NAVAL PERSONNEL RESEARCH & DEVELOPMENT LABORATORY

WASHINGTON, D.C. 20390

WRR 70-4

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BIBLIOGRAPHY AND ABSTRACT OF TECHNICAL REPORTS JULY 1968 to JUNE 1969

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FOREWORD

APPROVED

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SUMMARY

This bibliography contains abstracts of reports published from July 1968 through June 1969 (Fiscal Year 1969) by the Naval Personnel Research and Development Laboratory, Washington, D. C.

Three types of technical reports are normally published:

(1) Technical Bulletins (WTB) describe technical details of interest to research personnel.

(2) Research Reports (WRR) are for extensive dissemination of findings to operational personnel.

(3) Research Memoranda (WRM) describe work or findings of limited scope which are published because of immediate value to specific users.

A fourth type of report is published, Staff Studies (WSS). Frequently, these reports reflect research findings which are of potential value to the scientific community. When accepted by the Defense Documentation Center as such, they are included as part of this bibliography.

Classified publications listed in this bibliography are not available for general distribution, but may be obtained on a "need-to-know" basis. Qualified users may request copies of reports from the Defense Documentation Center, Cameron Station, Alexandria, Virginia, 22314. Documents which are unclassified and for which distribution is otherwise unlimited may be requested from the Clearinghouse for Federal Scientific and Technical Information, U. S. Department of Commerce, Springfield, Virginia, 22151. The DDC Availability Number (AD), which should be specified when ordering documents from DDC, is shown for each report where the number is known.

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Fleet Ballistic Missiles

Manning and Training Requirements for the 640 Class SSB(N) Weapons and Navigation Departments. WRR 69-2, March 1969. J. L. Wilson. DDC Availability No. AD 500 498L. (CONFIDENTIAL).

This report contains descriptions and analyses of technical billets located in the Weapons and Navigation Departments of 640 Class SSB(N)'s. The report delineates five alternate personnel and training programs to support 616, 627, and 640 Class SSB(N)'s after overhaul to POSEIDON.

Re-Entry Body (REB) Training Implications. WRR 69-5, March 1969. W. J. Pawlowski. DDC Availability No. AD 500 851L. (CONFIDENTIAL).

This report analyzes the skills and knowledges that are required of personnel who will be involved in processing the POSEIDON Re-Entry System at the POLARIS Missile Facility. Atlantic and on board Tenders supporting POSEIDON equipped SSBN's. Minimal training requirements and a recommended training plan are contained in this study. Additionally, the GMT and TM ratings were analyzed to determine the capability of these personnel to support the POSEIDON Re-Entry System.

Ordnance

Preliminary Staffing and Training Requirements for Second Generation CHAFFROC Systems. WRM 69-16, March 1969. T. G. Gentel. DDC Availability No. AD 850 794L. (UNCLASSIFIED).

This report contains a system description and tentative staffing and training requirements for the second generation CHAFFROC systems.

Surveillance

Maintenance Skills and Knowledge Commonalities for Surface Sonar Technician Profile. WRM 69-1, August 1968. H. M. Worth, J. A. Nobile, and J. A. Gandy. (UNCLASSIFIED).

This report identifies maintenance skill and knowledge areas which are common across sonar equipment functions and sub-functions for selected Sonar Naval Enlisted Classification Codes (NECs 0407, 0418, 0419, and 0421). The information is intended to assist in the development of new training requirements and programs through identification of common skill/knowledge requirements which exist among different surface sonar systems.

AN/SQS-26BX Maintenance Training Feedback Study. WRM 69-2, August 1968. R. G. Schaefer. DDC Availability No. AD 394 434L. (CONFIDENTIAL).

This Research Memorandum contains the results of a systematic solicitation of comments and opinions of selected graduates of the AN/SQS-26BX Class "C" Maintenance course, concerning course coverage and effectiveness. Proposals for course improvements, based on data obtained, are included.

