge radios, etc.

Specific:
* Knowledge of the particular procedures and practices for passing hoses to/from rigs/platforms.
* Knowledge of radio equipment, walkie-talkies, etc. provided on own OSV.
* Knowledge of the transfer procedures on own OSV.

TASK CODE: OILER (AE)-VI.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2A	90	2	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Operates the appropriate controls, valves, etc. to start the air compressor and pressurize the P-tank after venting compressor discharge to the atmosphere according to standard operating procedures as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Air compressor is started and operated properly.
* Valves and valve actuators are operated precisely and properly.
* Air is vented to the atmosphere until dry.

Numerical:
* In 100% of the cases, air is vented to the atmosphere for the amount of time specified in the operating procedures.
* In 100% of the cases, the air compressor is operated in accordance with operating procedures.
* In 100% of the cases, the P-tank is pressurized to the specified pressure.

TRAINING CONTENT

Functional:
* How to operate valves, valve actuators, etc.
* How to operate air compressors.
* Knowledge of the operating requirements and procedures for dry bulk systems.

Specific:
* Knowledge of the operating requirements and procedures for the dry bulk system on own OSV.
* Knowledge of own OSV's air system piping and controls.

TASK CODE: OILER (AE)-VI.B.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	2B	90	1	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Operates the appropriate levers, valve actuators, controls, etc. located on the weather deck to discharge the dry bulk according to standard procedures when acting as the person in charge of the transfer.

PERFORMANCE STANDARDS

Descriptive:
* Controls and valve actuators are operated properly, accurately and efficiently.
* Air jet is activated prior to opening discharge valve.

Numerical:
* In 100% of the cases, discharge procedures are followed precisely.

TRAINING CONTENT

Functional:
* Knowledge of the dry bulk transfer procedures.
* How to operate valves, valve actuators, controls, etc.

Specific:
* Knowledge of own OSV's dry bulk system and controls.
* Knowledge of the operating procedures to discharge dry bulk on own OSV.

TASK CODE: OILER (AE)-VI.B.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2C	85	2	2	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Monitor the dry bulk system pressure and adjust the air jet as necessary to maintain system pressure at the prescribed levels and to prevent clogging and fluidize the cargo, when acting as the person in charge of the transfer.

PERFORMANCE STANDARDS

Descriptive:
* System pressure is accurately ascertained.
* Air jet is properly operated to maintain system pressure at the prescribed levels.

Numerical:
* In 100% of the cases, system pressure is continuously monitored.
* In 100% of the cases, system pressure is maintained at the prescribed level at all times.

TRAINING CONTENT

Functional:
* How to read gauges.
* Knowledge of the dry bulk transfer operation and pressure regulation during transfer operations.
* How to use valve actuators.

Specific:
* Knowledge of the location and operation of valve actuators and gauges on own OSV.
* Knowledge of the dry bulk transfer operation and pressure regulation on own OSV.

TASK CODE: OILER (AE)-VI.B.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	90	1A	5	1A	5	3	4	1	3

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Monitors the transfer operation to detect and correct any hazardous or abnormal conditions, such as abnormal lists or trims, clogged hoses, leaking connections, etc. when acting as the person in charge of the transfer.

PERFORMANCE STANDARDS

Descriptive:
* Hazardous or abnormal conditions are recognized and the proper corrective action is promptly and effectively taken.

Numerical:
* In 100% of the cases, all abnormal or hazardous lists or trims are detected and the proper action to correct this is taken.
* In 100% of the cases, all problems with the transfer are detected and corrected.

TRAINING CONTENT

Functional:
* Knowledge of stability to recognize when trim, list, period of roll, etc, indicate a hazardous condition.
* Knowledge of the dry bulk transfer operation.
* How to correct the usual problems associated with dry bulk transfers.

Specific:
* Knowledge of the dry bulk transfer operation and system on own OSV.
* Knowledge of the stability characteristics of own OSV.

TASK CODE: OILER (AE)-IV.B.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	5	2B	65	2	2	1	2

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Blow down the P-tank to ensure all cargo has been transferred using standard procedures and own judgment that the tank is adequately emptied when acting as the person in charge of the transfer.

PERFORMANCE STANDARDS

Descriptive:
* P-tank is adequately emptied.
* P-tank is properly blown down.

Numerical:
* In 100% of the cases, the P-tank is emptied to within one sack of cargo.
* In 100% of the cases, the P-tank is blown down according to standard procedures.

TRAINING CONTENT

Functional:
* How to blow down a P-tank.
* Knowledge of the P-tank operation as to what is happening inside the tank during completion of the transfer and during blowing down.

Specific:
* Knowledge of the blow down procedures on own OSV.
* Knowledge of the P-tank operation on own OSV.

TASK CODE: OILER (AE)-VI.B.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	2A	85	2	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Secure the compressor and bleed the pressure of the P-tank by operating the appropriate valves, controls, etc., according to standard procedures as directed by the engineer.

PERFORMANCE STANDARDS

Descriptive:
* Compressor is properly secured.
* P-tank is properly depressurized.
* All valves are returned to their closed position or set-up to receive cargo.

Numerical:
* In 100% of the cases, operating procedures are followed precisely.

TRAINING CONTENT

Functional:
* How to operate valves, valve actuators, controls, etc.
* Knowledge of operational and safety procedures to bleed air from the P-tanks.

Specific:
* Knowledge of how to secure the compressor on own OSV.
* Knowledge of how to bleed air pressure from the P-tanks on own OSV.

TASK CODE: OILER (AE)-VI.B.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	20	1A	75	2	2	1	2

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Transfer dry bulk to the rig/platform safely and efficiently.

TASK: Assists the engineer in retrieving/disconnecting and stowing the transfer hoses in order to secure from the transfer operation as directed.

PERFORMANCE STANDARDS

Descriptive:
* Hoses are properly retrieved from the rig/platform.
* Hoses are properly disconnected and stowed.
* Hoses are handled properly.

Numerical:
* In 100% of the cases, hoses are retrieved, disconnected and stowed according to the standard procedures.

TRAINING CONTENT

Functional:
* Understanding of the general procedures to retrieve hoses from rigs/platforms.
* How to handle transfer hoses.
* How to disconnect and stow hoses.

Specific:
* Knowledge of own OSV's specified procedures for cargo handling operations.

TASK CODE: OILER (AE)-VII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	20	2	40	2A	40	2	2	1	3

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Ensure all anchor handling equipment is operating correctly.

TASK: Assists the engineer in performing operational checks on the anchor handling equipment similiar to those performed in OILER (AE)-III/IV/V.B and in performing any necessary repairs in order to ensure the equipment will operate as required.

PERFORMANCE STANDARDS

Descriptive:
* All anchor handling equipment is checked properly and efficiently as directed by the engineer.

Numerical:
* In 100% of the cases, all tasks that are directed to be performed are done promptly and properly.

TRAINING CONTENT

Functional:
* How to start and check anchor handling equipment for proper operation.
* Understanding of winch controls normally installed and their operation.
* How to operate hydraulic system controls.
* How to check and add oil.

Specific:
* Knowledge of the operating procedures and characteristics of own OSV's anchor handling equipment and components.

TASK CODE: OILER (AE)-VII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	30	2	20	2B	50	3	3	2	3

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Operate and monitor machinery plant in order to ensure continuous availability of power at the required levels.

TASK: Tasks are the same as for OILER (AE)-III/IV/V.

PERFORMANCE STANDARDS

Descriptive:
* All tasks listed under OILER (AE)-III/IV/V are performed accurately and efficiently.

Numerical:
* In 100% of the cases, all the tasks listed under OILER (AE)-III/IV/V are performed.

TRAINING CONTENT

Functional:
* How to perform all the tasks listed in OILER (AE)-III/IV/V.

Specific:
* Knowledge of the tasks required in OILER (AE)-III/IV/V as they apply to own OSV.

TASK CODE: OILER (AE)-VIII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
3B	20	2	40	2A	40	2	2	1	3

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Ensure all towing equipment is operating correctly.

TASK: Assist the engineer in performing operational checks on the towing equipment similiar to those checks performed in OILER (AE)-III/IV/V.B and in performing any necessary repairs in order to ensure the equipment will operate as required.

PERFORMANCE STANDARDS

Descriptive:
* All towing equipment is checked properly and efficiently as directed by the engineer.

Numerical:
* In 100% of the cases, all the tasks directed to be performed are done promptly and properly.

TRAINING CONTENT

Functional:
* How to start and check towing equipment for proper operation.
* Understanding of winch controls normally installed and their operation.
* How to operate hydraulic system controls.
* How to check and add oil.

Specific:
* Knowledge of the operating procedures and characteristics of own OSV's towing equipment and components.

TASK CODE: OILER (AE)-VIII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	30	2	20	2B	50	3	3	2	3

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Operate and monitor machinery plant in order to ensure continuous availability of power at the required levels.

TASK: Tasks are the same as for OILER (AE)-III/IV/V.

PERFORMANCE STANDARDS

Descriptive:
* All tasks listed under OILER (AE)-III/IV/V are performed accurately and promptly.

Numerical:
* In 100% of the cases, all the tasks listed under OILER (AE)-III/IV/V are completed.

TRAINING CONTENT

Functional:
* How to performed the tasks and using the equipment listed in OILER (AE)-III/IV/V.

Specific:
* Knowledge of the duties and equipment listed in OILER (AE)-III/IV/V.

TASK CODE: OILER (AE)-IX.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Manipulates buttons, switches, levers of alarm and/or communications system in order to sound the alarm and/or issue an OSV-wide alert, using knowledge of the characteristics of the internal communications equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for fire aboard the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of alarm device(s) and internal communication system.
* Acts calmly in emergency situations.
* Correctly follows applicable procedures.
* Clearly sounds the signal or message so that it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sounds the alarm immediately upon seeing or hearing about an emergency situation.

TRAINING CONTENT

Functional:
* How to operate the internal communication systems, e.g., sound-powered phone, PA system, etc.
* How to operate the emergency alarm systems.
Understanding of the emergency procedures and ability to communicate these to others.

Specific:
* Knowledge of the type and location of internal communications and alarms systems on own OSV.
* Knowledge of the emergency alert procedures, including standard signals and messages.

TASK CODE: OILER (AE)-IX.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	15	3B	15	1A	70	2	2	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Assists the engineer in closing and/or sealing hatches, doors, vents, ports, valves, etc., manually or remotely and securing blower fans, in order to maintain the watertight or gastight integrity to confine the fire to a minimum area and decrease the fuel load using knowledge of the layout of the OSV and OSV spaces and systems and of closing devices, latches, etc., which allow for the closing/sealing of bulkheads in accordance with emergency procedures.

PERFORMANCE STANDARDS

Descriptive:
* Closes and/or seals all appropriate openings.
* Correctly follows emergency procedures.
* Closes remote fuel shut-off to fire area (if applicable).

Numerical:
* In 100% of the cases, all doors, hatches, vents, ports, valves, etc. are closed and/or sealed as quickly as possible without jeopardizing personnel.
* In 100% of the cases, the master is immediately alerted if an opening can not be sealed and/or closed.

TRAINING CONTENT

Functional:
* How to close/seal doors, hatches, vents, ports, valves, etc., manually or remotely.

Specific:
* Knowledge of the layout of own OSV and its spaces and systems.
* Knowledge of the type and location of doors, hatches, vents, ports, valves, etc. which will aid in maintaining the watertight or gastight integrity of own OSV.
* Knowledge of the emergency procedures regarding the maintenance of own OSV's watertight or gastight integrity.

