

FINAL REPORT



BENEFIT ANALYSIS OF SPC PANEL SP-6 PROJECTS

and

**EVALUATION OF SPC PANEL SP-6
MANAGEMENT AND ADMINISTRATION**



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In Behalf Of
SNAME SPC PANEL SP-6

MARINE INDUSTRY STANDARDS

Under the
NATIONAL SHIPBUILDING RESEARCH PROGRAM



October 1993

Task N8-90-11

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P R E F A C E

The National Shipbuilding Research Program has been sponsored during the past 20 years by the Maritime Administration, United States Department of Transportation, and by the United States Navy toward improving productivity in shipbuilding. The Program is operated through several Panels of the SNAME Ship Production Committee. During 1988 a survey was conducted in behalf of SPC Panel SP-3 on Surface Preparation and Coatings to determine (1) the benefit value that had accrued from the research projects sponsored by that Panel during the previous 15 years, and (2) how the management and administration of the Panel itself- meetings, discussions, activities - was seen by the using community. The report of this survey (NSRP 0303, July 1989) was well received. It was therefore decided to conduct a similar survey for each of the other active SPC Panels.

The survey of SPC Panel SP-6 on Marine Industry Standards is reported herein. The purpose of this survey was (1) to determine the type of project most beneficial in the past, and therefore most likely to yield the largest benefit in the future, and (2) to determine how the direction of Panel SP-6 itself might be improved.

The Task was conducted by Rodney A. Robinson, Vice President of Robinson-Page-McDonough and Associates, Inc. Personal interviews were conducted with several representative members of the shipyard Marine Industry Standards community to gain the necessary information. Conclusions and recommendations based on analysis of the findings are included in the report. The work, under NASSCO Purchase Order No. MU171117-D, began in October 1991 and was completed in October 1993.

EXECUTIVE SUMMARY

This Task has investigated the benefits derived from the projects sponsored during the past 20 years by SNAME Ship Production Committee Panel SP-6 on Marine Industry Standards under the National Shipbuilding Research Program. It has found that those projects offering direct shipyard application have yielded the most value in the shipyard community. The responses from those interviewed endorse the value of such projects, rather than analytical exercises which offer little practical application.

This Task has also assessed the opinion of the shipyard using community on the administration and management of Panel SP-6 itself. It has found that the practices currently in effect should be continued with some improvements. It has also found, however, that there has been an insufficient number of shipyards represented at Panel meetings. This deficiency has produced a non-shipyard bias in Panel deliberations, which has contributed to the minimal shipyard implementation of research results. It has also found that Panel SP-6 has been suffering from several major deficiencies recently, such as a weak interest focus among the members, the absence of Panel goals, and a lack of consistent and stable leadership. These matters must receive prompt treatment if Panel SP-6 is to have a confident voice in the Marine Industry Standards area.

The portion of the NSRP within which Panel SP-6 is active takes on additional significance as efforts unfold to prepare our shipyard industry for entry into the international commercial market. Our shipyard community has been working under strict and highly technical Government requirements associated with military ships for many years. Professional and trade habits have become so well established that the transition to the quite different world of the international commercial market will require serious and dedicated efforts by capable leaders in order to re-focus our practices, our workers, and our management at every level. Marine industry standards offer an unprecedented opportunity to draw our shipyard community together in an organized challenge to the international competition. The talent and dedication of Panel SP-6 members and associates, together with strong and consistent support from our shipyard industry, can greatly assist in gaining a major share of the international commercial ship building and ship repair market for our shipyards. This opportunity deserves the support of everyone interested in preserving the shipyard industry in our Country.

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FINAL REPORT

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BENEFIT ANALYSIS OF SPC PANEL SP-6 PROJECTS

and

EVALUATION OF SPC PANEL SP-6 MANAGEMENT AND ADMINISTRATION

B A C K G R O U N D

General Discussion

This Project was designed: (1) to investigate the benefits that may have resulted from SPC Panel SP-6 Marine Industry Standards projects carried out over the first 20 years of Panel operations; and (2) to evaluate how the management of Panel SP-6 itself is currently viewed by the using community. The aim was to focus on what type of project has been most helpful in the past, and may therefore be presumed to yield the most benefits in the future, and also to explore how the activities associated with Panel SP-6 might be improved.

This Project would consist of interviews with members of the Marine Industry Standards community to gain information on these matters. The interviews would be on-site and face-to-face, to yield the most meaningful results. Analysis of findings would be published for principal consumption by SP-6 Panel Members toward their action on panel operations and projects in the fututure.

This project was a direct follow-onto a similar project conducted in 1989 in behalf of SPC Panel SP-3 to (1) explore the benefits that may have resulted from the projects sponsored by that Panel during the previous 15 years, and (2) to evaluate how the management of Panel SP-3 itself was seen by the using community. The report on that project (NSRP 0303, .July 1989) was well received, prompting the development of this current project. which consists of the same kind of analyses for all other SPC Panels, as well as an update on the projects of Panel SP-3 since the original report. The report presented herein covers the area of SPC Panel SP-6 on Marine Industry Standards.

Overview

Information on both aspects of this effort was gained through personal and anonymous interviews with 5 members of the Marine Industry Standards community from 7 different shipyard locations. 8 specific and detailed responses to the questionnaire were gathered, and have been used to formulate the detailed sections of this report. The period of interviews extended from January 1992 through May 1993.

Several questions were designed to explore both aspects of this survey. The worksheets for gathering information on the benefits of individual projects are contained in Appendix A. The worksheets associated with Panel SP-6 direction are contained in Appendix B.