Preliminary Personnel and Training Implications for the Submarine Towed Array and Sonar Receiving System (AN/BQR-15(XN-1). WRM 69-5, August 1968. H. L. McLinden. DDC Availability No. AD 393 806. (SECRET).

The AN/BQR-15(XN-1) Sonar Receiving Set, formerly designated as the Submarine Towed Acoustic Array (U) is to provide nuclear submarines with long range target detection and classification capability of high performance targets that will be degraded by shipboard self-noise.

Preliminary manning and training implications are discussed as related to existing ship's allowance. Some suggestions are advanced on the feasibility of personnel and training trade-offs and common core curriculum for new sensors being developed employing the "towed array" principle.

Surveillance (Continued)

Submarine Sonar Handbook. WRM 69-11, October 1968. L. D. Snyder, Jr. DDC Availability No. AD 395 475L. (CONFIDENTIAL).

The Submarine Sonar HANDBOOK presents a single source reference document concerning sonars, associated sonar equipments, and the related manning and training requirements for all active and planned submarines.

In addition to providing Navy planners concerned with new equipments or manpower allocations the relation between new equipments and personnel interfaces, the Handbook shows a list of the sonars aboard and the STS construction or planned submarine for installation are indicated separately. The maintenance and operation personnel requirements are outlined showing the applicable rating and NEC, if any, associated with the planned equipment installations.

Personnel and Training Requirements for the Interim Towed Array Sonar System. WRM 69-12, December 1968. R. G. Schaefer and J. A. Nobile. DDC Availability No. AD 394 871L. (SECRET).

This Research Memorandum contains a general description of the Interim Towed Array Sonar System (ITASS), and presents personnel and training requirements to support this system.

Training Feedback Study for the AN/BQQ-1A and 1B Maintenance Course. WRM 69-13, February 1969. W. H. Primas, Jr. DDC Availability No. AD 500 663L. (CONFIDENTIAL).

This study provides training feedback data on the AN/BQQ-1 maintenance course for use as a guide for updating or modifying existing course curriculum. This memorandum on a field survey of course graduates, instructors and sonar officer personnel associated with the AN/BQQ-1 illustrates an experimental approach used to isolate problem subject areas of the current curriculum to provide a basis for course modification or improvement. Several statistical techniques are employed to interpret the results obtained through face-to-face interviews, graduates' course evaluations, graduates' retention test scores as compared with instructors'

scores and consensus judgments of all personnel surveyed. The curriculum oriented survey and especially constructed retention test was administered to twenty-eight sonar technicians aboard thirteen (13) Nuclear Fast Attack Submarines as one sample, and fifteen (15) instructors as a sample control group. Judgments on adequacy of training for each sub-area of the curriculum was obtained as well as identification of related problem areas such as logistic support, equipment accessibility and layout that are encountered by Fleet Personnel. While some new insights are offered for improving curriculum by the training feedback approach utilized, additional research is planned using larger populations.

An Analysis of the Personnel and Training Implications of the Production Hindsight Sonar System (AN/BQR-16). WRM 69-25, June 1969. J. S. Carra. DDC Availability No. AD 502 454L. (CONFIDENTIAL).

Manning and training requirements for a production HINDSIGHT system are presented together with a detailed system description and system maintenance philosophy. Also discussed is the SIMM (Symbolic Integrated Maintenance Manual) technique, a new maintenance concept in fault diagnostics.

Personnel now located aboard SSBN submarines will suffice to operate and maintain the HINDSIGHT system. Operator and maintenance training, however, will be required and recommendations herein are to be phased into both fleet training and Navy school courses.

OPERATIONAL SUPPORT SYSTEMS

Personnel and Training Requirements for the Improved Rearming Rates Project (IIRP). WRM 69-3, August 1968. C. J. Barron and G. E. Mierke. DDC Availability No. AD 843 635L. (UNCLASSIFIED).

This report contains estimates on personnel and training requirements for the Improved Rearming Rates Project (IIRP). Three different approaches are described for installing the equipment aboard CVA's: (1) The Mechanized Handling System, (2) The Simplified Mechanized Handling System, and (3) The Fork Lift Truck Handling System.