TASK CODE: OILER (AE)-IX.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	5	1A	65	1	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Leads out a pressurized fire hose using experience gained during drills/training and under the direction of the mate in order to provide water to the scene of a fire.

PERFORMANCE STANDARDS

Descriptive:
* Quickly and smoothly leads out the fire hose from the most advantageous fire station.
* Obtains pressure for the hose.

Numerical:
* In 100% of the cases, a pressurized hose is lead to the scene of the fire.

TRAINING CONTENT

Functional:
* How to lead out a fire hose from a fire station.
* How to operate a multi-purpose nozzle.
* How to obtain pressure for a hose.

Specific:
* Knowledge of the location of all fire stations and the length of the hoses on own OSV.
* Knowledge of the specified emergency procedures used on own OSV.

TASK CODE: OILER (AE)-IX.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	30	1C	65	2	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Provides the necessary support as directed by the mate or the engineer including operation of pumps and pumping systems, use of self-contained breathing apparatus, use of fire extinguishers, use of fire hoses, etc, i order to contain or extinguish a fire.

PERFORMANCE STANDARDS

Descriptive:
* All tasks assigned by the mate or the engineer are properly and promptly completed.
* Remains in communication with the mate and/or the engineer at all times.

Numerical:
* In 100% of the cases, all assigned tasks are completed.

TRAINING CONTENT

Functional:
* How to operate pumps.
* How to use a self-contained breathing apparatus.
* How to use fire extinguishers.
* Understanding of the emergency procedures for fire fighting aboard an OSV.
* How to combat fire in closed spaces.

Specific:
* Knowledge of own OSV's internal communications system.
* Knowledge of own OSV's arrangement and systems.

TASK CODE: OILER (AE)-IX.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	25	1A	5	2A	70	2	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Dons self-contained breathing apparatus by manipulating straps, clips, valves, levers, and mask and reads dials using experience gained from drills/training in order to safely combat a fire in a closed space upon orders of the mate.

PERFORMANCE STANDARDS

Descriptive:
* Properly dons a self-contained breathing apparatus.
* Correctly operates and monitors the proper functioning of the self-contained breathing apparatus.

Numerical:
* In 100% of the cases, the self-contained breathing apparatus is properly donned and operated.

TRAINING CONTENT

Functional:
* Knowledge of the various types of self-contained breathing apparatus available on an OSV.
* How to don and operate a self-contained breathing apparatus.
* Knowledge of the limitations of a self-contained breathing apparatus.

Specific:
* Knowledge of the type and location of self-contained breathing apparatus on own OSV.
* Knowledge of any specified emergency procedures for own OSV.

TASK CODE: OILER (AE)-IX.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Manipulates buttons, switches, levers of alarm and/or communications system in order to sound the alarm and/or to issue an OSV-wide alert, using knowledge of the characteristics of the internal communications equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for collision or flooding emergency.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of alarm device(s) and internal communications system.
* Acts calmly in the emergency situation.
* Correctly follows applicable procedures.
* Clearly sounds the signal or message so that it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sounds the alarm immediately upon seeing or hearing about an emergency situation.

TRAINING CONTENT

Functional:
* How to operate the internal communications systems, e.g., sound-powered phone, PA system, etc.
* How to operate the emergency alarm systems.
* Understanding of emergency procedures and ability to communicate these to others.

Specific:
* Knowledge of the type and location of the internal communications and alarm systems on own OSV.
* Knowledge of the emergency alert procedures, including standard signals and messages.

TASK CODE: OILER (AE)-IX.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	15	3B	10	1A	75	1	1	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Assists the engineer in closing and/or sealing doors, hatches, vents, ports, valves, etc., manually or remotely in order to maintain watertight integrity and confine the flooding to a minimum area, using knowledge of the layout of the OSV and OSV spaces and of closing devices, latches, etc., which allow for the closing/sealing of bulkheads, and in accordance with any emergency procedures designated.

PERFORMANCE STANDARDS

Descriptive:
* Closes and/or seals all appropriate openings.
* Correctly follows emergency procedures.

Numerical:
* In 100% of the cases, alerts the master immediately if an opening (door, hatch, vent, etc.) cannot be closed/secured.
* In 100% of the cases, all doors, hatches, vents, ports, valves, etc. are closed and/or sealed as quickly as possible without jeopardizing personnel.

TRAINING CONTENT

Functional:
* How to close/seal doors, hatches, vents, ports, valves, etc., manually or remotely.

Specific:
* Knowledge of the layout of own OSV and own OSV spaces.
* Knowledge of the type and location of doors, hatches, vents, ports, valves, etc. aboard own OSV which will aid in maintaining the watertight intergity.
* Knowledge of the emergency procedures regarding the maintenance of own OSV's watertight integrity.

TASK CODE: OILER (AE)-IX.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1A	5	1C	80	1	1	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Assists the engineer in operating the necessary and available pumps to maintain the stability of the OSV or dewater as necessary.

PERFORMANCE STANDARDS

Descriptive:
* Bilge ballast, fire pumps, etc., are correctly lined up to take suction from the affected space.
* Tanks are ballasted/deballasted as required and/or directed by the master.

Numerical:
* In 100% of the cases, pumps are operated to capacity according to the operating procedures.

TRAINING CONTENT

Functional:
* How to determine flow patterns and line up systems.
* Understanding of stability in regard to free-surface effects, counter flooding, off-center weight, etc., associated with flooding situations.

Specific:
* Knowledge of the characteristics, arrangement and capacities of own OSV's pumps and pumping system.
* Knowledge of stability characteristics of own OSV.

TASK CODE: OILER (AE)-IX.B.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	1A	80	1A	10	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Proceeds to the scene of the collision and/or flooding and makes one's self available to perform damage control tasks as ordered by the mate and/or engineer in order to minimize flooding.

PERFORMANCE STANDARDS

Descriptive:
* Promptly completes tasks assigned.
* Properly secures watertight doors, hatches, vents, etc.

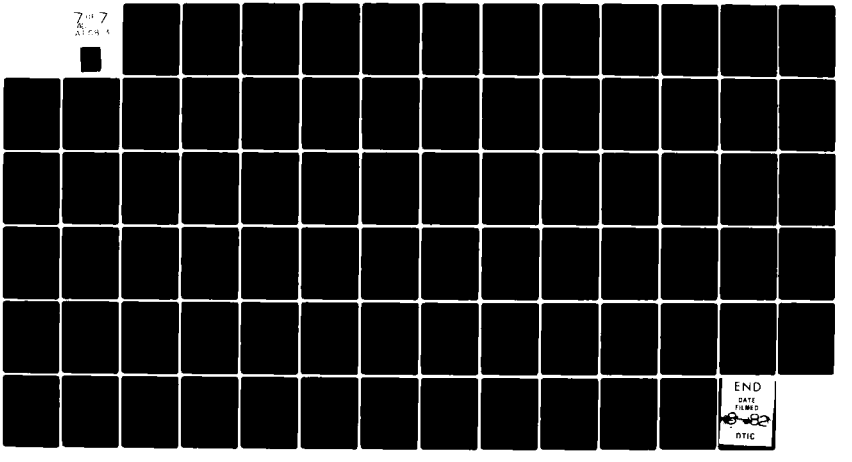
Numerical:
* In 100% of the cases, performs damage control tasks as assigned to minimize the flooding.

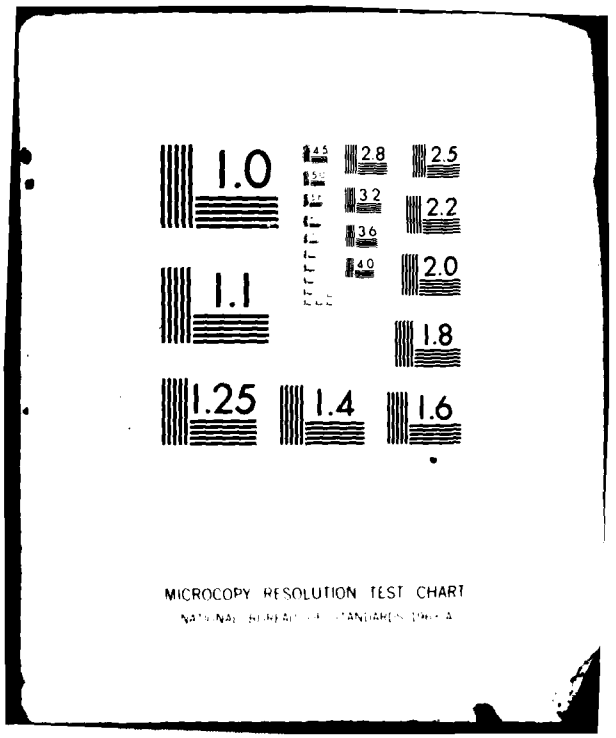
TRAINING CONTENT

Functional:
* How to secure watertight doors, hatches, vents, etc.
* How to use hand/power tools.
* General knowledge of basic damage control techniques and procedures.

Specific:
* Knowledge of the type and location of tools and materials available for emergency repairs aboard own OSV.

AD-A110 813 COAST GUARD DISTRICT (8TH) NEW ORLEANS LA F/G 5/1
FUNCTIONAL JOB ANALYSIS OF MARINE PERSONNEL EMPLOYED ON OFFSHOR--ETC(U)
JAN 82 H R PRZELOMSKI, A M BONNEAU
UNCLASSIFIED CGDSM-01-82 NL

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MICROCOPY RESOLUTION TEST CHART

TASK CODE: OILER (AE)-IX.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	90	1A	5	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Hails and passes "man overboard port (starboard) side" to the bridge using voice in order to alert personnel of a man overboard emergency.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and loudly passes the warning to the bridge.

Numerical:
* In 100% of the cases, personnel are immediately alerted to the man overboard emergency.

TRAINING CONTENT

Functional:
* Understanding of the importance of passing information to the bridge.
* How to clearly shout a warning.

Specific:
* Knowledge of any specified emergency procedures for own OSV.

TASK CODE: OILER (AE)-IX.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	1A	85	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Throws a life ring and a float light overboard upon hearing the signal "man overboard" in order to provide floatation material to the person in the water.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and accurately throws a life ring and float light overboard.

Numerical:
* In 100% of the cases, a life ring is thrown near the person in the water.

TRAINING CONTENT

Functional:
* How to detach and throw a life ring and a float light overboard.

Specific:
* Knowledge of the type and location of life rings and float lights aboard own OSV.

TASK CODE: OILER (AE)-IX.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	2	85	1A	5	1	1	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Points to the person in the water and continually advises the bridge of the relative position of the person in the water in order to provide the master with a reference point.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and loudly passes correctly the relative positions and distances to the bridge of the person in the water.
* Keeps the person in the water in sight during OSV maneuvers.

Numerical:
* In 100% of the cases, the person in the water is kept in sight.

TRAINING CONTENT

Functional:
* How to estimate distances and relative positions.
* How to function as a lookout.
* Knowledge of the proper terminology for passing positions and distances.

Specific:
* Knowledge of any specified emergency procedures on own OSV.

TASK CODE: OILER (AE)-IX.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	20	1A	70	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Provides heaving line, life ring, ladder, cargo net and first aid kit using experience gained from drills/training in order to recover the person in the water.

PERFORMANCE STANDARDS

Descriptive:
* Promptly provides to the recovery position the appropriate gear for recovering the person in the water.

