THE NATIONAL SHIPBUILDING RESEARCH PROGRAM

Assist U.S. Shipyards to Develop and Maintain a Skilled Workforce -- Database "Read Me" Document

U.S. DEPARTMENT OF THE NAVY
CARDEROCK DIVISION,
NAVAL SURFACE WARFARE CENTER

in cooperation with
National Steel and Shipbuilding Company
San Diego, California

Report Documentation Page

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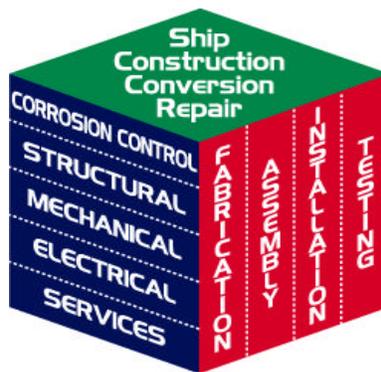
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DISCLAIMER

NSRP SP9
Skill Standards Database

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For

The National Shipbuilding Research Program

August 1998

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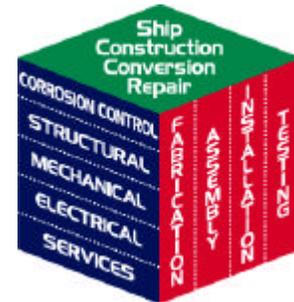
The NSRP Skill Standards Database

This database is provided to show skill standards for production skills used in the construction, conversion and repair of ships. The skill standards database has four principle components:

- Skill Standards, primarily concerned with ship construction
- A body of tasks primarily related to ship repair
- Knowledge, Skills and Abilities (KSAs) used in shipyard production work
- Training Providers

Organization of Information

Instead of viewing shipyard work by traditional division of trades, the Skill Standards are organized around shipbuilding / repair process "areas," *i.e.*, Fabrication, Assembly, Installation and Testing; and process "activities," *i.e.*, Structural, Mechanical, Electrical, Corrosion Control and Services. The "cube" helps visualize the interrelationship between areas and activities. With activities shown horizontally and areas vertically, the cube is a visual reminder of how areas, activities and related KSA's cut across ship construction, conversion and repair processes.

Skill Standards

There are 38 Skill Standards in the database. Each Skill Standard has a narrative description of a segment of work followed by lists of applicable industrial standards, key tasks and KSAs. The Skill Standards are identified to an Area and Activity intersection from the "cube", such as, Mechanical/Assembly.

Repair Tasks

The repair tasks are organized by blocks of repair work that are subsets of traditional trade/craft work. Each group has a task list and reference to supporting KSAs.

Knowledge, Skills and Abilities (KSAs)

There are approximately 2800 KSAs organized into some 400 groups of related KSAs. The groups are tied to Skill Standards and Repair groups and can be accessed by Identifying group number, Area, Activity, trade or by a word search.

Training Providers

There is a listing of shipyards, public institutions, and private organizations that are currently providing training to shipyard production personnel. The listing indicates topic areas for instruction, the ability of the organization to expand instruction to other clients and points of contact. Access is by selecting topic areas.

Navigating the Database

Navigation through the database is on a point and click basis with a few exceptions that will be addressed below. The program will always open on a menu screen entitled Selection. This screen offers six choices.

- Area Search.
- Knowledge, Skills and Abilities
- Word Search
- Activity Search
- Repair Applications Search
- Training Providers

Moving from any one of these choices to another is done by returning to this "Main Menu."

Getting Information

You get information by clicking on, or typing in, parameters that define a "find" and then "clicking on" an option for displaying the information.
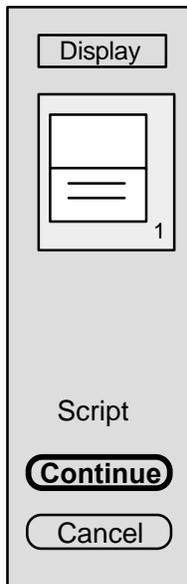
Display Modes

The display screens will be in one of three modes:

- Find
- Browse
- Preview

The display mode is indicated in the bar at the bottom of the screen. These modes will change automatically as you "point and click."