A detailed discussion of the findings is presented below. Those associated with the benefit analysis of panel projects begin on this page. Those associated with panel management begin on page 22. Conclusions reached from the findings are on pages 29 and 30. The recommendations drawn from these conclusions are on page 31.

BENEFIT ANALYSIS OF PROJECTS SPONSORED BY SPC PANEL SP-6

General Discussion

This section contains information on all of the SP-6 projects investigated, including a description of each project, the pertinent information surrounding that project, and an analysis of the benefit value gained from that project to date. The NSRP Number is that assigned to each report in the NSRP Bibliography of Publications 1973-1992, published (now annually) by the University of Michigan for the National Shipbuilding Research Program. The projects investigated are those listed in this specific publication (1973-1992). The analysis portion has been drawn from the comments offered by those interviewed, and is intended to provide a general indication of how the project has been received by the shipyard industry. It also indirectly provides the feelings of those interviewed on whether that particular type of effort should be sponsored by SP-6 in the future, since those projects with the higher benefit value might better receive the more favorable consideration. Appendix A was the worksheet used during the interviews.

The display below is intended to provide a rapid visual idea of the relative benefit value that has been gained from the SP-6 sponsored projects that were investigated. While these ratings are surely subjective, they represent the general opinions of those interviewed, which constitute a good cross-section of the shipyard industry in the Marine Industry Standards area. As such, these opinions reflect the overall industry attitude surrounding these projects, which should be of interest to SP-6 panel members during consideration of what projects to sponsor in the future. The number of *'s against each project report indicates the amount of benefit gained from it to date. The more *'s, the larger the benefit value gained.

<u>Report No.</u>	<u>Benefit Value</u>	<u>Report No.</u>	<u>Benefit Value</u>
NSRP 0042	*	NSRP 0093	*
NSRP 0046	*	NSRP 0107	* * * *
NSRP 0047	*	NSRP 0108	*
NSRP 0049	*	NSRPO116	*
NSRP 0050	*	NSRP 0126	* * * *
NSRP 0052	*	NSRP 0133	*
NSRP 0057	* * * * *	NSRP 0144	*
NSRP 0059	* *	NSRP 0160	
NSRP 0061	* *	NSRP 0161	Not rated)
NSRP 0078	* *	NSRP 0174	*
NSRP 0082	* *	NSRP 0212	* * * *
NSRP 0087	* *	NSRP 0344	* * * * *
NSRP 0088	*	NSRP 0349	*
NSRP 0089	*	NSRP 0354	*

Detailed Discussion of Individual Projects

Each of the individual projects investigated are discussed below in the chronological order in which they were earned out. Included is: NSRP Number; Benefit Value Rating (*'s): *TITLE*; *AUTHOR*; *DATE*, *COST* (where available): *ABSTRACT*. and *BENEFIT ANALYSIS*.

Appendix C is an abbreviated listing of these same projects (NSRP Number; *TITLE*; *AUTHOR*; *DATE*, *COST*) arranged according to the benefit value (number of *'s) assigned to each project, highest to lowest. Appendix C is included as an aid to understanding which types of projects were found to be of most (and least) interest and value to the using community. based on user comments received during this survey.

NSRP 0042 *

TITLE: Propulsion Plant Feasibility Study Report - Subtask I - Forecast for Propulsion Plant Standards.

AUTHOR: M. Rosenblatt and Son. Inc.. for Bath Iron Works.

DATE: June 1974

COST: (Not available)

ABSTRACT: This report contains the commercial shipbuilding forecast for the Propulsion Plant Standards Feasibility Study and estimates the requirements for propulsion equipment installations by U.S. shipyards between 1975 and 1985. The results of this forecast indicated that the volume of shipbuilding was sufficient to warrant the application of propulsion plant standards. (42 p.)

BENEFIT ANALYSIS: LOW VALUE. 87% of those interviewed were not familiar with this report and had no interest in this material. The one person who was familiar with the report said that it "contained good ideas", but that it "was never implemented because it did not have any horsepower or organization behind it".

NSRP 0046 *

TITLE: Propulsion Plant Feasibility Study - Subtask II -
Technical Analysis on Determination of Standards Candidates.

AUTHOR: M. Rosenblatt and Son. Inc.. for Bath Iron Works.

DATE: January 1975

COST: (Not available)

ABSTRACT: This report consists of a technical evaluation of the propulsion plants which reflect the requirements of the ships forecast to be ordered in U.S. shipyards in 1986. The main purpose of this task was to select viable standards candidates for further economic analysis. This report noted that emphasis for standards on propulsion plants should be first placed on steam turbine and then diesels and gas turbines. The selection of standards for economic analysis was based on the potential savings to be expected from each of the following four groups of standards: Equipment Standards, including the main condensate pump, starting air compressor and main boiler; Total plant Standards on two plant systems including a 26,000 SHP steam turbine and a 14,000 SHP medium speed diesel; "Equipment Envelope Standards" for a 26,000 SHP geared steam turbine. (200p. approx.)

BENEFIT ANALYSIS: LOW VALUE. The one person interviewed who was familiar with this report commented that this report says to put emphasis on steam plants, but history has shown that diesel plants are favored for commercial ships; only Navy ships use stem plants. See also NSRP 0042 comments above.

NSRP 0047 *

TITLE: Propulsion Plant Feasibility Study Report - Subtask III -
Economic Analysis of Selected Standards Candidates.

AUTHOR: M. Rosenblatt and Son. Inc., for Bath Iron Works.

DATE: February 1975

COST: (Not available)

ABSTRACT: This report contains the results of an economic analysis performed on four groups of standards relating to propulsion plants as recommended in Subtask II Determination of Standards Candidates. The overall potential cost savings were predicted by using an economic analysis on the four groups of propulsion plant standards, and generalizing on the predicted savings of other similar standards in each group which were not economically analyzed. (200 p. approx.)