Numerical:
* In 100% of the cases, gear for recovering the person in the water is provided to the recovery site.

TRAINING CONTENT

Functional:
* Knowledge of the methods for recovering a person in the water.
* Knowledge of the gear available to assist the person in the water, i.e., life ring, heaving lines, etc.

Specific:
* Knowledge of the location of gear available aboard own OSV to assist the person in the water.

TASK CODE: OILER (AE)-IX.C.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	15	2A	80	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Recovers the person in the water using a life ring, heaving line, cargo net, ladder, rescue boat or swimming ability under the direct supervision of the mate and/or master in order to safely bring the person aboard.

PERFORMANCE STANDARDS

Descriptive:
* Safely and expeditiously recovers the person in the water.
* Safely launches the rescue boat under the supervision of the mate and/or the master.

Numerical:
* In 100% of the cases, the person in the water is safely recovered.

TRAINING CONTENT

Functional:
* Knowledge of the methods for recovering a person in the water.
* How to use a life ring or heaving line.
* How to launch a rescue boat.
* How to deploy a ladder or cargo net.

Specific:
* Knowledge of the procedures for launching own OSV's rescue boat.
* Knowledge of the procedures for deploying a ladder or cargo net.

TASK CODE: OILER (AE)-IX.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	15	1A	10	1A	75	1	1	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Assists the engineer in closing and/or sealing doors, hatches, vents, ports, valves, etc., manually or remotely in order to maintain watertight integrity and confine flooding to a minimum area, using knowledge of the layout of the OSV and OSV spaces and of closing devices, latches, etc., which allow for the closing/sealing of bulkheads, and in accordance with any emergency procedures.

PERFORMANCE STANDARDS

Descriptive:
* Closes and/or seals all appropriate openings.
* Correctly follows emergency procedures.

Numerical:
* In 100% of the cases, alerts the master immediately if an opening (door, hatch, vent, etc.) cannot be closed and/or sealed.
* In 100% of the cases, all doors, hatches, vents, ports, valves, etc. are closed and/or sealed as quickly as possible without jeopardizing personnel.

TRAINING CONTENT

Functional:
* How to close/seal doors, hatches, vents, ports, valves, etc. manually or remotely.

Specific:
* Knowledge of the layout of own OSV and own OSV's spaces.
* Knowledge of the type and location of door, hatches, vents, ports, valves, etc which will aid in maintaining the watertight integrity of own OSV.
* Knowledge of the emergency procedures regarding the maintenance of own OSV's watertight integrity.

TASK CODE: OILER (AE)-IX.D.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	1A	90	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Manipulates clips and straps of a life preserver using experience and accepted methods of securing in order to properly don the life preserver.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and correctly dons the life preserver.
* Remains calm and alert while donning the life preserver.

Numerical:
* In 100% of the cases, the life preserver is properly donned.

TRAINING CONTENT

Functional:
* How to properly don a life preserver.
* Knowledge of life preserver stowage.

Specific:
* Knowledge of the location and number of life preservers on own OSV.

TASK CODE: OILER (AE)-IX.D.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	30	2	10	2A	60	3	4	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Proceeds to the engine room and assists the engineer in securing and stopping all unnecessary equipment so as to prevent damage to the machinery as water fills the engine room using standard procedures and own judgment as to what gear must be left running.

PERFORMANCE STANDARDS

Descriptive:
* All unnecessary equipment is stopped expeditiously.
* All necessary operations continue uninterupted (fire fighting, pumping bilges, maneuvering, radio transmissions, etc.).

Numerical:
* In 100% of the cases, all engines are secured before leaving the OSV.

TRAINING CONTENT

Functional:
* How to stop and secure equipment.
* Knowledge of what prime movers must be in operation to perform various OSV operations.

Specific:
* Knowledge of what OSV operations are in progress or expected before abandoning own OSV.
* Knowledge of own OSV's systems, prime movers and standard operating procedures.

TASK CODE: OILER (AE)-IX.D.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	1B	20	1A	40	1	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Proceeds to the life raft station with the required gear using experience gained from drills/training in order to stand-by for orders to abandon ship in accordance with the Station Bill.

PERFORMANCE STANDARDS

Descriptive:
* Immediately proceeds to the life raft station.
* Promptly performs the tasks assigned while standing-by.

Numerical:
* In 100% of the cases, required gear is provided at the life raft station.
* In 100% of the cases, all assigned tasks are performed.

TRAINING CONTENT

Functional:
* Understanding of the Station Bill.

Specific:
* Knowledge of any specified emergency procedures on own OSV.
* Knowledge of what gear and/or logs should be brought from own OSV (i.e., engine logs, blankets, etc.).

TASK CODE: OILER (AE)-IX.D.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	15	1A	75	2	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon ship safely and expeditiously.

TASK: Launches the life raft using a painter line and experience gained from drills/training in order to safely abandon ship in accordance with the orders and directives from the master, mate and/or engineer.

PERFORMANCE STANDARDS

Descriptive:
* Correctly prepares and safely launches the life raft(s).
* The life raft is properly inflated in the water.

Numerical:
* In 100% of the cases, life rafts are launched and inflated safely and properly.

TRAINING CONTENT

Functional:
* How to launch a life raft.
* How to secure a painter line when launching a life raft.
* How to inflate a life raft in the water.

Specific:
* Knowledge of the procedures for launching a life raft on own OSV.

TASK CODE: OILER (AE)-IX.E.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	20	1A	50	1	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensure the OSV is prepared for heavy weather.

TASK: Assists as required in securing cargo, gear, equipment and watertight doors, hatches and vents using own experience and under the supervision of the engineer, mate, and/or master in order to prevent injuries and damage from missle hazards and shifting cargo and ensure watertight integrity.

PERFORMANCE STANDARDS

Descriptive:
* Potential missle hazards are removed or eliminated.
* Promptly and correctly secures all watertight doors, hatches and vents as directed.

Numerical:
* In 100% of the cases, potential missle hazards and shifting cargo is secured.
* In 100% of the cases, watertight doors, hatches and vents are secured.

TRAINING CONTENT

Functional:
* Knowledge of the methods of securing various gear, cargo, tools and equipment.
* How to secure watertight doors, hatches and vents.
* Physical strength to move and manipulate heavy and/or bulky objects.

Specific:
* Knowledge of own OSV's configuration for securing gear, cargo, tools and equipment.
* Knowledge of the type and location of watertight doors, hatches and vents.

TASK CODE: OILER (AE)-IX.F.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	30	4C	50	1A	20	3	4	2	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Provides first aid to victims, moves victims from disaster/accident scene if possible or feasible and obtains additional assistance if necessary in order to give immediate care and prevent further injury to victims using knowledge of first aid procedures for various kinds of injuries of available medical kits and manuals, and giving evidence of the willingness to aid, reassurance and encouragement to the injured person(s).

PERFORMANCE STANDARDS

Descriptive:
* Correctly uses first aid kits, procedures and manuals.
* Uses good judgment in moving injured personnel.
* Promptly provides first aid and calls for any required additional medical attention.
* Promotes confidence in the victim by demonstrating competency and acting calmly.

Numerical:
* In 100% of the cases, medical attention is given in all cases where required.
* In 100% of the cases, never moves an injured person until an examination has been made of all injuries.

TRAINING CONTENT

Functional:
* Understanding of the procedures used to treat various kinds of injuries, including the rules for moving injured personnel.
* How to read and interpret first aid/medical manuals.
* How to use first aid equipment, i.e., stimulants, tourniquets, bandages, splints, etc.
* How to reassure and encourage a victim.

Specific:
* Knowledge of the location and contents of first aid/medical kits and manuals on own OSV.
* Knowledge of the company's guidelines for obtaining additional assistance.

TASK CODE: OILER (AE)-IX.F.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	70	2	25	1A	5	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Provides all pertinent information/circumstances of any injury, accident, illness or death to the master in order to enable him to document in the rough log the incident and complete all the reports in accordance with the government's regulations, company's and charterer's policies.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately describes the circumstances surrounding an injury, illness or death.

Numerical:
* In 100% of the cases, information required to document an accident, injury, illness or death is provided the master.

TRAINING CONTENT

Functional:
* Knowledge of the information required, i.e., the name of the person, date, time, circumstances, etc.

Specific:
* Knowledge of the company's policy and guidelines on personnel injuries, illnesses and deaths.

TASK CODE: OILER (AE)-IX.F.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	1	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Ascertains the accuracy of the master's entry in the rough log of any accident, injury or illness involving own self in order to make additional comments in the log to clarify any errors.

PERFORMANCE STANDARDS

Descriptive:
* Accurately describes the circumstances surrounding an illness, injury or accident.
* Entries in the rough log are legible.

Numerical:
* In 100% of the cases, rough log entry of an illness, injury or accident is accurate.

TRAINING CONTENT

Functional:
* Understanding of the entries made in a rough log.
* How to make an entry in a log.

Specific:
* Knowledge of the rough log kept on own OSV.

TASK CODE: OILER (AE)-X.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	35	2	60	1A	5	1	1	1	2

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Become fully qualified in the tasks required of an oiler.

TASK: Strives to gain knowledge and skills by remaining alert, asking meaningful questions and seeking on-the-job training, in order to perform the tasks required of an oiler and prepare one's self for further advancement.

PERFORMANCE STANDARDS

Descriptive:
* Displays an active interest in bettering one's self.

Numerical:
* In 100% of the cases, knowledge and skills are developed above the minimum.

TRAINING CONTENT

Functional:
* Understanding of the nature and scope of oiler work tasks.
* Knowledge of OSV operations.

Specific:
* Knowledge of the particular company's training policy and programs.

TASK CODE: OILER (AE)-X.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	60	1A	5	1A	35	2	1	1	1

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Develop an awareness of personal and preventive safety.

TASK: Practices common sense and has an awareness of personal and preventive safety using own knowledge of the inherent hazards of shipboard work, and developing a safety consciousness in order to prevent and avoid injuries.

PERFORMANCE STANDARDS

Descriptive:
* Avoids needless injuries by being safety conscious.
* Performs tasks assigned without injury to self or fellow crew members.

Numerical:
* In 100% of the cases, injuries are reduced through an awareness of personal and preventive safety.

TRAINING CONTENT

Functional:
* Understanding of the types of hazards common to vessels.
* Knowledge of protective clothing, i.e., safety shoes, work gloves, safety goggles, ear protection, etc.

Specific:
* Knowledge of the established company's policy on personal and preventive safety.

TASK CODE: OILER (AE)-X.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	2	50	2A	30	1	2	2	2

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Develop an awareness of personal and preventive safety.

TASK: Reports to the master, mate and/or engineer and takes prompt action to correct potential safety hazards using necessary tools, materials and own experience in order to prevent injuries.

PERFORMANCE STANDARDS

Descriptive:
* Remains alert to potential safety hazards.
* Promptly reports potential hazards to the master, mate and/or engineer.
* Immediately takes corrective action to eliminate the hazardous situation/condition.

Numerical:
* In 100% of the cases, the master, mate and/or engineer are made aware of potentially hazardous situations.
* In 100% of the cases, potential hazards are corrected.

TRAINING CONTENT

Functional:
* Understanding of the importance of reporting and correcting potentially hazardous conditions.
* How to use hand/power tools.
* Knowledge of the characteristics of various materials, i.e., wood, aluminum, steel, etc.

Specific:
* Knowledge of own OSV operations and the inherent dangers of offshore work.
* Knowledge of the types and locations of tools and materials for making repairs.