The study had to be approached from two separate directions: (1) BuPers responsibility for the shipboard portion (equipment aboard the CVA with a shipboard responsibility), and (2) the Deputy Chief of Naval Operations (DCNO) responsibility for the aviation portion (equipment assigned to support an aviation function or aviation equipment).

An Advance Appraisal of the Personnel Research Requirements of the Beach Jumper Units (APPRN-5). WRM 69-8, October 1968. M. A. Schwartz and D. E. Wagner. DDC Availability No. AD 395 207L. (SECRET).

Beach Jumper Units (BJU's) are responsible for developing testing, operating and maintaining unique and highly sophisticated equipment and material. Missions of BJU's require specially trained and extremely skilled operators and maintenance men.

Through discussion with responsible personnel in OPNAV and with BJU personnel, several important problems were identified and analyzed. These problems dealt with personnel selection, retention, and training.

A report summarizing the results of the personnel research requirement analysis was prepared. It recommended that specific analyses of existing personnel problems be conducted and suggested a continuing effort aimed at the identification and solution of future BJU personnel problems.

Manning and Training Requirements for Swimmer Support and Weapons Systems. WRM 69-17, March 1969. S. B. Coleman and N. R. Skoog. DDC Availability No. AD 500 755L. (CONFIDENTIAL).

This report investigates the manning and training requirements of the Navy Underwater Demolition and Sea Air Land Teams as affected by the introduction of new equipments under the Swimmer Support and Weapons Systems.

COMMAND SUPPORT SYSTEMS

U. S. Navy Tactical Satellite Communications Program (Preliminary Personnel and Training Estimates). WRM 69-4, August 1968. E. Zweiban. DDC Availability No. AD 394 872L. (CONFIDENTIAL).

This report provides early information regarding preliminary personnel and training requirements; prepares a basis for future personnel research studies; provides an initial comparison between IDCSP (DCSP Phase I) and Tactical Satellite Communications.

ECM/ELINT Operator Qualifications and Requirements for SSN Class Submarines. WRM 69-20, March 1969. H. S. Cain and G. J. Spiro. DDC Availability No. AD 501 204L. (SECRET).

This report identifies procedural skills and knowledges necessary for qualification as a submarine ECM/ELINT operator, provides guidelines for interim operator training and identifies necessary training equipments.

Personnel and Training Requirements for the FBM Submarine "IN EXTREMIS" Communications System. WRM 69-21, April 1969. M. Satchwell and J. F. DeLuca. DDC Availability No. AD 501 849L. (CONFIDENTIAL).

This memorandum reports the results of an initial investigation of the manning and training requirements that will be generated by the introduction of the FBM Submarine "IN EXTREMIS" Communications System. The system has been assigned the nomenclature AN/BST-1, and is titled "Submarine Emergency Communications System (SECT)."

The report contains a brief analysis of the mission for the FBM submarine, present emergency communications equipments which support these missions, a functional analysis of the SECT system, special environmental characteristics which affect operational and maintenance requirements, and recommendations for personnel allowances and training requirements.

Factory Training Course Analysis for the Ship's Self-Contained Navigation System (SSCNS). WRM 69-24, May 1969. E. F. McGonagle. DDC Availability No. AD 852 446L. (UNCLASSIFIED).

This study examines the factory training course on the Miniature Inertial Navigation System (MINS) (the Ship's Self-Contained Navigation System [SSCNS] minus the radiometric tracker). As a result of this course evaluation, subject areas requiring additional emphasis or less emphasis can be reworked and the change incorporated in the Navy formal training.

Maintenance Training Implications for the AN/SPN-43 Air Traffic Control Radar. WRM 69-26, May 1969. L. T. Germaine, J. C. Hamilton and J. J. Stack. DDC Availability No. AD 502 470L. (CONFIDENTIAL).