BENEFIT ANALYSIS: LOW VALUE. See comments on NSRP 0042 above.

NSRP 0049 *

TITLE: Executive Summary - Propulsion Plant Standards Feasibility Study.

AUTHOR: M. Rosenblatt and Son. Inc.. for Bath Iron Works.

DATE: June 1975

COST: (Not available)

ABSTRACT: This executive summary highlights the objective. recommendations. and conclusions of this feasibility study. (10 p.)

BENEFIT ANALYSIS: LOW VALUE. See comments on NSRP 0042 above.

NSRP 0050 *

TITLE: Ship Producibility Task S-1: Propulsion Plant Standards Feasibility Study.

AUTHOR: Ingalls Shipbuilding for Bath Iron Works.

DATE: June 1975

COST: (Not available)

ABSTRACT: The report supplements a major effort by M. Rosenblatt and Son. Inc., on the same subject. The major efforts of the report were to define and lay out four propulsion plants for a 150,000 dwt. tanker, including steam, medium speed diesel, heavy duty gas turbine, and an aircraft derivative gas turbine plant. Each of these four propulsion plants contains three levels of standards: a full description of the component by a data package; performance specification for overall components of a given size range; and standard procurement specification. This report also studies the cost differential by applying these three levels of standards to each propulsion plant and summarizes the merits of each type of proposed standard, the acceptability of the types of standards, and the approximate cost of developing the data for each type of standard. (100 p. approx.)

BENEFIT ANALYSIS: LOW VALUE. See comments on NSRP 0042 above.

NSRP 0052 *

TITLE: Final Report - Propulsion Plant Standards Feasibility Study.

AUTHOR: Ingalls Shipbuilding Division, for Bath Iron Works Corporation.

DATE: August 1975

COST: (Not available)

ABSTRACT: The purpose of the study was to assess the technical feasibility and economic benefits and/or drawbacks of the development and implementation of propulsion plant standards. Emphasis was placed on reducing shipbuilding costs and delivery time in the United States by defining standards which could be useful to the maritime industry. (100 p. approx.)

BENEFIT ANALYSIS: LOW VALUE. See comments on NSRP 0042 above.

NSRP 0057 * * * * *

TITLE: Standard Structural Arrangements.

AUTHOR: General Dynamics/Quincy. for Bath Iron Works.

DATE: July 1976

COST: (Not available)

ABSTRACT: This report determined the value of standard structural arrangements and was to be used in reducing the cost of U.S. built ships by producing a series of standard structural arrangements. This report is divided into three sections: Structural Detail Guidelines. Misalignment Tolerance Guidelines, Tripping Bracket Guidelines. (250 p. approx.)

BENEFIT ANALYSIS: MIXED VALUE. 50% of those interviewed were not familiar with this report and had no interest in this material. The rest were familiar with the report. one person said that it had been issued in 1992 as an ASTM standard. Another person commented that there are more structural standard areas that there are piping or electrical.

NSRP 0059 * *

TITLE: Executive Summary - Feasibility of Shipbuilding Standards.

AUTHOR: Bath Iron Works Corporation.

DATE: October 1976

COST: (Not available)

ABSTRACT: This report summarizes findings and conclusions regarding the feasibility of a shipbuilding standards program. Conclusions are that standards already exist and are in use. but additional standards are needed. Recommendations include the development and support of a national shipbuilding standards program. (8 p.)

BENEFIT ANALYSIS: LOW VALUE. 62% of those interviewed were not familiar with this report and had no interest in this material. One of those familiar with the report said that the report was a good idea. but that there was "no crisp detailed conclusion" in it. Another said that this investigation was redone several years later, where a minority opinion said that the level of business did not support an aggressive program of inter-shipyard standards. even though one was needed.

NSRP 0061 * *

TITLE: Castine Report S-15 Project: Shipbuilding Standards.

AUTHOR: Bath Iron Works Corp.

DATE: October 1976

COST: (Not available)

ABSTRACT: This is a report on the proceedings of a workshop on the feasibility of developing national shipbuilding standards which was held in Castine, Maine, in June, 1976. It was at this workshop that the need for a national coordinated effort for the development of shipbuilding standards was identified. (100 p. approx.)

BENEFIT ANALYSIS: LOW VALUE. 62% of those interviewed were not familiar with this report and had no interest in this material. One person familiar with the report commented that this report "got standards started". Another said that it "obviously led toward what actually happened".

NSRP 0078 * *

TITLE: A Compendium of Shipbuilding Standards - Consolidated Pilot Phase Report.

AUTHOR: Corporate-Tech Planning, Inc.. for Bath Iron Works.

DATE: October 1978

COST: (Not available)

ABSTRACT: One of the first studies to be done before commencing a coordinated national standards development effort was to identify those standards which existed and were being utilized by the industry. This report was a compendium of all existing standards which have applications in marine sectors. The objectives of this pilot phase were to design a catalog system, process a sample of U.S. and foreign standards, and analyze a sample number of standards for completeness, duplication, and conflict. (300 p. approx.)

BENEFIT ANALYSIS: LOW VALUE. 37% of those interviewed were familiar with this report but none of them cited any application of this material. One person said that he was going to get the report and read it now. One person commented that the report was a "good start", but that it "had no implementation plan". He added that Panel SP-6 had updated this material later on.

NSRP 0082 * *

TITLE: Interim Report on Subtask I Regulatory Body and Classification Body
Shipbuilding Standards.