TASK CODE: DECKHAND-I.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	15	1A	65	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Scrubs down exterior of the OSV using cleaning solution and water, buckets, scrubs brushes, mops and hoses, in order to remove salt, dry mud, cement, chemicals and dirt deposits, in accordance with the instructions from the master and the mate after each trip or as directed.

PERFORMANCE STANDARDS

Descriptive:
* Thoroughly scrubs the cabin area of the OSV including the interior bulwark forward of the cargo deck.
* Thoroughly rinses the cargo deck and surrounding bulwark interior with fresh water.

Numerical:
* In 100% of the cases, the exterior surfaces of the OSV are cleaned.

TRAINING CONTENT

Functional:
* How to mix a cleaning solution of water and soaps.
* How to breakout, use and restow water hoses.
* How to activate water hoses.
* Knowledge of the safety considerations when working over the side.

Specific:
* Knowledge of the location of hoses and cleaning supplies on own OSV.

TASK CODE: DECKHAND-I.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1A	10	1A	75	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Sweeps and mops the OSV interior using a broom, dustpan, mop, bucket, wringer, cleaning solution and water in order to clean the interior of the OSV as directed by the master and the mate daily.

PERFORMANCE STANDARDS

Descriptive:
* Properly sweeps and mops the interior of the OSV.

Numerical:
* In 100% of the cases, the interior of the OSV is mopped and swept.

TRAINING CONTENT

Functional:
* How to sweep and use a dustpan.
* How to mix a cleaning solution using waters and soaps.
* How to use a mop and wringer bucket.

Specific:
* Knowledge of the location of cleaning supplies on own OSV.

TASK CODE: DECKHAND-I.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1B	10	1A	60	1	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Cleans and sanitizes shower, sink, toilet, deck and bulkheads in the heads using cleaning solution, toilet brushes and sanitizer, rags and water in order to maintain clean and sanitary conditions as directed by the master and the mate.

PERFORMANCE STANDARDS

Descriptive:
* Sinks, showers toilets and bulkheads are cleaned and sanitized.
* Prohibited cleaning/sanitizing solutions are not introduced into the MSD.

Numerical:
* In 100% of the cases, the heads are cleaned and sanitized.

TRAINING CONTENT

Functional:
* How to mix cleaning and sanitizing agents with water.
* Knowledge of the hazards of mixing cleaners and sanitizing agents with each other.
* Knowledge that certain cleaning/sanitizing solutions should not be introduced into MSD systems.

Specific:
* Knowledge of the location of cleaning supplies on own OSV.
* Knowledge of which cleaning/sanitizing solutions should not be introduced into the particular MSD system on own OSV.

TASK CODE: DECKHAND-I.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	2	10	3A	70	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Prepares exterior metal surfaces of the OSV and deck equipment for painting using grinder, sander, needle gun, chipping hammer, wire brush and sandpaper while wearing the proper eye and ear protection in order to prevent paint system failure.

PERFORMANCE STANDARDS

Descriptive:
* Removes all rust with the appropriate hand tools.
* Sands immediate area to bare metal.
* Feathers and tapers the edges of the paint surrounding the area being prepared.
* Lightly sands the surfaces on which the paint is intact.

Numerical:
* In 100% of the cases, areas to be painted are properly prepared to insure adhesion of the new paint.
* In 100% of the cases, surface preparation is not commenced until the area is cleaned and dry.

TRAINING CONTENT

Functional:
* How to use, operate and maintain paint and rust removal tools, i.e., grinder, sander, needle gun, wire brushes, etc.
* How to don and use eye and ear protection.
* Understanding of the hazards of electrical and pneumatic hand tools.

Specific:
* Knowledge of the type and location of paint and rust removal tools on own OSV.
* Knowledge of the operation and maintenance of hand tools on own OSV.

TASK CODE: DECKHAND-I.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	2	10	3A	70	2	2	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Paints prepared exterior bare metal surfaces with primer, and then all primed and other prepared surfaces with enamel or other finish coat following a suitable primer drying time interval, using brushes, spray gun and rollers, in order to maintain surfaces as directed and supervised by the mate.

PERFORMANCE STANDARDS

Descriptive:
* Correctly and neatly applies paint to the exterior surfaces of the OSV.
* Applies paint (primer/finish coats) in accordance with paint system instructions.

Numerical:
* In 100% of the cases, prepared metal surfaces are painted.

TRAINING CONTENT

Functional:
* How to mix and thin paint.
* How to use a paint brush, roller and sprayer to apply paint.
* How to clean and maintain paint brush, roller and sprayer.
* Knowledge of flammables used in paint operations.
* Knowledge of weather restrictions on painting.
* How to don and use a respirator.

Specific:
* Knowledge of the types and location of painting supplies on own OSV.

TASK CODE: DECKHAND-I.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	90	2	5	1A	5	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Advises the mate of fiber lines, wire rope and ground tackle aboard the OSV which are in need of repair using own experience and judgement, in order to ensure safe mooring, towing and anchor operations.

PERFORMANCE STANDARDS

Descriptive:
* Promptly advises the mate of lines, wire rope or ground tackle in need of repair or replacement.

Numerical:
* In 100% of the cases, only serviceable lines, wire rope and ground tackle are used in mooring, towing and anchor operations.

TRAINING CONTENT

Functional:
* Understanding of when a line, wire rope or ground tackle are not serviceable.
* How to identify cuts, abrasions, fraying and decomposition.

Specific:
* Knowledge of the types and location of all fiber lines, wire rope and ground tackle on own OSV.

TASK CODE: DECKHAND-I.A.7

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1B	30	1A	40	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Splices fiber line aboard the OSV using own knowledge of marlinspike seamanship, fids, axes and knives under the direct supervision of the mate in order to maintain fiber lines.

PERFORMANCE STANDARDS

Descriptive:
* Assists the mate as directed in splicing fiber lines.
* Lines are properly spliced.

Numerical:
* In 100% of the cases, all fiber lines are properly spliced and maintained.

TRAINING CONTENT

Functional:
* How to safely use a knife or axe to cut lines.
* Ability to handle and manipulate parts of a line to facilitate splicing.
* How to identify strands in a line and make insertions of line strands.

Specific:
* Knowledge of splicing procedures used on own OSV.

TASK CODE: DECKHAND-I.A.8

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1B	30	1A	40	1	1	2	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Assists the mate in performing minor maintenance and repairs to lifesaving equipment using own experience and judgement in order to ensure the servicability of lifesaving equipment in accordance with instructions from the mate.

PERFORMANCE STANDARDS

Descriptive:
* Properly attaches water lights, life lines, whistles and reflective tape to life preservers, life rings and life floats as required.
* Promptly advises the mate and the master of deteriorated lifesaving equipment.

Numerical:
* In 100% of the cases, safety and lifesaving equipment are serviceable and accessible.

TRAINING CONTENT

Functional:
* Knowledge of lifesaving equipment to determine serviceability.
* How to splice fiber lines.
* How to measure lenghts of fiber lines in increments of fathoms or feet.
* How to attach battery terminals to the proper leads and insert batteries into devices.

Specific:
* Knowledge of the types and location of all lifesaving equipment on own OSV.

TASK CODE: DECKHAND-I.A.9

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1B	30	1A	40	1	1	2	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Assists the mate in performing minor maintenance and repairs to fire fighting equipment, using own experience and judgement, in order to ensure the serviceability of fire fighting equipment in accordance with instruction from the mate.

PERFORMANCE STANDARDS

Descriptive:
* Assists the mate as directed in maintaining and/or repairing fire fighting equipment.
* Checks hoses and nozzles for leaks while under pressure.
* Checks for proper fit of gaskets in female hose and nozzle connections.
* Checks the location and number of spanner wrenches.

Numerical:
* In 100% of the cases, deficient fire fighting equipment is replaced or repaired.

TRAINING CONTENT

Functional:
* How to breakout, inspect and restow fire fighting equipment.
* How to identify leaks in fire fighting system hoses and nozzles.
* Knowledge of proper operation of fire fighting equipment.
* How to check charge on potable fire extinguishers.

Specific:
* Knowledge of types and location of fire fighting equipment on own OSV.

TASK CODE: DECKHAND-I.A.10

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1B	30	2A	50	1	2	2	2

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Assists the cook as assigned in the preparation of meals and the cleaning of the galley, mess deck and galley storage areas, using food preparation devices, and cleaning supplies, in order to ensure sanitary conditions and provide meals as ordered by the master or the mate.

PERFORMANCE STANDARDS

Descriptive:
* Moves galley supplies, including food, to the OSV and to various places aboard as directed.
* Properly cleans galley spaces as directed, including grease traps.
* Promptly assists the cook as directed by the master or the mate.

Numerical:
* In 100% of the cases, galley and mess deck areas are maintained in a state of cleanliness prior to and immediately after meals.
* In 100% of the cases, utensils and galley equipment are cleaned and properly stowed.

TRAINING CONTENT

Functional:
* How to use food preparation devices, i.e., flatware, can opener, oven, stove, toaster, cutlery, etc.
* Understands the hazards associated with the use of food preparation devices, ie., cutting, burning, crushing, and electric shock.
* How to measure quantities of food using single measuring cups and spoons.
* How to wash pots, pans, dishes, etc.
* How to clean and sanitize food storage, preparation and serving areas.

Specific:
* Knowledge of the location of galley stores and food preparation devices on the OSV.
* Knowledge of the type and location of cleaning supplies on own OSV.

TASK CODE: DECKHAND-I.A.11

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	20	1A	70	1	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Complete assigned routine maintenance and repairs.

TASK: Cleans out dry bulk tanks of excess material using brooms, shovels, buckets and respirators in order to prepare the tanks for the next load of material under the supervision of the mate.

PERFORMANCE STANDARDS

Descriptive:
* Dry bulk tanks are properly cleaned of excess material.
* No damage results from the cleaning of the dry bulk tanks.

Numerical:
* In 100% of the cases, dry bulk tanks are cleaned out and dry before new material is pumped in.

TRAINING CONTENT

Functional:
* Knowledge of the configuration of the dry bulk tanks used on OSVs.
* How to don and use a respirator.
* How to clean up dry bulk material.

Specific:
* Knowledge of the type and location of the dry bulk tanks on own OSV.

TASK CODE: DECKHAND-I.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	60	1A	10	1C	30	2	1	1	1

GOAL: Perform necessary routine maintenance, repairs and ship's business.

OBJECTIVE: Provide security for the OSV while it is berthed.

TASK: Stands in port watch at night, using own experience and knowledge of OSV operations and communications equipment, in order to provide security, check moorings and monitor radios, in accordance with the orders from the master.

PERFORMANCE STANDARDS

Descriptive:
* Remains alert to potential hazards or emergencies.
* Continually monitors communications equipment.
* Remains calm during an emergency.

Numerical:
* In 100% if the cases, potential hazardous situations are identified and rectified.
* In 100% of the cases, communications equipment is monitored at all times.

TRAINING CONTENT

Functional:
* Knowledge of shipboard hazards.
* How to operate the communications equipment.
* Knowledge of the alarm systems.
* Knowledge of the proper radio procedures.
* How to check and adjust mooring lines.

Specific:
* Knowledge of the type and location of communications equipment on own OSV.
* Knowledge of the configuration and layout of own OSV.
* Knowledge of specified emergency procedures on own OSV.
* Knowledge of the master's specific orders.