Turning Pages

In the Preview mode the scroll bar will move you up and down the page but will not move you to a new page. To move to a new page click on the book like icon at the top of the gray bar to the left of the screen. If there are no lines on these pages it means there are no more pages to view. If the gray bar is not present on the left of the screen, click on the rectangular icon next to the display mode.

Getting Lost

Parts of the program permit you to apply multiple constraints on the information you are requesting. As a result, it is possible to request a combination that no records will satisfy. In this case the program returns a warning and offers three options for proceeding:

- Cancel
- Continue
- **Modify Find**

ALWAYS CHOOSE Modify Find.   Either of the other options is likely to place you outside the "point and click" processes of the program.

Coming Home

You can return to the **Selection** menu by pressing Control + 1. **Unless** the program is in the middle of a "script." A script is an automatically executed series of commands similar to a

"macro." If you are in a script the bar on the left of the screen will display the words "Script, Continue, and Cancel." Click cancel and then use <u>Control + 1</u> to return to the Selection menu.

Help

Help screens are accessed by pressing <u>Control + 3</u> or by clicking on the question mark icon.

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About

Information on the program and points of contact for help can be accessed by pressing <u>Control + 4</u>, or clicking on the "Tree" icon.

Printing

You can print from any **Browse** or **Preview** display by pressing <u>Control + p</u>.

You can also print by selecting <u>Print</u> under the **File** menu.

Checking the Number of Pages

Some prints may be quite long either because of the volume of information or the way the displays have been implemented. It is a good idea to check the number of pages before you start a print

In the **Preview** mode you can determine the number of pages in a print by dragging down the small tab on the side of the open book like icon at the top of the gray bar to the left of the screen. If there are no lines on lower page it means there are no more pages to view.

To enter **Preview** from **Browse** click on the mode icon at the bottom of the display

If the gray bar is not present on the left of the screen, click on the rectangular icon next to the display mode.

Skill Standards

Organization and Content

There are 38 Skill Standards. Each is related to an Area and Activity as depicted in the cube.

The skill standards have four components:

1. Scenario - The scenario describes the process and provides the context needed to understand the applications of workplace knowledge, skills, and abilities.

2. Conventional Industry Standards - Conventional industry standards contain accuracy or production requirements that serve as performance criteria. This information provides valid criteria for the design and implementation of assessments and informs the reader of the quality required during various steps in the process described.

3. Key Tasks - The key tasks are selected from task lists as identified and validated by trainers in the industry. Only the tasks considered as the most important and frequently performed are included.

4. Workplace Knowledge, Skills, and Abilities - Both technical and foundation KSA's that are relevant to the scenario are listed. This information may be helpful in curriculum development and in the design of performance assessments.

Access

The Skill Standards may accessed through a screen that organizes them by Area:

• Fabrication, • Assembly, • Installation, • Testing

or by Activity

• Structural,   • Mechanical, • Electrical, • Services   • Corrosion Control .

Skill Standards can also be accessed by a Word Search

Area and Activity Searches

Each of the search screens offers a pull down menu of the Skill Standards. You select by clicking on the Skill Standard that you want and then selecting the type of information display you want.

If you want information on more that one Skill Standard you click the Additional Request button and select another Skill Standard before making your display selection. You may make as many additional requests as you want.

> Additional Request

Display Options

There are three display options that relate to Skill Standards.

> Scenario   Tasks & KSAs   Tasks & KSA Titles

Scenario: This option first displays the narrative scenario and then displays the Industrial Standards, Tasks and KSA Group Titles. To print this option use the button provided instead of Control+p.

> Print Standard

Tasks and KSAs: These options display only the Industrial Standards, Tasks and KSAs

They differ in that one display only shows titles of KSA groups associated with the standard while the other display includes the KSA details. KSA details vary from one to 20+ lines per group.