AUTHOR: Corporate-Tech Planning, Inc.. for Bath Iron Works.

DATE: 1979

COST: (Not available)

ABSTRACT: This report is part of a three-subtask effort to review shipbuilding and other industrial standards for possible use in the National Shipbuilding Standards Program. This report catalogues existing shipbuilding standards which predominate U.S. shipbuilding. The three organizations whose standards are most commonly promulgated: the American Bureau of Shipping, the Maritime Administration, and the U.S. Coast Guard, are included in this report. (59 p.)

BENEFIT ANALYSIS: LOW VALUE. Only 25% of those interviewed were familiar with this report, and none of them cited any application of this material. One person commented that it was an index of what was available, adding that the U. S. Coast Guard is currently looking at foreign standards toward establishing an equivalency to our standards.

NSRP 0087 * *

TITLE: Interim Report on Subtask HI, Foreign Shipbuilding Standards.

AUTHOR: Corporate-Tech Planning, Inc.. for Bath Iron Works.

DATE: March 1979

COST: (Not available)

ABSTRACT: This report is part of a three-subtask effort to review shipbuilding and other industrial standards for possible use in the National Shipbuilding Standards Program. This report is a compendium of foreign shipbuilding standards which are valuable for reference or are suitable for use in the United States. The report concludes that there are many ISO standards which are suitable for immediate use in the U.S. shipbuilding industry with little or no changes in the text of the standard. (150 p.)

BENEFIT ANALYSIS: LOW VALUE. Only one person interviewed was familiar with this report. He commented that "certainly the idea has more momentum in 1993 than it did in 1974". The rest of those interviewed were not familiar with the report and had no interest in this material, except for one person who said he would get the report and read it now.

NSRP 0088 *

TITLE: A Compendium of Shipbuilding Standards - Index to Shipbuilding Regulations and Standards.

AUTHOR: Corporate-Tech Planning, Inc., for Bath Iron Works.

DATE: April 1979

COST: (Not available)

ABSTRACT: This catalog of standards contains 2,580 entries from regulatory sources. These standards have been sorted in four ways: Organization, Ship Work Breakdown Structure, Recommended F-25 Subcommittee, and Subject. (600 p. approx.)

BENEFIT ANALYSIS: LOW VALUE. Although 62% of those interviewed were familiar with this report, no application of the material was cited. One person commented that "this was not used". It is an index follow-up to NSRP 0082.

NSRP 0089 *

TITLE: Interim Report on Subtask II, Industrial Standards in Shipbuilding Use.

AUTHOR: Corporate-Tech Planning, Inc., for Bath Iron Works.

DATE: May 1979

COST: (Not available)

ABSTRACT: This report is part of a three subtask effort to review shipbuilding and other industrial standards for possible use in the National Shipbuilding Standards Program. This report identifies industrial standards which are in use by the shipbuilding community and catalogues them by originating organization, by Ship Work Breakdown Structure (SWBS) number, by subject, and by the subcommittee of the ASTM Committee F-25 on Shipbuilding. (38 p.)

BENEFIT ANALYSIS: LOW VALUE. 50% of those interviewed were not familiar with this report and had no interest in this material. 25% were familiar with the report, but did not cite any application of the material. 25% said that they would get the report and read it now.

NSRP 0093 *

TITLE: A Compendium of Shipbuilding Standards - Final Report.

AUTHOR: Corporate-Tech Planning, Inc.. for Bath Iron Works.

DATE: September 1979

COST: (Not available)

ABSTRACT: This summary report outlines the results of the Compendium of Shipbuilding Standards. This summary report recommends a management system for the development of an integrated family of U.S. shipbuilding standards under ASTM Committee F-25 on Shipbuilding. This report also summarizes the charts and data tables from the Compendium with several recommendations made from reviewing these charts and tables. (44 p.)

BENEFIT ANALYSIS: LOW VALUE. 50% of those interviewed were familiar with this report but did not cite any application of this material. One person said that this was "another summary/index that was not used", One person said that he would get the report and read it now.

NSRP 0107 * * * *

TITLE: Weld Defect Tolerance Study.

AUTHOR: Dr. Leslie W. Sandor (Sun Ship). for Bath Iron Works.

DATE: June 1980

COST: (Not available)

ABSTRACT: The objective of this project was to examine the possibility of decreasing the high cost of weld repair in commercial shipbuilding through the development and application of weld defect tolerance standards. A comprehensive survey was made of international literature and existing codes. In addition, quality control data was acquired from four major U.S. shipbuilders. The fitness-for-purpose philosophy represents an important advancement over present weld acceptance standards, which, in general, are much too conservative and workmanship-based. (124 p.)

BENEFIT ANALYSIS: MIXED VALUE. 75% of those interviewed were not familiar with this report and had no interest in this material. One person cited substantial use of this material, and said that it might be applied again in the future. Another person familiar with the report said that SPC Panel "SP-7" had done something similar".

NSRP 0108 *

TITLE: National Shipbuilding Standards Program Status Report No. 1.

AUTHOR: Bath Iron Works.

DATE: June 1980

COST: (_Not available)

ABSTRACT: This first status report of the National Shipbuilding Standards Program covers activities from the origin of the Program in June, 1976 until June, 1980. The report includes information on the reactivation of Panel SP-6 and the formation of ASTM Committee F-25 on Shipbuilding Standards. (24 p.)

BENEFIT ANALYSIS: LOW VALUE. Only one person interviewed was familiar with this status report. No application of this material was cited.

NSRP 0116 *

TITLE: National Shipbuilding Standards Program Status Report No. 2.

AUTHOR: Bath Iron Works.