TASK CODE: DECKHAND-II.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1A	50	1B	15	1A	35	1	1	1	1

GOAL: Prepare for trip and load cargo safely.

OBJECTIVE: Assist in the safe loading of cargo.

TASK: Adjusts mooring line(s) using deck fittings and assistance from the mate in order to reposition the OSV or maintain a safe and proper berthing condition for safely loading cargo in accordance with the master's orders.

PERFORMANCE STANDARDS

Descriptive:
* Promptly, safely and accurately adjusts mooring lines as directed.
* Remains alert for potentially hazardous conditions/situations.

Numerical:
* In 100% of the cases, the OSV is positioned so as to safely load cargo.

TRAINING CONTENT

Functional:
* Physical ability to manipulate heavy mooring lines.
* How to tend a mooring line.
* Understands simple hand signals.
* How to unhitch line(s) from deck fittings and resecure them.
* Understands the potential dangers of lines under tension.

Specific:
* Knowledge of the system for mooring own OSV.

TASK CODE: DECKHAND-II.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	15	1A	80	1	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Assist in the safe loading of cargo.

TASK: Assist the engineer in connecting/disconnecting transfer hoses, using own experience and judgement, and guidance from the chief engineer, and government regulations, in order to prepare to take aboard dry and liquid bulk cargoes.

PERFORMANCE STANDARDS

Descriptive:
* Correctly secures the proper hoses to the appropriate connections.

Numerical:
* In 100% of the cases, all transfer hoses are properly connected/disconnected.

TRAINING CONTENT

Functional:
* How to connect/disconnect transfer hoses.

Specific:
* Knowledge of the particular fitting characteristics on own OSV.

TASK CODE: DECKHAND-II.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	10	1A	60	1	1	1	1

GOAL: Prepare for trip and safely load cargo aboard the OSV.

OBJECTIVE: Assist in the safe loading of cargo.

TASK: Secures loose gear, equipment, tools and cargo using own experience, guidance from the mate and lines, in order to prevent damage to the OSV and injuries to personnel while underway.

PERFORMANCE STANDARDS

Descriptive:
* Correctly secures loose gear, equipment, tools, and cargo.
* Remains alerts to potential hazardous conditions.
* Secures items so as not to block access to vents, fire fighting stations, switches, valves, doors or hatches.

Numerical:
* In 100% of the cases, loose gear, equipment, tools and cargo are secured.

TRAINING CONTENT

Functional:
* How to secure gear, cargo, tools and equipment.
* Understands the potential hazards associated with loading heavy items aboard an OSV.
* How to use chains, chain binders, cable, turn buckles and dunnage.

Specific:
* Knowledge of the configuration of own OSV.

TASK CODE: DECKHAND-III.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1A	45	1B	15	1A	40	1	1	1	1

GOAL: Berth/unberth the OSV.

OBJECTIVE: Properly handle mooring lines to berth/unberth the OSV.

TASK: Adjusts mooring line(s) as affected by variations of tide, current and weather, using own experience, deck fittings, and guidance from the mate, in order to maintain a safe and proper berthing condition.

PERFORMANCE STANDARDS

Descriptive:
* Promptly, safely and accurately adjusts mooring lines.

Numerical:
* In 100% of the cases, the OSV is safely secured for the prevailing environmental conditions.

TRAINING CONTENT

Functional:
* Physical ability to manipulate heavy mooring lines.
* How to tend a mooring line.
* Understands simple hand signals.
* How to unhitch line(s) from deck fittings and resecure.
* Understands the potential dangers of lines under tension.

Specific:
* Knowledge of the system for mooring own OSV.

TASK CODE: DECKHAND-III.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	50	1B	20	1A	30	1	1	1	3

GOAL: Berth/unberth the OSV.

OBJECTIVE: Properly handle mooring lines to berth/unberth the OSV.

TASK: Casts off and retrieves mooring line(s) using knowledge of line handling procedures and own experience, in order to allow the OSV to get underway, following the orders of the master or the officer of the deck.

PERFORMANCE STANDARDS

Descriptive:
* Promptly stands by assigned mooring station.
* Accurately and safely casts off and retrieves mooring line(s) as directed by the master or the officer of the deck.
* Remains alert during the berthing/unberthing operation.

Numerical:
* In 100% of the cases, mooring line(s) cast off and retrieval are as ordered by the master or the officer of the deck.

TRAINING CONTENT

Functional:
* Physical ability to manipulate heavy mooring lines.
* How to untie or unhitch mooring line(s) from deck fittings.
* Understands simple hand signals.
* Understands the portential dangers of lines under tension.
* Understands line handling terminology, i.e., hold, check, slack, etc.

Specific:
* Knowledge of the system for mooring own OSV.

TASK CODE: DECKHAND-III.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	1B	10	1A	50	1	2	1	1

GOAL: Berth/unberth the OSV.

OBJECTIVE: Properly handle mooring lines to berth/unberth the OSV.

TASK: Prepares mooring line(s) for berthing the OSV using own experience and guidance from the master and the mate, in order to fake out the proper lines prior to arrival at the assigned berth.

PERFORMANCE STANDARDS

Descriptive:
* Mooring lines are layed or faked out to allow them to run freely.
* Correct mooring lines are used.

Numerical:
* In 100% of the cases, mooring lines are prepared for berthing prior to OSV arrival at the assigned berth unless there are heavy sea conditions.

TRAINING CONTENT

Functional:
* Physical ability to manipulate heavy mooring lines.
* How to identify line(s) specified for use.
* How to fake our a line to allow it to run freely.
* How to remove lines from a secured sea position.

Specific:
* Knowledge of the lines to be used for the particular mooring.
* Knowledge of the types and location of the lines on own OSV.

TASK CODE: DECKHAND-III.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	60	1B	10	1A	30	1	1	1	3

GOAL: Berth/unberth the OSV.

OBJECTIVE: Properly handle mooring lines to berth/unberth the OSV.

TASK: Tends and secures mooring lines to complete the berthing operation, using own experience, proper size and number of lines, and guidance from the mate, in order to properly secure the OSV following the orders of the master.

PERFORMANCE STANDARDS

Descriptive:
* Promptly stands by assigned mooring station with lines made ready for immediate use.
* Attaches mooring line(s) to dock or other vessel at mooring points.
* Properly secures line to deck fittings on the OSV.

Numerical:
* In 100% of the cases, mooring lines are handled during the berthing operation under the direction of the master or the officer of the deck.
* In 100% of the cases, mooring lines are properly secured.

TRAINING CONTENT

Functional:
* Physical ability to manipulate heavy mooring lines.
* Understanding of the potential dangers in working with lines under tension.
* Understands simple hand signals.
* Understanding of line handling terminology, i.e., hold, check, slack, etc.

Specific:
* Knowledge of the types and location of the lines on own OSV.

TASK CODE: DECKHAND-III.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	50	1A	10	1A	40	1	1	1	1

GOAL: Berth/unberth the OSV.

OBJECTIVE: Properly secure the OSV for sea.

TASK: Secures mooring lines after unberthing the OSV and prior to encountering adverse sea conditions, using own experience, small stuff and guidance from the mate in order to ensure that the lines will not be lost or fouled on any underwater appendage of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Mooring lines are faked over bulwarks and lashed in place with small stuff.
* Mooring lines are not allowed to lie loose on the deck.

Numerical:
* In 100% of the cases, mooring lines are secured after getting underway to prevent deterioration and avoid fouling on the underwater appendages of the OSV.

TRAINING CONTENT

Functional:
* Physical ability to handle heavy mooring lines.
* How to fake or wrap mooring lines around bulwards and/or deck fittings.
* How to tie simple knots for lashing mooring lines in place.

Specific:
* Knowledge of own OSV's deck fittings and bulkward configuration.

TASK CODE: DECKHAND-III.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	25	1A	10	1A	65	1	1	1	1

GOAL: Berth/unberth the OSV.

OBJECTIVE: Properly secure the OSV for sea.

TASK: Secures hoses after unberthing the OSV and prior to encountering adverse sea conditions by stowing in racks and lashing with small stuff, using own experience and guidance from the mate and the chief engineer, in order to prevent unnecessary wear and the possible loss overboard.

PERFORMANCE STANDARDS

Descriptive:
* Hoses are promptly secured in the appropriate racks.
* Hoses are not allowed to lie loose on the deck.

Numerical:
* In 100% of the cases, hoses are properly secured to avoid injuries, unnecessary wear and/or loss overboard.

TRAINING CONTENT

Functional:
* How to secure and lash hoses in the racks provided.

Specific:
* Knowledge of the type and location of topside hoses on own OSV.
* Knowledge of the method of securing hoses on own OSV.

TASK CODE: DECKHAND-III.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	25	1A	10	1A	65	1	1	1	1

GOAL: Berth/unberth the OSV.

OBJECTIVE: Properly secure the OSV for sea.

TASK: Secures watertight doors, hatches and vents, using own experience, and in accordance with the master's orders and established company policy in order to provide watertight integrity on the OSV while underway.

PERFORMANCE STANDARDS

Descriptive:
*Promptly secures watertight doors, hatches and vents as directed after the OSV is underway.

Numerical:
* In 100% of the cases, watertight doors, hatches and vents are secured after the OSV is underway as directed by the master.

TRAINING CONTENT

Functional:
* How to secure and dog down watertight doors, hatches and vents.
* Understands the potential danger of not securing watertight doors, hatches and vents when underway.

Specific:
* Knowledge of the type and location of all watertight doors, hatches and vents aboard own OSV.
* Knowledge of the master's instructions and company policies regarding watertight fittings.

TASK CODE: DECKHAND-IV.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	2	30	1A	30	2	2	1	2

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Perform underway watches and duties.

TASK: Stands a six-hour on six-hour off sea watch encompassing lookout and security duties and other tasks as assigned, using own experience and guidance from the master and the mate in order to ensure the safe operation of the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Remains awake and alert at all times either in the wheelhouse or where directed by the officer of the deck.
* Immediately reports visual and audible contacts to the officer of the deck.
* Performs required security rounds as directed by the officer of the deck and reports potentially hazardous conditions.
* Completes tasks assigned by the officer of the deck.

Numerical:
* In 100% of the cases, a watch is stood while underway as directed by the master.

TRAINING CONTENT

Functional:
* How to adapt to night vision.
* Physical ability to manipulate objects which may be large and cumbersome.
* How to use and adjust binoculars.
* How to visually identify other vessels, structures, aids to navigation and dangers to navigation.
* How to report contacts by relative position and distance.
* How to identify hazardous conditions on security rounds.

Specific:
* Knowledge of own OSV's layout and configuration.
* Knowledge of the required security rounds on own OSV.

TASK CODE: DECKHAND-IV.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	60	2	10	2A	30	2	2	1	1

GOAL: Navigate through (maneuver in) restricted waters as required in order to reach destination safely and expeditiously.

OBJECTIVE: Perform underway watches and duties.

TASK: Reports and/or promptly corrects potentially hazardous conditions discovered while on or off watch, using own experience and judgement, guidance and instructions from the master and internal communications system, in order to alert the master and/or the officer of the deck.

PERFORMANCE STANDARDS

Descriptive:
* Promptly reports potential hazards to the master.
* Immediately takes corrective action to eliminate the hazardous condition/situation.

Numerical:
* In 100% of the cases, the master and/or the officer of the deck are made aware of the hazardous conditions/situations.