This study is the third in the series of personnel research reports on All Weather Carrier Landing Systems (AWCLS). The purpose of this study is to provide the Naval Air Technical Training Center (NATTC) Glynco, Georgia with information for maintenance training planning. The latest system modifications and change summaries has been included to aid planners at ship and shore sites in keeping abreast of system modifications. (This study also points out the need that the ET-1502 and ET-1524 NECs be retained to identify the AN/SPN-43 and AN/SPN-6 respectively, trained technician until the AN/SPN-6 is phased out; at which time, the ET-1524 NEC may be deleted).

Personnel and Training Requirements for the Direct Altitude Identify Readout (DAIR) System. WRM 69-29, June 1969. J. J. Stack and E. F. McGonagle. DDC Availability No. AD 855 250L. (UNCLASSIFIED).

Personnel training estimates for the operation and maintenance of DAIR are set forth in terms of rates, ratings, specific courses, course duration, and curriculum breakdown.

NAVAL VEHICLES

Gas Turbine Propulsion - A Preliminary Review of Personnel Implications. WRM 69-10, November 1968. R. E. Willis and R. W. Gettings. DDC Availability No. AD 395 096L. (CONFIDENTIAL).

This report contains: (1) a brief general description of the characteristics of Marine Gas Turbine Propulsion Systems; (2) a short discussion of the apparent trend toward Gas Turbine Power in destroyer ships of other nations; (3) a listing of the design and manning constraints relevant to prospective DX/DXG main propulsion systems; (4) a review of previous Navy-sponsored engineering and personnel research related to Gas Turbine Destroyer main propulsion systems; (5) a description of the estimated effects on manning of different shipboard maintenance philosophies and various degrees of machinery automation; (6) a preliminary discussion of Naval and factory training facilities at which appropriate training could be offered; and (7) a preliminary assessment of projected engineering department billet/manpower availability.

Classification Model for Officers and Enlisted Personnel Associated with the Deep Submergence Vehicle Program. WRM 69-18, March 1969. H. M. Worth. DDC Availability No. AD 850 795L. (UNCLASSIFIED).

This report establishes a classification structure for officer and enlisted personnel associated with the Deep Submergence Vehicle Program. The Naval Officer Classification NOC-9322 and the Naval Enlisted Codes NEC 3501, 3503, 3505, and 3507 are intended for the immediate use of planners concerned with the training distribution, and detailing of personnel associated with the deep submergence rescue vehicle (DSRV) program.

The Special Qualification/Special Designation (SQ-SD) identifies 015 Deep Submergence Vehicle Operator has been established for immediate use in the officers automated record. This input to the automated record allows for quick retrieval of personnel who are certified as deep submergence vehicle operators.

Personnel and Training Requirements for the Deep Dive System MK2. WRR 69-7, May 1969. W. H. Scheu and K. H. Purdy. DDC Availability No. AD 854 260L. (UNCLASSIFIED).

This study analyzes the manning and training requirements for the new Deep Dive Systems to be installed in the new catamaran ASR's. Training requirements and a training plan are recommended in this study for the DDS MK2, the Underwater Breathing Apparatus MK VIII and MK IX and saturation diving qualification training. This training provides for interim and future training to be conducted at the new Naval School Diver Salvage.

PERSONNEL STANDARDS

Design of an Optimum Navy Enlisted Classification Structure: Preliminary Report on Current Needs and Problem Areas. WRM 69-19, May 1969. N. A. Hrutkay, R. L. Black and W. R. Carraway. DDC Availability No. AD 855 566. (UNCLASSIFIED).

This report presents a compilation of information bearing on the administrative operations of the NEC system acquired through interviews with 66 Navy and civilian personnel at 35 naval establishments.

Included in the forepart of the report is an analysis of the data and information pertaining to problems encountered with the use of the NEC Manual, billet identification, detailing personnel to billets, BUPERS-EPDO-PAMI-TYCOM administrative operations, personnel cross-trained by OJT, Enlisted Personnel Schools Data System, the Enlisted Rating Structure, and Navy Aviation NECs.