DATE: November 1980

COST: (Not available)

ABSTRACT: The second status report of the National Shipbuilding Standards Program covers developments from July to November, 1980. This report covers the development of many SP-6 draft standards that were input into Committee F-25 for processing as National Shipbuilding Standards. (250 p. approx.)

BENEFIT ANALYSIS: LOW VALUE. See comments on NSRP 0108 above.

NSRP 0126 * * * *

TITLE: Navy Weld Defect Tolerance Study.

AUTHOR: Dr. Leslie W. Sandor (Sun Ship), for Bath Iron Works.

DATE: March 1981

COST: (Not available)

ABSTRACT: This study is a statistical analysis of quality control data collected from six major U.S. shipyards involved in naval ship construction. This analysis is confined to noncombatant naval vessels built out of mild steel only. The purpose of the study was to assess the significance of weld discontinuities with a view toward optimizing weld acceptance standards so as to minimize unnecessary weld repair. (30 P.)

BENEFIT ANALYSIS: MIXED VALUE. 75% of those interviewed were not familiar with this report and had no interest in this material. one person cited substantial use of this material. and said that it might be applied again in the future. This project is an expansion of NSRP 0107.

NSRP 0133 *

TITLE; National Shipbuilding Standards Program Status Report No. 3.

AUTHOR: Bath Iron Works,

DATE: November 1981

COST: (Not available)

ABSTRACT: This document reports the status of the National Shipbuilding Standards Program from December. 1980 to November. 1981. Developments in this report include the publication of ten ASTM standards on shipbuilding and the incorporation of an ASTM F-25 standards into the U.S. Navy GENSPECS (18 p.)

BENEFIT ANALYSIS: LOW VALUE. See comments on NSRP 0108 above.

NSRP 0144 *

TITLE: Recommended U.S. Shipbuilding Standards Program Long Range Plan Final Report.

AUTHOR: IHI Marine Technology, for Bath Iron Works.

DATE: February 1982

COST: (Not available)

ABSTRACT: While significant progress has been made during the preliminary phase of this program, it was the consensus of the program participants and other key industry representatives that expert assistance should be solicited to formally recommend a standards long-range plan for the U.S. shipbuilding industry. A plan that would include standard program goals, objectives, plans, priorities, and other necessary courses of action. With this background, IHI Marine Technology, Inc., an American subsidiary of Ishikawajima-Harima Heavy Industries Co., Ltd. (IHI), Japan, was selected to perform the task as described above. The principal objective of this task is to present a written recommended long-range plan for the U.S. Shipbuilding Standards Program based upon the knowledge and experience of the Japanese shipbuilding industry, specifically, IHI. (230 p. approx.)

BENEFIT ANALYSIS: LOW VALUE. 62% of those interviewed were familiar with this report. No application of the material was cited, but several interesting comments were offered. One person said that this project "almost tore SP-6 apart" in that we had "hired IHI to tell us what we need". Another person said that this report was "rejected at a meeting of shipbuilders in 1983", and that it "did not go anywhere until parts of it were included in the new plan". A third person said that the report "contained nothing on how to implement". Another person said that he was reading the report now, but that he had found nothing of consequence to his shipyard.

NSRP 0160 *

TITLE: Consensus QA/QC Acceptance Standards.

AUTHOR: Newport News Shipbuilding and Dry Dock Co., for Bath Iron Works.

DATE: November 1982

COST: \$25,677.

ABSTRACT: This report identifies areas where the development of consistent quality assurance/quality control (QA/QC) acceptance standards can benefit the U.S. commercial shipbuilding industry. This project is limited to commercial shipbuilding, overhaul, and repair; Naval shipbuilding is not addressed. (55 p.) (Project identified as 6-80-2.)

BENEFIT ANALYSIS: LOW VALUE. 37% of those interviewed were familiar with this report, but no application of the material was cited. One person said that "this was a good idea that should have been explored".

NSRP 0161 (Not rated)

TITLE: Jigs and Futures Handbook Development.

AUTHOR: Bath Iron Works Corporation.

DATE: August 1982

COST: (Not available)

ABSTRACT: This report was inadvertently included in the first edition of the NSRP *Bibliography of Publications* and has been withdrawn at the request of Bath Iron Works Corporation.

BENEFIT ANALYSIS: (Not applicable)

NSRP 0174 *

TITLE: Feasibility Study for the Commercialization of U.S. Navy GENSPECS -1982 Edition.

AUTHOR: John J. McMu11en Associates., Inc., for Bath Iron Works.

DATE: July 1983

COST: \$52,567.

ABSTRACT: This report critically analyzes the imposed military and federal specification requirements in the U.S. Navy GENSPECS to determine the feasibility of converting 10 commercial standards. This report recommends over 285 commercial standards that could effectively replace the cited Navy standards in the GENSPECS. and recommends that this report be extensively reviewed by industry and NAVSEA to determine if these recommended standards could be implemented in lieu of the current military specifications. Copies available from SP-6. (124 p.) (Project identified as 6-82-3.)

BENEFIT ANALYSIS: **LOW VALUE.** 50% of those interviewed were familiar with this report. but no application of the material was cited. One person commented that "this kicked off ASTM Panel F-25". Another person said that this was "a joke". A third person added that this material was included in a recent study by the University of Michigan.

NSRP 0212 * * * *

TITLE: Computerized Application of Standards.

AUTHOR: Newport News Shipbuilding

DATE: 1985

COST: (Not applicable)

ABSTRACT: The computerized application of standards project successfully proved that MOST-developed standards could be applied by an existing computer-aided design system to eliminate manual application of standards. Several groups, including the Computer Center, Industrial Engineering, and Production Engineering, worked together to develop a computer program to apply standards to the pipe detail work package for the bending, fabricating, welding, and machining operations in the pipe shops. The implementation of this program into the computer-aided pipe detail design systems has resulted in improved accuracy and consistency of standards applications. (94 p. approx.)