TRAINING CONTENT

Functional:
* Understands the importance of reporting and correcting potentially hazardous conditions or situations.
* How to secure gear that has broken loose.
* Physical ability to manipulate objects which may be large and cumbersome.

Specific:
* Knowledge of the normal operations and conditions on own OSV.
* Knowledge of the types and locations of tools and materials for making repairs.

TASK CODE: DECKHAND-V.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	50	2	20	2A	30	2	2	1	2

GOAL: Operate OSV in non-restricted waters as required to reach destination safely and expeditiously.

OBJECTIVE: Perform underway watches and duties.

TASK: Performs the tasks of DECKHAND-IV.A in order to stand watches and perform underway duties.

PERFORMANCE STANDARDS

Descriptive:
* Meets the standards as listed in DECKHAND-IV.A.

Numerical:
* In 100% of the cases, the standards of DECKHAND-IV.A are met.

TRAINING CONTENT

Functional:
* Training as required in the duties listed in DECKHAND-IV.A.

Specific:
* Knowledge the same as that required in DECKHAND-IV.A.

TASK CODE: DECKHAND-VI.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	50	1A	20	1A	30	1	1	1	2

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely transfer cargo to the rig/platform.

TASK: Handles mooring lines as required by the method of mooring/unmooring (tied up alongside, off mooring buoy), using own experience, deck fittings and guidance from the mate in order to safely position the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Safely and expeditiously casts off/tends/secures the mooring lines as directed.
* Remains alert during the mooring operation.

Numerical:
* In 100% of the cases, mooring lines are handled properly and safely to position the OSV for cargo transfer.

TRAINING CONTENT

Functional:
* Physical ability to handle heavy mooring lines.
* How to tend a mooring line.
* How to unhitch or secure a mooring line to a deck fitting.
* Understands simple hand signals.
* Understanding of the potential dangers to lines under tension.
* Understanding of the procedures for handling mooring lines offshore.
* Knowledge of safety procedures when working under cranes on moving decks.

Specific:
* Knowledge of the type and location of deck fittings on own OSV.

TASK CODE: DECKHAND-VI.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	5	2	15	1A	80	2	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely transfer cargo to the rig/platform.

TASK: Assists the chief engineer in connecting/disconnecting transfer hoses using own experience and judgement, guidance from the chief engineer and government regulations, in order to prepare to transfer dry and liquid bulk cargoes.

PERFORMANCE STANDARDS

Descriptive:
* Accurately and expeditiously connects/disconnects the proper hoses to the appropriate connections.

Numerical:
* In 100% of the cases, all transfer hoses are properly connected/disconnected.

TRAINING CONTENT

Functional:
* How to connect/disconnect transfer hoses.
* Knowledge of safety procedures when working under cranes on moving decks.

Specific:
* Knowledge of the particular fitting characteristics on the specific OSV.

TASK CODE: DECKHAND-VI.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	90	1A	5	1	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely transfer cargo to the rig/platform.

TASK: Makes himself available to the master and/or the mate during the transfer operation to perform tasks assigned in order to ensure a safe operation.

PERFORMANCE STANDARDS

Descriptive:
* Promptly completes the tasks assigned by the master and/or the mate.
* Remains alert and readily available if needed.

Numerical:
* In 100% of the cases, performs the assigned tasks.

TRAINING CONTENT

Functional:
* Knowledge of offshore transfer operations.
* Knowledge of the safety hazards during offshore transfer of heavy objects between an OSV and a rig/platform.

Specific:
* Knowledge of the transfer operations on own OSV.

TASK CODE: DECKHAND-VI.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	30	1A	60	1	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely anchor the OSV.

TASK: Assists the mate as directed in "letting go/weighing" the anchor, using own experience and guidance from the mate in order to position the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Promptly carries out assigned tasks during an anchoring operation.
* Remains alert for potentially hazardous conditions.

Numerical:
* In 100% of the cases, anchoring operations are safely completed.

TRAINING CONTENT

Functional:
* Knowledge of the procedures for anchoring an OSV.
* How to use and release a stopper.
* Checks the chain locker for loose gear.
* Understanding of the terminology used in anchoring an OSV.

Specific:
* Knowledge of the procedure used on own OSV for anchoring.
* Knowledge of how to operate anchor windlass on own OSV.

TASK CODE: DECKHAND-VI.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1A	15	1A	70	1	1	1	1

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely anchor the OSV.

TASK: Stacks the anchor chain in the anchor locker using a "rebar" to hook the chain and a "2x4" in order to fake the chain and distribute it evenly in the chain locker.

PERFORMANCE STANDARDS

Descriptive:
* Anchor chain is evenly distributed in the chain locker.
* Chain pipe is not fouled.

Numerical:
* In 100% of the cases, the anchor chain is evenly distributed and made ready for letting go.

TRAINING CONTENT

Functional:
* How to fake out chain.
* How to use a "rebar".
* Understanding of the safety hazards, i.e., weight of chain, etc.
* Physical ability to manipulate and move anchor chain.

Specific:
* Knowledge of the configuration of own OSV's chain locker.

TASK CODE: DECKHAND-VI.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
4	60	2	10	1C	30	3	3	1	2

GOAL: Conduct transfer operations between OSV and drilling/production rigs/platforms.

OBJECTIVE: Safely anchor the OSV.

TASK: Checks the anchor and position of the OSV and monitors the radios while standing radio and anchor watch, using own experience, instructions from the master, standard procedures and communications equipment, in order to identify potential hazards and to keep the master advised.

PERFORMANCE STANDARDS

Descriptive:
* Immediately notifies the master of potentially hazardous conditions.
* Remains alert to radio traffic for his own OSV.
* Accurately carries out instructions of the master.

Numerical:
* In 100% of the cases, all potentially hazardous conditions are recognized.
* In 100% of the cases, the master's instructions are followed.

TRAINING CONTENT

Functional:
* How to operate the communications equipment.
* How to recognize worsening environmental conditions.
* How to determine if the anchor is dragging.
* How to determine the risk of collision with other vessels.

Specific:
* Knowledge of own OSV's communications equipment.

TASK CODE: DECKHAND-VII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	10	1A	60	1	1	1	1

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Prepare for an anchor handling trip.

TASK: Clears the work deck of unnecessary loose gear, using own experience, guidance from the mate, lines and chafing gear, in order to provide for the loading of an anchoring system (if required), and the anchor handling crew's equipment and gear.

PERFORMANCE STANDARDS

Descriptive:
* Properly secures loose gear with lines, chafing gear, chains, etc.
* Excess gear is removed and stored.

Numerical:
* In 100% of the cases, the work deck is adequately cleaned so as to facilitate the anchor handling operation.

TRAINING CONTENT

Functional:
* How to secure loose gear and equipment.
* How to use line, chafing gear, chains, chain binders, turn buckles, etc.

Specific:
* Knowledge of the configuration of own OSV's work deck area.

TASK CODE: DECKHAND-VII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	75	1A	15	1	1	1	1

GOAL: Handle anchors and buoys for rigs/platforms safely and expeditiously.

OBJECTIVE: Handle anchor and buoys safely.

TASK: Makes himself available to the master and the mate during an anchor handling job utilizing an anchor handling crew, in order to perform assigned tasks from lookout, security rounds and radio watch to assisting the cook in the galley.

PERFORMANCE STANDARDS

Descriptive:
* Immediately reports all visual and audible contacts to the officer of the deck.
* Performs the required security rounds as directed by the officer of the deck and reports potentially hazardous conditions.
* Properly cleans galley spaces and untensils.

Numerical:
* In 100% of the cases, all assigned tasks are completed.

TRAINING CONTENT

Functional:
* How to operate communications equipment.
* How to report contacts by relative position and distance.
* How to identify hazardous conditions on security rounds.
* How to wash pots, pans, dishes, etc.
* How to use food preparation devices.

Specific:
* Knowledge of own OSV's layout and configuration.

TASK CODE: DECKHAND-VIII.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	30	1A	65	1	1	1	1

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Prepares to take a vessel or rig in tow.

TASK: Breaks out and arranges towing gear, using own experience and guidance from the mate, in order to ensure the necessary gear is aboard and in good condition.

PERFORMANCE STANDARDS

Descriptive:
* Promptly breaks out and arranges the towing gear.

Numerical:
* In 100% of the cases, towing gear is broken out and arranged as directed by the mate.

TRAINING CONTENT

Functional:
* Knowledge of towing gear, i.e., tow bar, towing pod, chaffing gear and plate, shackles, pelican hooks, etc.

Specific:
* Knowledge of the types, number and locations of towing gear on own OSV.

TASK CODE: DECKHAND-VIII.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	1A	20	1A	65	1	1	1	1

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely connect/disconnect to/from the vessel or rig to be towed.

TASK: Muscles aboard/or casts-off the towing pennant or towing bridle, under the direct supervision of the mate, using own experience, pelican hook and dead wire and assistance from the towing winch operator, in order to position the pennant or towing bridle for connection.

PERFORMANCE STANDARDS

Descriptive:
* Quickly and safely retrieves the towing pennant or bridle.
* Wears the proper protective clothing.
* Secures and positions the pennant or bridle with the pelican hook.

Numerical:
* In 100% of the cases, the towing pennant or bridle is retrieved without personnel injuries or damage to the OSV.

TRAINING CONTENT

Functional:
* How to use a pelican hook.
* Knowledge of winch signals.
* Knowledge of the procedures for receiving a towing pennant or bridle.
* Knowledge of the safety considerations in handling a towing pennant or bridle.
* Knowledge of the protective clothing to be worn for towing operations, i.e., hard hat, work vest, safety shoes, gloves, etc.

Specific:
* Knowledge of own OSV's work deck configuration for rigging a tow.

TASK CODE: DECKHAND-VIII.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	30	1A	60	1	1	1	1

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely connect/disconnect to/from the vessel or rig to be towed.

TASK: Rigs the towing pennant or bridle, under the direct supervision of the mate, using own experience, pelican hook and dead wire, nylon spring line, chaffing gear and plate, tow bar, tow pod and assistance from the towing winch operator, in order to rig the OSV for towing.

PERFORMANCE STANDARDS

Descriptive:
* Correctly rigs the towing pennant or bridle as directed.
* Promptly performs the tasks assigned.
* Remains alert for potentially hazardous conditions.

Numerical:
* In 100% of the cases, the towing pennant or bridle is properly and safely rigged for towing.

TRAINING CONTENT

Functional:
* How to use the appropriate towing gear.
* Knowledge of winch signals.
* Understanding of the potential dangers when working with lines under tension.
* Understanding of the methods for rigging a towing pennant or bridle.

Specific:
* Knowledge of own OSV's work deck configuration for rigging a tow.
* Knowledge of the type and location of own OSV's towing gear.

TASK CODE: DECKHAND-VIII.B.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	30	1A	60	1	1	1	1

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely connects/disconnects to/from the vessel or rig to be towed.

TASK: Disconnects the towing pennant or bridle under the direct supervision of the mate, using own experience and appropriate towing gear, in order to safely complete the towing job.

PERFORMANCE STANDARDS

Descriptive:
* Correctly and safely disconnects the towing pennant or bridle.
* Remains alert for potentially hazardous conditions.

Numerical:
* In 100% of the cases, the towing pennant or bridle is disconnected without personnel injuries or damage to the OSV.

TRAINING CONTENT

Functional:
* Understanding of the methods for disconnecting a towing pennant or bridle.
* Knowledge of winch signals.
* Understanding of the potential dangers when working with lines under tension.