Included in the latter portion of the report is a presentation of the interviewees' opinions regarding paygrading NECs, and their comments relative to the need of an all-digit NEC/MOS/AFSC type coding system. NECs to identify personnel with supervisory and managerial skills, advancement examinations based on NECs, and a method of skill-level progression appropriate to the identification of four-year obligor (enlistee) requirements.

Job Analysis: Design of a System for Navy Use. WRM 69-22, May 1969. M. E. Johnson and R. B. Wethy. DDC Availability No. AD 854 735. (UNCLASSIFIED).

The report describes the design, development, and pilot test of procedures for an occupational analysis system suitable for Navy use. Sample print-outs, tables, and charts reflecting end products of the system are presented. A Navy-wide field test of the system under operational conditions is recommended as a step in establishing a Navy Occupational Data Bank.

Enlisted Billet Evaluation: Selection and Pilot Test of Factors for Navy Use. WRM 69-27, May 1969. A. J. Rose and R. B. Wethy. DDC Availability No. AD 857 195. (UNCLASSIFIED).

This research report deals with the development and pilot test of a job evaluation system designed to reflect specific requirements of Navy enlisted billets. The report assesses the effectiveness of an information gathering instrument. Designed for use in a closely related project (Design of Navy Occupational Analysis Systems) i.e., as a method for obtaining occupational information for use in evaluating billets.

Proposed Techniques for Determining the Relative Importance of the Advancement Qualifications. WRR 69-3, September 1968. M. D. Callahan, N. A. Hrutkay, T. B. Turner, and A. J. Rose. DDC Availability No. AD 844 009. (UNCLASSIFIED).

This research report describes the data reduction and analysis phase of the proposed techniques for determining the relative importance of Navy advancement qualifications. The quantitative techniques are applied to the data collected through the Data Systems Technician survey and are deemed suitable for the treatment of similar data on all Navy evaluative support to the writers of advancement examinations, training publications writers, and personnel engaged in updating qualifications for advancement in rating.

PERSONNEL SURVEYS

Motivational Effects of the Associate Degree Completion Program, Report 3. WSR 69-1, September 1968. T. W. Muldrow. DDC Availability No. AD 840 757. (UNCLASSIFIED).

This report describes the results of the third in a series of studies which are being conducted to aid in evaluating the career motivation value of the Associate Degree Completion Program (ADCOP) for career enlisted personnel.

Survey questionnaires were mailed to the 36 men and one WAVE who comprised the second ADCOP graduating class. Questions on this survey dealt with service and personal background, career motivation, and opinions of ADCOP.

Findings show that the majority of the graduates are in paygrades E-6 and E-7. They have at least 10 years, AFMS, plan to remain on active duty until eligible for retirement, and hope to attain at least a bachelor's degree. Most of the graduates were satisfied with the quality of instruction they received and felt prepared to handle the course work. The students generally praised the program highly.

Veteran Naval Aviator Survey. WSR 69-2, September 1968. R. W. Deimel and S. S. Stumpf. DDC Availability No. AD 840 761. (UNCLASSIFIED).

A survey questionnaire was administered in March 1968 to veteran naval aviators in an effort to: (1) determine how many veteran Navy pilots who left active duty since 1963 with the rank of LCDR and below are now employed as commercial airline pilots; (2) determine if and how much of a monetary inducement would be sufficient to attract veteran pilots to return to active duty for periods ranging from one to five years; and (3) compare these findings with those of a similar study conducted two years ago.

Sixty-eight percent of the respondents were presently employed as commercial airline pilots. Eight in ten of those employed as airline pilots obtained their employment imme diately upon separation from active duty. The median salary for commercial airline pilots was $15,120 compared with $11,110 for those never employed by the airlines.