Unless you are developing training materials the KSA group titles will generally provide a good sense of the skills needed to perform the tasks associated with the Skill Standard.

Repair Applications

The information on Repair Applications has been segmented into five search screens:

- Core Skills   •   Structural   •   Mechanical
- Electrical   •   Services

Each screen permits selection on the basis of an application, or in the case of the Core Skills by a trade area. Selection is done from a pull down menu. The segmentation was done to limit the number of selection options offered at any one time since there are over a hundred Repair Application combinations.

Core Skills

The Core Skills option lists those KSAs that are common to all the TSDs in an activity/trade. These are not repeated with each of the other Repair Application selections.

Knowledge, Skills and Abilities (KSAs) Searches

KSA searches are performed either on the basis of a request for an Area or Activity, a word search, or a request to for a specific group number.

Area or Activity

The KSA search screen uses check boxes to either <u>select</u> or <u>omit</u> an area or activity. When selected any KSA Group/KSA that is keyed to that selection parameters will be shown. Thus selecting the Area "fabrication" and the Activity "structural" will show all the KSAs keyed to structural and fabrication. Many of these KSAs will be keyed to other applications as well. To eliminate an area or activity, <u>Omit</u> is checked. Thus selecting "fabrication" and "structural" and omitting "mechanical" will return all KSAs keyed to fabrication and structural except for those also keyed to mechanical. This is an <u>And</u> selection process. The results returned will include/exclude all checked parameters.

Warning: In KSA searches it is easy to ask for parameter combinations that no KSAs fit. The program will ask for your direction and you should always return "**Modify Find.** See the help screen for **Lost and Found.**

Word Searches

You may enter a word, a phrase or several words in the space provided. This is an <u>And</u> search and the result will contain <u>all</u> the words you have entered. The words will not necessarily appear in the order you entered them.

A search for "staging, electrical" will contain the same result as one for "electrical, staging." Each response will have both the words electrical and staging in them.

If you want to conduct an <u>Or</u> search, enter each word or phrase separately and click <u>Additional Request</u> between entries.

Entering "electrical", <u>Additional Request</u> "staging," will return all entries with <u>either</u> the word "electrical" or "staging."

Word searches can be used in conjunction with Area/Activity searches or Group number searches.

Group Numbers

Group numbers will have been identified from Skill Standards/Repair searches. When entered with words they limit the responses.

Displays

There are four display options:

- KSA Group Titles,
- KSAs (includes titles and elements)
- A listing of the Skill Standards that call out the KSA groups
- A list of the Repair Applications that call out the KSA groups

KSAs

This selection will show all KSA elements and/or group titles matching the parameters. If using a word search and the word(s) are in an element, only the element and its group title will be shown. Elements in the same group that don't contain the search word(s) will not be shown. If the

word(s) is in a title all elements in the group will be shown since the title forms a part of the record for each element.

Skill Standards

The title of each skill standard that calls out the KSA group will be shown

Repair Applications

The title of each repair application that calls out the KSA group will be shown.

Training Providers

Searches for Training Providers are conducted by selecting from a menu of 12 core skills and 5 foundation skills or by doing a Word Search on Course Names

Core and Foundation Skills

Selection of Core and Foundation skills is by means of check boxes. Multiple entries permit identification of providers that meet any specific combination of skills. This is an <u>And</u> search so that the only providers returned will be those that match all the entries.

Course Searches

Courses other than those directly supporting Core or Foundation skills can be found by entering one or more words in a space provided. This is an <u>And</u> search and the result will contain <u>all</u> the words you have entered. The words will not necessarily appear in the order you entered them. Since course names may be phrased in a wide variety of ways, in general, the less entered the better.

An alternative to a word search for courses is viewing the entire course list. The list is presented in alphabetical order and includes the names of both courses and providers.

Displays

Information on providers is provided in two steps. First a list of providers that includes name, location, and service area is displayed. A selection from this listing displays all the information on the provider including all training offered, points of contact and any constraints on service.