BENEFIT ANALYSES: MIXED VALUE. 50% of those interviewed were not familiar with this report and had no interest in this material. Since this report covers labor standards rather than material or equipment standards, two people asked why it **was** listed in the NSRP Bibliography of Publications under SP-6 rather than under SP-8. However, two shipyard representatives said that they had used this material substantially, and that the information had been useful to them.

NSRP 0344 * * * * *

TITLE: Marine Industry Standards Planning Workshop.

AUTHOR: Thomas Soik and Douglas Rusch

DATE: March 1992

COST: (Not available)

ABSTRACT: This report is the proceedings of a Marine Industry Standards Planning Workshop. Twenty representatives from the shipbuilding industry and government met to formulate and coordinate a marine industry standardization process by improving the global competitive position of the U. S. shipbuilding industry. (71p.)

BENEFIT ANALYSIS: MIXED VALUE. 50% of those interviewed were familiar with this report. One person said that he had applied this material substantially in his shipyard and that the information had been useful to him. He added that "this was an outstanding workshop", that "a lot of good came from it". and that the Workshop "promoted cooperation". Another person said that this report had "made the rounds through our senior people". A third person was not so complimentary. He said that the workshop left the attendees divided. He added that "SP-6 is in a crossfire with ISO. ASTM TAG. shipyard interests. the U. S. Coast Guard. etc. on who will do what in the future. He said that the workshop "at least illuminated the problem. although it left a frustrated group behind. The company proprietary problem was severe. There was no interest in sharing or cooperating. " It must have been quite a workshop to have produced such diverse opinions of the outcome.

NSRP 0349 *

TITLE Balloting of Hull and Mechanical Standards.

AUTHOR: William O'Sullivan Associates

DATE: June 1992

COST: (Not available)

ABSTRACT: This report involves the description of various hull and mechanical standards. their effectiveness. and reliability under Project P-52. A general idea on the improvement. or elimination of each standards listed can be drawn. There is an emphasis on the referencing of other standards and documents. (237p.)

BENEFIT ANALYSIS: LOW VALUE. Only one person interviewed was familiar with this report. He commented that "this was to go through the ASTM balloting process". that it either "had gone through or was going through". and that "then it would not be used". No application of this material was cited or predicted.

NSRP 0354 *

TITLE: Standard Practice for the Selection and Application of Marine Deck Coverings

AUTHOR: Joseph F. O'Donnell

DATE: July 1992

COST: (Not available)

ABSTRACT. This project is intended for use as a guide to assist in product selection, writing specifications, determining budgetary costs. purchasing and installation of marine deck covering. Data sheets are provided that include description and features of the deck material, specification references, trade names and manufacturers. Budgetary cost coefficients. physical properties. applications methods, cautionary notes, warranty information and construction detail are included. A section of the various marine bodies of influence in the United States. as well as the International Maritime organization (IMO). briefly describing their activities in the marine industry; has also been included. (305 p.)

BENEFIT ANALYSIS: LOW VALUE. Only one person interviewed was familiar with this report No application of this material was cited or predicted..

MANAGEMENT OF SPC PANEL SP-6 ACTIVITIES

General Discussion

This section describes the opinions of those interviewed relative to the administration of SPC Panel SP-6 meetings. including such things as the use of pre-planned agenda, the actual format for a meeting, who should attend, how often a meeting should be held and under what circumstances (e.g., during the same time frame as the meeting of another SPC Panel, or an NSRP Symposium), what matters should/should not be discussed, how meeting minutes should be handled, and similar considerations that bear on the mechanics of the panel meeting itself. It also describes the thoughts of those interviewed on how the NSRP can be of more assistance to them, what projects should be prosecuted, and in general what message they would like to have transmitted back to Panel SP-6.

The discussions that produced these opinions were open and serious. Those interviewed were anxious to offer a position on the matter at hand. The persons interviewed constitute the shipyard core of Panel SP-6 as it is known today, and so their feelings are surely important to the future well-being of the Panel and its activities.

On the following page is a matrix showing SPC Panel SP-6 Meeting Attendees for 9 recent meetings. This matrix reveals which shipyards and other activities have been supporting SP-6 by having a representative in attendance at these meetings. The date and location of each meeting is indicated, along with the company affiliation of those in attendance. Note that only 35% of these companies have had a representative at three at more of these meetings.

Attendee Affiliation	Date - Location									
	Dec '88 - San Diego, CA	May '89 - Annapolis, MD	Dec '89 - Orlando, FL	Apr '90 - San Diego, CA	Aug '90 - Milwaukee, WI	Dec '90 - San Antonio, TX	Mar '92 - Kansas City, MO	Dec '92 - San Diego, CA	Jun '93 - Bath, ME	
Amadis, Inc.							X		X	
ARPA									X	
ASME							X			
ASTM	X	X	X			X				
ASTM Panel F-25	X		X			X				
Avondale Industries, Inc.							X			
Bath Iron Works						X	X		X	
BBN Sys & Tech						X				
Bethlehem Steel - Sparrows Point							X			
CDI Marine Co.							X	X		
Charleston NSY				X						
Continental Maritime - San Diego							X			
D&P Inc.	X									
Daylon T. Brown Inc.			X							
Dreadnought Marine, Inc,									X	
DTRC (NSWC - Carderock)				X	X		X		X	
Eness R&D Corp.	X		X							
GD/EB Div.			X		X			X	X	
IMO Ind.			X			X				
Ingalls Shipbuilding Div.	X									
ISO/TAG (TC8/ISO)		X				X				
Isolamin AB Sweden	X		X							
JJG Associates								X		
JJH	X		X			X				
Jonathan Corp.				X						
Kansas State U.								X		
M. Rosenblatt & Son, Inc.			X			X				
Maritime Administration, U. S. DoT		X	X				X	X	X	
Mil Davie				X						
Military Sealift Command	X	X	X			X		X	X	
MIT									X	
NASSCO	X	X	X	X	X	X	X	X	X	
NavSea	X	X	X		X	X		X		
Newport News Shipbuilding				X	X		X	X	X	
NorShipCo				X	X					
O'Sullivan & Associates	X	X	X	X		X		X		

listings of attendees for
meetings held during 1991
were not available.