The longer the proposed period of return to active duty (from 1-5 years), the more respondents would not return for any amount of money. The percentage of those who were presently airline pilots who said they would not return ranges from 67% for one year to 81% for five years. Compared with 59% and 67% respectively for the non-pilots. It would require about 1 1/2 to 2 times the amount of bonus money to induce airline pilots to return to active duty than to induce the non-pilots.

Attitudes and Experiences of Naval Personnel Relating to Morale Services, NPS 66-1. WSR 69-3, October 1968. DDC Availability No. AD 845 188. (UNCLASSIFIED).

This periodic Naval Personnel Survey was conducted in August/ September 1966, to ascertain the attitudes and experiences of a worldwide, all Navy sample of approximately 8% of the officers (N=5,392) and 6% of enlisted personnel (N=20,943).

Topic areas of the study include a wide range of subjects such as service experiences and background, career plans, All Hands magazine, library services, and incentive pay. Attitudes and expressions of male officers and enlisted men are presented giving a clear picture of the feelings of the fleet. Responses to all questions are displayed by paygrade. Because the sample agrees adequately with the population in regard to paygrade, the responses can be utilized with assurance that they accurately reflect the feelings of the population.

An Attitudinal Study of Resigned/Retired Nuclear Trained Submarine Officers. WSR 69-4, April 1969. T. W. Muldrow. DDC Availability No. AD 851 868. (UNCLASSIFIED).

This report reveals the results of an exploratory study on the attitudes, opinions, and experiences of former Nuclear Power Trained Submarine Officers regarding various aspects of the nuclear submarine service.

Survey questionnaires were mailed to all resigned/retired Nuclear Power Trained Submarine Officers for whom a mailing address was available (N=127). Questions dealt with service experience, incentives, and post Navy experiences. Two write-in questions were included which requested the respondent to recommend changes which he felt would increase the career attractiveness of the submarine service.

Findings show that the majority of the respondents were lieutenants when they left active duty and were graduates of the Naval Academy. The majority of the respondents would not be willing to return to active duty for any amount of money. Many indicated a willingness to return if certain changes were made in the submarine service. Forty-nine percent of the respondents are presently in positions which are related to their nuclear power training and experience. Presently, 10% of these ex-submarine officers are enrolled in graduate schools. There were two basic dissatisfactions with the submarine service - lack of personal and professional development, and lack of stability of family life.

Recruitment Survey - Motivational Factors Influencing Enlistment Decision. WSR 69-5, May 1969. R. W. Deimel and E. H. Blakelock. DDC Availability No. AD 853 810. (UNCLASSIFIED).

This report contains the results of a survey conducted to determine the motivational factors affecting the enlistment decision in 1968. Where possible, the results of this survey were compared to those of a similar study conducted in 1967.

Questionnaires were sent to the Recruiter-in-Charge at all Navy Recruiting Stations, Branch Stations, and Sub-Stations, with instructions to survey every man who applied for enlistment during the week of 9-14 September 1968. Information was obtained on the respondents' backgrounds, their reasons for enlisting in the Navy and their career plans. Responses were received from 2,926 men.

Personal Reasons were the foremost influences in the 1968 Enlistment Decision.

The Navy Recruiter was the single most influential personal contact.

Publicity, both Navy and civilian in origin, exerted considerable positive influence upon the enlistment decision. The High School News Service Report, however, exerted only negligible influence.

The relative impact on the reenlistment decision of items within Personal Reasons and within Navy Recruiting Publicity did not change substantially from 1967 to 1968. However, the percentage of individuals who were favorably influenced by these items declined somewhat during this period.

Navy Personnel Survey NPS 68-1 - Reactions and Experiences of Naval Personnel Relating to Career Incentives, Programs, and Benefits. WSR 69-6, May 1969. R. W. Knitter, S. S. Stumpf and S. E. Dow. DDC Availability No. AD 854 088. (UNCLASSIFIED).

The Navy Personnel Survey is one of a series of semi-annual surveys conducted to collect attitudes and opinions about various aspects of naval service from a representative sample of Navy military personnel. This survey was administered during December 1968 and January 1969.