Specific:
* Knowledge of the method used to rig the particular tow.
* Knowledge of own OSV's work deck configuration for utilizing towing gear.

TASK CODE: DECKHAND-VIII.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	70	2	25	1A	5	2	2	1	2

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely tows a vessel or rig to a new location.

TASK: Inspects the tow wire and chaffing gear during security rounds using own experience and judgement, and guidance from the mate, in order to keep the master advised of the towing wires condition.

PERFORMANCE STANDARDS

Descriptive:
* Properly evaluates the condition of the tow.
* Determines that the chaffing gear is correctly positioned.
* Clearly communicates the conditon of the tow wire and chaffing gear.

Numerical:
* In 100% of the cases, the master is advised of the condition of the tow wire.

TRAINING CONTENT

Functional:
* How to identify deterioration in the tow wire.
* How to recognize properly positioned chaffing gear.

Specific:
* Knowledge of the method used for rigging the particular tow.

TASK CODE: DECKHAND-VIII.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	25	1A	20	1A	55	1	2	1	1

GOAL: Tow vessels and rigs as required safely and expeditiously.

OBJECTIVE: Safely tows a vessel or rig to a new location.

TASK: Adjusts the length of the tow wire and positioning of the chaffing gear under the direct supervision of the mate, using own experience and chaffing gear, in order to provide a good catenary on the wire, in accordance with the master's instructions.

PERFORMANCE STANDARDS

Descriptive:
* Accurately adjusts the length of the tow wire as directed.
* Properly protects the tow wire with the chaffing gear.

Numerical:
* In 100% of the cases, a proper catenary is maintained in the tow wire.
* In 100% of the cases, chaffing gear is positioned to protect the tow wire.

TRAINING CONTENT

Functional:
* How to position the chaffing gear to protect the tow wire.
* A basic understanding of catenary.
* Knowledge of winch signals.

Specific:
* Knowledge of the types and location of chaffing gear on own OSV.

TASK CODE: DECKHAND-IX.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Manipuates buttons, switches, levers of alarm and/or communications system in order to sound alarm and/or issue an OSV-wide alert, using knowledge of the characteristics of internal communications equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for a fire aboard.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of alarm device(s) and internal communications system.
* Acts calmly in an emergency situation.
* Correctly follows applicable procedures.
* Clearly sounds the signal or message so that it is heard and understood by the entire crew.

Numerical:
* In 100% of the cases, sounds the alarm immediately upon seeing or hearing about an emergency situation.

TRAINING CONTENT

Functional:
* How to operate the internal communications systems, e.g., sound-powered phone, PA system, etc.
* How to operate the emergency alarm system.
* Understanding of emergency procedures and ability to communicate them to others.

Specific:
* Knowledge of the type and location of internal communications equipment and alarm systems on own OSV.
* Knowledge of the emergency alert procedures, including standard signals and messages.

TASK CODE: DECKHAND-IX.A.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	5	1A	65	1	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Leads out a pressurized fire hose using experience gained during drills/training and under the direction of the mate in order to provide water to the scene of a fire.

PERFORMANCE STANDARDS

Descriptive:
* Quickly and smoothly leads out the fire hose from the most advantageous fire station.
* Obtains pressure for the hose.
* Acts calmly in the emergency situation.

Numerical:
* In 100% of the cases, a pressurized fire hose is lead to the scene of the fire.

TRAINING CONTENT

Functional:
* How to lead out a fire hose from a fire station.
* How to operate a multi-purpose nozzle.
* How to obtain pressure for the fire hose.

Specific:
* Knowledge of the locations of all fire stations and the length of the fire hoses on own OSV.
* Knowledge of the specified emergency procedures used on own OSV.

TASK CODE: DECKHAND-IX.A.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	30	1A	5	2A	65	1	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Provide fire extinguisher(s) to the scene of the fire, using experience gained during drills/training and knowledge of the types of extinguishers, in order to minimize the effects of a fire.

PERFORMANCE STANDARDS

Descriptive:
* Provides the appropriate type of fire extinguisher to the scene of a fire.
* Correctly and accurately operates the fire extinguisher.
* Acts calmly in the emergency situation.

Numerical:
* In 100% of the cases, provides the appropriate type of fire extinguisher to the scene of the fire.
* In 100% of the cases, the fire extinguisher is operated correctly.

TRAINING CONTENT

Functional:
* Understanding of the types of extinguishing agents/equipment appropriate for various classes of fire.
* How to operate various fire extinguishers.

Specific:
* Knowledge of the types and locations of fire extinguishers aboard own OSV.
* Knowledge of any specified emergency procedures.

TASK CODE: DECKHAND-IX.A.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	25	1A	5	2A	70	2	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Dons self-contained breathing apparatus by manipulating straps, clips, valves, levers and mask, and reads dials, using experience gained from drills/training, in order to safely combat a fire in a closed space upon the directions of the mate.

PERFORMANCE STANDARDS

Descriptive:
* Properly dons a self-contained breathing apparatus.
* Correctly operates and monitors the proper functioning of the self-contained breathing apparatus.
* Acts calmly in the emergency situation.

Numerical:
* In 100% of the cases, the self-contained breathing apparatus is properly donned and operated.

TRAINING CONTENT

Functional:
* Knowledge of the types of various self-contained breathing apparatus.
* How to don and operate a self-contained breathing apparatus.
* Knowledge of the limitations of various types of self-contained breathing apparatus.

Specific:
* Knowledge of the type and location of self-contained breathing apparatus equipment on own OSV.
* Knowledge of the specified emergency prodecures on own OSV.

TASK CODE: DECKHAND-IX.A.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	15	2	15	2A	70	2	2	1	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Combats the fire using self-contained breathing apparatus, portable fire extinguishers, fire hoses, fire axes, etc., and own experience and knowledge gained from drills/training, under the direct supervision of the mate, in order to contain and extinguish a fire.

PERFORMANCE STANDARDS

Descriptive:
* Correctly handles/operates fire fighting equipment aboard the OSV.
* Promptly carries out assignments.
* Acts calmly in the emergency situation.

Numerical:
* In 100% of the cases, the fire fighting equipment is properly utilized to contain or extinguish the fire.

TRAINING CONTENT

Functional:
* Understanding of shipboard fire fighting techniques.
* How to operate a multi-purpose nozzle.
* How to operate portable fire extinguishers.
* How to don and operate a self-contained breathing apparatus.
* Understanding of signals used to tend a lifeline.

Specific:
* Knowledge of the types and locations of portable fire extinguishers aboard own OSV.
* Knowledge of the types and locations of self-contained breathing apparatus equipment aboard own OSV.
* Knowledge of the specified emergency procedures used on own OSV.

TASK CODE: DECKHAND-IX.A.6

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	1A	25	2A	55	1	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of fire aboard the OSV.

TASK: Overhauls the fire and stands a reflash watch, using experience gained from drills/training, under the direct supervision of the mate, in order to ensure that the fire is completely extinguished and will not reflash.

PERFORMANCE STANDARDS

Descriptive:
* Fire is overhauled properly.
* Stands an alert reflash watch as directed.
* Remains calm in the emergency.

Numerical:
* In 100% of the cases, an overhauled fire does not reflash.

TRAINING CONTENT

Functional:
* How to overhaul a fire and gear required.
* Understanding of the importance of a reflash watch.
* How to operate a portable fire extinguisher.

Specific:
* Knowledge of the type and location of gear on own OSV that can be used to overhaul a fire.

TASK CODE: DECKHAND-IX.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	15	2	35	1C	50	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Manipulates buttons, switches, levers of alarm and/or communications system, in order to sound the alarm and/or issue an OSV-wide alert, using knowledge of the characteristics of the internal communications equipment and alarm system, and in accordance with specified emergency procedures and standard signal codes for collision or flooding emergencies.

PERFORMANCE STANDARDS

Descriptive:
* Correctly operates control switches of the alarm device(s) and internal communications system.
* Acts calmly in the emergency situation.
* Correctly follows applicable procedure.
* Clearly sounds the signal or message so that it is heard by the entire crew.

Numerical:
* In 100% of the cases, sounds the alarm immediately upon seeing or hearing about an emergency situation.

TRAINING CONTENT

Functional:
* How to operate the internal communications systems, e.g., sound-powered phone, PA system, intercoms, etc.
* How to operate the emergency alarm systems.
* Understanding of emergency procedures and ability to communicate these to others.

Specific:
* Knowledge of the type and location of internal communications systems and alarm system on own OSV.
* Knowledge of the emergency alert procedures, including standard signals and messages.

TASK CODE: DECKHAND-IX.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	10	1A	80	1A	10	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Minimize the effects of collision, flooding or grounding.

TASK: Proceeds to the scene of the collision and/or flooding and makes himself available to perform damage control tasks as ordered by the master, mate and/or chief engineer, in order to minimize flooding.

PERFORMANCE STANDARDS

Descriptive:
* Promptly completes tasks assigned.
* Properly secures watertight doors, hatches and vents.
* Remains calm during the emergency situation.

Numerical:
* In 100% of the cases, performs damage control tasks as assigned to minimize flooding.

TRAINING CONTENT

Functional:
* How to secure watertight doors, hatches and vents.
* How to use hand/power tools.
* General knowledge of basic damage control techniques and procedures.

Specific:
* Knowledge of the types and locations of tools and materials available for emergency repairs aboard own OSV.

TASK CODE: DECKHAND-IX.C.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	90	1A	5	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Hails and passes "man overboard port (starboard) side" to the bridge, using voice, in order to alert personnel of a man overboard emergency.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and loudly passes the warning to the bridge.
* Acts calmly in the emergency situation.

Numerical:
* In 100% of the cases, personnel are immediately alerted to a man overboard emergency.

TRAINING CONTENT

Functional:
* Understanding of the importance of passing information to the bridge.
* How to clearly shout a warning.

Specific:
* Knowledge of the specified emergency procedure on own OSV.

TASK CODE: DECKHAND-IX.C.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	5	1A	85	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Throws a life ring and float light overboard, upon hearing the signal "man overboard", in order to provide floatation material to the person in the water.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and accurately throws the life ring and float light overboard to the person in the water.
* Acts calmly in the emergency situation.

Numerical:
* In 100% of the cases, a life ring and float light are thrown near the person in the water.

TRAINING CONTENT

Functional:
* How to detach and throw a life ring and float light overboard.

Specific:
* Knowledge of the types and locations of life rings and float lights aboard own OSV.

TASK CODE: DECKHAND-IX.C.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	2	85	1A	5	1	1	2	3

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Points the the person in the water and continually advises the bridge of the relative position of the person in order to provide the master with a reference point.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and loudly passes correctly the relative positions and distances to the bridge of the person in the water.
* Keeps the person in the water in sight during the OSV's maneuvers.
* Remains calm during the emergency.

Numerical:
* In 100% of the cases, the person in the water is kept in sight.

TRAINING CONTENT

Functional:
* How to estimate relative positions and distances.
* How to function as a lookout.
* Knowledge of the proper terminology for passing positions and distances.

Specific:
* Knowledge of the specific emergency procedures for own OSV.

TASK CODE: DECKHAND-IX.C.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	20	1A	70	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Provides heaving line, life ring, ladder, cargo net and first aid kit, using experience gained from drills/training, in order to recover the person in the water.

PERFORMANCE STANDARDS

Descriptive:
* Promptly provides to the recovery position appropriate gear for recovering the person in the water.
* Remains calm in the emergency situation.