Meeting Attendees
SPC Panel SP-6
Marine Industry Standards

Attendee Affiliation	Date - Location									
	Dec '88 - San Diego, CA	May '89 - Annapolis, MD	Dec '89 - Orlando, FL	Apr '90 - San Diego, CA	Aug '90 - Milwaukee, WI	Dec '90 - San Antonio, TX	Mar '92 - Kansas City, MO	Dec '92 - San Diego, CA	Jun '93 - Bath, ME	
Pearl Harbor NSY				X						
Peterson Builders, Inc.		X	X	X	X	X	X	X		
R. D. Jacobs & Associates	X				X					
SAIC/AMSEC			X							
Sea CEQ			X							
SHARP			X							
Shipbuilder's Council of America							X			
Soic Associates							X	X		
Trinity Marine Group				X	X	X	X	X	X	
U. Michigan	X				X	X	X	X	X	
U. S. C. G.	X	X	X	X	X		X		X	
UL - Marine		X	X							
Vibtech, Inc.										X
Wilkins Enterprise, Inc.	X	X		X		X		X		
ZSI Inc.				X	X	X				

Listings of attendees for meetings held during 1991 were not available.

**Meeting Attendees
SPC Panel SP-6
Marine Industry Standards**

Detailed Discussion of Findings

The responses are summarized under the headings of each question, following the order and language of the worksheet, Appendix B, that was used during the interviews.

PANEL MEETINGS AND ADMINISTRATION

How often do you attend?

3 7% of those interviewed attended meetings regularly. One interviewee attends one or two meetings per year. 50% of those interviewed attended 1 meeting several years ago.

Do/should others in your Company attend?

One interviewee said that the VP and General Manager of his Shipyard, the Director of Engineering, the QA Manager, and the Standards Coordinator (if they had one) should attend regularly. 1 person said that the Navy should always be represented. The rest answered this question in the negative or offered no response at all, indicating that their solo attendance should be continued.

Are the meetings of value to you?

All responding to this question answered in the affirmative.

How can the meetings be improved? In particular,

Increase/decrease number of meeting days?

62% felt that the present meeting arrangement of 2 days, three times per year, should be continued. The rest had no opinion.

Continue/change meeting format?

The only comment offered in response to this question was that the meetings are too informal and unstructured. This is a major concern, although it was expressed by only one person.

Continue/change content of meeting?

Four comments were offered here, as follows:

1. The relationships among Panel members during discussions of ISO involvement were awkward. A focus could not be achieved. Participation was low.
2. Meeting material was OK, but the meetings were not sufficiently structured. This person added that he was "not brought into the meeting family", but was "treated as a spectator".
3. The meeting content "may be too hung up on projects, which could go on between meetings - that is, all year long".
4. Meetings are OK in general, but SP-6 has major problems in direction, goals, and leadership.

Broaden/restrict who should attend?

Those interviewed cited the present mix of attendees at Panel meetings as marginally satisfactory. There were three comments on the mix of attendees, as follows:

1. More high level people are needed;
2. More shipyard representatives are needed (made by two people);
3. Fewer vendors and consultants are needed (made by two people).

What should be added to the agenda?

Two specific suggestions were made in response to this question, as follows:

1. Members need an update of the agenda two weeks prior to the meeting, so that they can become aware of the current status of items to be discussed at the meeting
2. The agenda should include more information from other industries, such as the American Aerospace Industries Association.

What should be dropped from the agenda?

The only comment offered here was that there should be less time spent on projects during the meetings.

Should meetings be held in conjunction with other organizations?

37% of those interviewed said that holding a meeting in conjunction with other SPC Panels, or during the same time frame as a related technical/NSRP symposium, would be worthwhile. One person said that SP-6 and ASTM F-25 used to meet together, but now have separated. 1 interviewee said that Panel meetings should not be coupled to other activities. The rest offered no opinion.

Are meeting minutes of value to you?

All responding to this question answered "yes". One person commented that action items in the minutes currently have no follow up, but they should.

How can the NSRP be of more assistance to your company?