Topic areas in this report are: service experiences and background; career motivation; career incentives and education programs; morale and related services; and pay and retirement benefits. Information included here can be useful as a reference and also in answer to inquiries.

Basic statistical information is derived from responses to the world-wide sample of 5.5% of male officers and 2.6% of enlisted men. Officer data is presented by rank, designator, original obligation and marital status and enlisted data is presented by rate, enlistment, and marital status. With regard to rank, and rate distributions, the sample agrees adequately with the population; therefore, the responses can be utilized with reasonable assurance to reflect the actual population.

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PERSONNEL COSTS

LHA Life Cycle Costing: A Methodology. WRM 69-14, December 1968. J. L. Taylor. DDC Availability No. AD 681 742. (UNCLASSIFIED).

The purpose of this Research Memorandum is to generate a suggested prototype methodology for Life Cycle Costing of personnel integrated within a specific combative system. It should not be considered a finite methodology; rather it is the first attempt at establishing the total cost of training and maintenance personnel for a selected military unit, the Landing Helicopter Assault Ship (LHA).

Training Time and Costs for Navy Ratings and NECs. WSS 69-3, April 1969. N. J. Clary. (UNCLASSIFIED).

Reports FY 68 data on enlisted training time and costs to be used as inputs to the Career Premium Computer Program for determining Pro Pay eligibility. Specifically, it presents the training time and funds invested in enlisted personnel from initial procurement through appropriate basic training for 80 general and/or service ratings and advanced and/or specialized training for 888 Navy Enlisted Classifications (NECs).

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Surface Sonar Technician Personnel Characteristics Inventory and Training Paths. WRM 69-6, August 1968. J. A. Gandy and J. A. Nobile. DDC Availability No. AD 845 009L. (UNCLASSIFIED).

Selected personnel and training data related to the Surface Sonar Program is compiled and arranged for the purpose of meeting information needs of Navy offices and contractor personnel who require familiarization with the background, selection criteria, training paths, and inventory of Surface Sonar Technicians. Computer-assisted techniques were used where possible for retrieval, treatment, and format to provide a ready reference document for planners, developers, and managers of Surface Sonar training programs.

Submarine Sonar Technician Personnel Characteristics and Training Paths. WRM 69-15, April 1969. G. R. Bunde and R. L. Grillo. DDC Availability No. AD 852 092L. (UNCLASSIFIED).

Selected personnel and training data concerning the Submarine Sonar Technician are presented which relate to the Submarine Sonar Programs. This report contains information on: selection criteria, educational background, aptitude requirements, training content, training paths, and Navy Enlisted Classifications (NEC) inventory.

Procedures for Determining Personnel Requirements for Training Functions of Navy Fleet and Bureau of Naval Personnel Training Activities - Supervisors. WRR 69-6, May 1969. James H. Swann. DDC Availability No. AD 853 984. (UNCLASSIFIED).

This research report presents the final results of research concerned with the development of procedures for determining the number and quality of technical and training supervisors required for enlisted skill training in Navy fleet and BuPers training activities. The end product of the research is presented in Appendix B to the research report as a proposed addition (CH-1) to BuPers Instruction 1510.105 which contains procedures for determining instructor requirements for enlisted skill training.

The procedures establish the man-hour workload of supervisors as derived from the preparation and related duties of instructors, plus military duties of supervisors and then calculation of the number of supervisors required to perform the established man-hour workload.

Field tests of the procedures indicate that it provides a valid, practical, and operationally feasible way to determine supervisor requirements for Navy enlisted skill training at fleet and BuPers enlisted Schools.

BIBLIOGRAPHY REPORT

Bibliography and Abstract of Technical Reports, July 1967 to June 1968. WRR 69-1, October 1968. DDC Availability No. AD 841 583. (UNCLASSIFIED).

This bibliography contains abstracts of reports published from July 1968 to June 1969 (Fiscal Year 1969) by the Naval Personnel Research and Development Laboratory, Washington, D. C.

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