Numerical:
* In 100% of the cases, gear for recovering the person in the water is provided at the recovery location.

TRAINING CONTENT

Functional:
* Knowledge of the methods for recovering a person in the water.
* Knowledge of the gear available to assist the person in the water, i.e., life ring, heaving lines, etc.

Specific:
* Knowledge of the location of the gear available aboard own OSV to assist a person in the water.

TASK CODE: DECKHAND-IX.C.5

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	2	15	2A	80	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to a man overboard situation.

TASK: Recovers the person in the water using a life ring, heaving line, cargo net, rescue boat or swimming ability, under the direct supervision of the mate and the master, in order to safely bring the person aboard.

PERFORMANCE STANDARDS

Descriptive:
* Safely and expeditiously recovers the person in the water.
* Safely launches the rescue boat under the supervision of the mate and/or master.
* Remains calm during the emergency.

Numerical:
* In 100% of the cases, the person in the water is safely recovered.

TRAINING CONTENT

Functional:
* Knowledge of the methods of recovering a person in the water.
* How to use a life ring or heaving line.
* How to launch a rescue boat.
* How to deploy a ladder or cargo net.

Specific:
* Knowledge of the procedures for launching own OSV's rescue boat.
* Knowledge of the procedures for deploying a ladder or cargo net.

TASK CODE: DECKHAND-IX.D.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	5	1A	5	1A	90	1	1	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon the OSV safely and expeditiously.

TASK: Manipulates the clips and straps of a life preserver, using experience and accepted method of securing, in order to properly don the life preserver.

PERFORMANCE STANDARDS

Descriptive:
* Promptly and correctly dons the life preserver.
* Remains calm and alert while donning the life preserver.

Numerical:
* In 100% of the cases, the life preserver is donned properly.

TRAINING CONTENT

Functional:
* How to properly don a life preserver.
* Knowledge of life preserver stowage aboard the OSV.

Specific:
* Knowledge of the type, location and number of life preservers aboard own OSV.

TASK CODE: DECKHAND-IX.D.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	25	2	60	1C	15	1	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon the OSV safely and expeditiously.

TASK: Arouses sleeping crew members using voice, internal communications systems, general alarm and ship's whistle, as directed by the master, in order to ensure all personnel are alert and aware of the order to prepare for abandoning the OSV.

PERFORMANCE STANDARDS

Descriptive:
* Promptly arouses all sleeping crew members.
* Carries out the tasks assigned by the master promptly.
* Acts calmly in the emergency situation.

Numerical:
* In 100% of the cases, all crew members are alerted to the abandon ship emergency.

TRAINING CONTENT

Functional:
* How to operate internal communication equipment.
* How to operate the general alarm and ship's whistle.
* Knowledge of the procedures for abandoning an OSV.

Specific:
* Knowledge of the location of all personnel aboard own OSV.
* Knowledge of the specified emergency procedure.

TASK CODE: DECKHAND-IX.D.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	40	1B	20	1A	40	1	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon the OSV safely and expeditiously.

TASK: Proceeds to the life raft station with the required gear, using experience gained from drills/training, in order to stand-by for orders to abandon the OSV in accordance with the Station Bill.

PERFORMANCE STANDARDS

Descriptive:
* Immediately proceeds to the life raft station.
* Promptly performs the tasks assigned while standing-by to abandon ship.
* Remains calm during the emergency situation.

Numerical:
* In 100% of the cases, the required gear is provided at the life raft.
* In 100% of the cases, all assigned tasks are performed.

TRAINING CONTENT

Functional:
* Understanding of the Station Bill.

Specific:
* Knowledge of the specified emergency procedure aboard own OSV.
* Knowledge of the types and locations of various lifesaving gear aboard own OSV.

TASK CODE: DECKHAND-IX.D.4

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	10	1A	15	1A	75	2	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Abandon the OSV safely and expeditiously.

TASK: Launches the life raft using a painter line and experience gained during drills/training, in order to safely abandon the OSV in accordance with the orders and directives from the master and the mate.

PERFORMANCE STANDARDS

Descriptive:
* Correctly prepares and safely launches the life raft(s).
* Properly inflates the life raft in the water.
* Remains calm during the emergency situation.

Numerical:
* In 100% of the cases, the life rafts are launched and inflated correctly.

TRAINING CONTENT

Functional:
* How to launch a life raft.
* How to release the hydrostatic release.
* How to secure the painter line when launching a life raft.
* How to inflate a life raft.

Specific:
* Knowledge of the procedures for launching a life raft from own OSV.

TASK CODE: DECKHAND-IX.E.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
1	30	1A	20	1A	50	1	2	1	1

GOAL: Perform emergency response procedures.

OBJECTIVE: Ensure the OSV is prepared for heavy weather.

TASK: Assists as required in securing cargo, gear, equipment and watertight doors, hatches and vents, using own experience and under the supervision of the mate and/or master in order to prevent injuries to personnel, damage from missile hazards and shifting cargo, and ensure watertight integrity.

PERFORMANCE STANDARDS

Descriptive:
* Potential missile hazards are removed or eliminated.
* Properly and correctly secures all watertight doors, hatches and vents as directed.

Numerical:
* In 100% of the cases, potential missile hazards and shifting cargo are secured.
* In 100% of the cases, watertight doors, hatches and vents are secured.

TRAINING CONTENT

Functional:
* Knowledge of the methods of securing various gear, cargo, tools and equipment.
* How to secure watertight doors, hatches and vents.
* Physical ability to move and manipulate heavy and/or bulky objects.

Specific:
* Knowledge of own OSV's confirguation for securing gear, cargo, tools and equipment.
* Knowledge of the type, number and location of watertight doors, hatches and vents.

TASK CODE: DECKHAND-IX.F.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER INSTRUCTIONS	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%		REASONING	MATH	LANGUAGE
3B	30	4C	50	1A	20	3	4	2	4

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Provides first aid to victims of the disaster/accident scene if possible or feasible, and obtains additional assistance if necessary in order to give immediate care and prevent further injury to the victims, using knowledge of first aid procedures for various kinds of injuries, of available medical kits and manuals, and giving evidence of the willingness to aid, reassure and encourage injured person(s).

PERFORMANCE STANDARDS

Descriptive:
* Correctly uses first aid kits, procedures and manuals.
* Uses good judgement in moving injured personnel.
* Promptly provides first aid and calls for any required additional medical assistance.
* Promotes confidence in the victim by demonstrating compentence and acting calmly.

Numerical:
* In 100% of the cases, medical attention is given in all cases where required.
* In 100% of the cases, never moves an injured person until an examination has been made of all injuries.

TRAINING CONTENT

Functional:
* Understanding of the procedures used to treat various kinds of injuries, including the rules for moving injured personnel.
* How to read and interpret first aid/medical manuals.
* How to use first aid equipment, e.g., stimulants, tourniquets, bandages, splints, etc.
* How to reassure and encourage the victim.

Specific:
* Knowledge of the location and contents of first aid/medical kits and manuals on own OSV.
* Knowledge of the company's guidelines for obtaining additional assistance.

TASK CODE: DECKHAND-IX.F.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	70	2	25	1A	5	1	1	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Provides all pertinent information/circumstances of any injury, accident, illness or death to the master in order to enable the master to document in the rough log the incident and complete all reports, in accordance with government regulations and company's/charterer's policies.

PERFORMANCE STANDARDS

Descriptive:
* Clearly and accurately describes to circumstances surrounding an injury, illness or death.

Numerical:
* In 100% of the cases, all information required to document an accident, injury, illness or death is provided to the master.

TRAINING CONTENT

Functional:
* Knowledge of the information required, i.e., name of person, date, time, circumstances, etc.

Specific:
* Knowledge of the company's guidelines and policy on personnel injuries, illnesses and deaths.

TASK CODE: DECKHAND-IX.F.3

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
2	90	1A	5	1A	5	1	2	1	2

GOAL: Perform emergency response procedures.

OBJECTIVE: Respond to personnel injuries, illnesses or deaths.

TASK: Ascertains the accuracy of the master's entry into the rough log of any accident, injury or illness involving himself, in order to make additional comments in the log to clarify any errors.

PERFORMANCE STANDARDS

Descriptive:
* Accurately describes the circumstances surrounding an injury, illness or accident.
* Entry in the rough log is legible.

Numerical:
* In 100% of the cases, the rough log entry of an accident, illness or injury is accurate and legible.

TRAINING CONTENT

Functional:
* Understanding of the entries to be made in a rough log.
* How to make an entry in a log.

Specific:
* Knowledge of the rough log kept on own OSV.

TASK CODE: DECKHAND-X.A.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	35	2	60	1A	5	1	1	1	2

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: To become fully qualified in the tasks required of a deckhand.

TASK: Strives to gain knowledge and skills by remaining alert, asking meaningful questions and seeking on-the-job training, in order to perform the tasks required of a deckhand and to prepare himself for further advancements.

PERFORMANCE STANDARDS

Descriptive:
* Displays an active interest in bettering himself.

Numerical:
* In 100% of the cases, knowledge and skills are developed above the minimum.

TRAINING CONTENT

Functional:
* Understanding of the nature and scope of the work tasks performed by a deckhand.
* Knowledge of OSV operations.

Specific:
* Knowledge of own company's training policies and programs.

TASK CODE: DECKHAND-X.B.1

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	60	1A	5	1A	35	2	1	1	1

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Develop an awareness of personal and preventive safety.

TASK: Practices common sense and has an awareness of personal and preventive safety measures, using own knowledge of the inherent hazards of shipboard work, and develops a safety consciousness in order to avoid injuries.

PERFORMANCE STANDARDS

Descriptive:
* Avoids needless injuries by being safety conscious.
* Is alert to the potential hazards of shipboard work.
* Performs task assignments without injury to himself or fellow crew members.

Numerical:
* In 100% of the cases, injuries are reduced through an awareness of personal and preventive safety.

TRAINING CONTENT

Functional:
* Understanding of the types of hazards common to vessels.
* Knowledge of protective clothing, i.e., safety shoes, work gloves, safety goggles, ear protection, etc.

Specific:
* Knowledge of the established company policy on personal and preventive safety.

TASK CODE: DECKHAND-X.B.2

WORKER FUNCTION LEVEL AND ORIENTATION						WORKER	GENERAL EDUCATIONAL DEVELOPMENT		
DATA	%	PEOPLE	%	THINGS	%	INSTRUCTIONS	REASONING	MATH	LANGUAGE
1	20	2	50	2A	30	1	2	2	2

GOAL: Train/supervise OSV personnel in the safe conduct of OSV operations.

OBJECTIVE: Develop an awareness of personnel and preventive safety.

TASK: Reports to the master and takes prompt action to correct potential safety hazards, using necessary tools, materials and own experience, in order to prevent injuries.

PERFORMANCE STANDARDS

Descriptive:
* Remains alert to potential safety hazards.
* Promptly reports potential safety hazards to the master.
* Immediately takes corrective action to eliminate the hazardous condition/situation.

Numerical:
* In 100% of the cases, the master is made aware of potentially hazardous situations.
* In 100% of the cases, potential hazards are corrected.

TRAINING CONTENT

Functional:
* Understanding of the importance of reporting and correcting potentially hazardous situations.
* How to use hand/power tools.
* Knowledge of the characteristics of various materials, i.e., wood, aluminum, steel, etc.

Specific:
* Knowledge of OSV operations and the inherent dangers of offshore work.
* Knowledge of the types and locations of tools and materials for making repairs.

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