This question prompted a series of comments which reflect some serious difficulties with the NSRP in general. These comments also illustrate serious and deep concerns on the part of those interviewed for the future of the NSRP and the shipyard industry. These comments are summarized below, as nearly verbatim as possible:

- The problems we have in getting into the international commercial market are not technological. We need to focus on the other things that are needed - financial, subsidies, etc. We are working on the wrong problems. The structure of the U. S. (Justice Department) prevents us (shipyards) from working together to combine talents and beat the competition. OPA-90 is billed as the tanker replacement program, but it really is the tanker retirement program. There is no market anymore.
- Owners and operators need to be involved in the "solution" to the shipyard industry problem. They are the ones who will decide what gets built and when.
- There is a disconnect between Government support of the aircraft industry vs. the marine industry. The Jones Act prevents much in the marine industry. This need equalization. We need a "foreign ship group" in order to get around the anti-trust laws and allow cooperative shipyard efforts against the real competition - the Europeans, Koreans, etc. This was suggested at the SCA (Shipbuilder's Council of America), where two lawyers said it would be OK. The vote was down however. Also, alliances are needed with associated industries.
- We need to sponsor things that are of use to the users.
- There is no universal (NSRP-wide) plan of action. The ECB needs to concentrate on it. This focus is vital to success. There is no clear and coordinated direction among all of the players. We need a three-year viewpoint for projects, not just one year. Our one-year cycle is not satisfactory, especially with no multi-panel involvement in the same body of concern. We need to get all of the facets covered by involving all of the panels - training, standards, facilities, etc. Identify the steps for completing all of the aspects. Then lay out the plan for doing them - over three years or so - sequenced as needed.
- Panel attendees have different interests based on the desires and opinions of their senior management. From the SP-6 standpoint, there has been no clear and conceptually-supported interest focus. We need senior management to provide this input. Then we can set up accountability and improve the outcomes.
- NavSea, and their involvement with SP-6, needs a housecleaning.

- It takes too long to get to projects. It is too tortuous to get through the maze of requirements.
- We need continuity of involvement in the meetings. One person new on the block cannot do it.
- By being more of an entity than "fluff". The NSRP needs to be on the map. If you want to call the NSRP, who do you call? If some common issue needs to be published in the name of the NSRP, who puts it out? The NSRP should be the focal point for the shipyard industry.

What Projects would you like to see carried out?

50% of those interviewed had specific comments on this question, as follows:

- SP-7 procedures should go onto become standards. So should other Panel products as well. The educational aspects of projects should involve SP-9. There was a welding report issued two years ago that should have become a standard. and then the application of it would have been approved. SP-9 should formulate training for the same body of material.
- We selected specific projects to go forward with and seek approval of finding, but these projects were not the best ones from the standpoint of shipyard needs. The shipyards should be asked to grade the potential projects on a scale of 1 to 10 as to which ones would be of the most value to them. Naval Shipyards should be included in this determination. We need to direct our efforts toward what the "customer" wants and needs, that is, the "users". This could be done by a committee of Naval and other shipyards. We could follow a "shopping list" approach. This should include all shipyards, not just those who are represented at SP-6 meetings.
- Conversion of MIL specifications to ASTM (etc.) specifications. There will still be a need for this even in combination with the activities associated with the international commercial market.
- We need a "master plan". We also need to identify ISO participation. We might need a project to set up liaison with other standards organizations.

Do you have on-going NSRP Projects?

The responses to this question were all negative. One comment seemed to sum up a major problem in this regard. It was: "We have a problem getting a commitment from our senior management to spend money on a project. With the cost sharing program it is tough to get an OK from our own people. We could surely use a project as a bridge during low workload periods."

What problem areas would you like to see investigated?

This question was quite similar to the earlier one that asked "What Projects would you like to see carried out?", but prompted a few rather different responses, as follows:

- SP-6 needs a project that everyone can work on and accomplish, and have a sense of contribution to the industry. A National strategy is needed.
- We need a bottom-up approach to standards development, with really disciplined procedures and processes all tied together as a stable way of operating - like the Japanese treat material, processes, planning, etc.
- Other industries and other standards organizations may be able to help us with our problems, if we will just communicate with them.
- If you win a bid, you also need to take a standard from the "voluntary" pot and do it. If we are really cost sharing, this approach should be viable. We need to harness the potential that resides in the shipyards. We need "competition through cooperation". We need to upgrade the industry and do it all the same way. Then we can compete against the real competition - the world.
- We should take some money and go into the international arena with a paid person to lead the march to ISO, et al. The SCA could provide the central focus. There is no alternative on the books right now. We need leadership from the SCA. We could take a senior shipyard person to lead for a period of six months, and pay him to do it. This leadership might pull the whole scene together.

What message would you like transmitted to this Panel?

This question was added to the list so that the people being interviewed could have a direct voice back to the Panel, anonymously, on any point that they might wish to raise. Some comments were favorable, and some not so favorable. There were not many comments offered in the SP-6 area, but notice how they collectively cover quite a spectrum of concern. Responses were as follows:

- Commercialization of MIL specifications is the wrong way to go. Let the Navy commercialize itself. A library of U. S. standards is needed, like Sweden, Japan, etc. We should focus on ISO material.
- Involvement with ASTM is a waste. IEEE is the electrical standards body - NEMA included. ASTM is not the place to put information on the design of a valve, for instance. People will look to the valve manufacturers for it. With proper planning we can make standards a more effective tool. We need a cost analysis for benefit potential, not just words. If a standard does not save money, we should put it on the voluntary list.

- . F-25 has been effective. We need to publicize this fact, and tie SP-6 to it. This effectiveness has been going on for years. The Navy was a bottleneck in the early years, but they have loosened up lately.
- We spend too much time refining and defining goals, changing management styles and chairmen, etc.
- We should think on a higher level. We should think globally, and act locally.
- F-25 is publishing lots of standards, and SP-6 not many. However, F-25 "may be cutting the ribbons on roads laid by SP-6". This might be irritating the SP-6 attitude.

PROJECT REPORTS AND NSRP INFORMATION

Do you receive adequate information on NSRP Project Reports?

75% of those interviewed answered "Yes". One person said "no", and one person had no opinion.

Do you get the "Yellow Book" NSRP Bibliography of Publications?

Here 50% answered "Yes", and 37% answered "No". When questioned further,, however, the "NO'S" each said that they had access to this document, even though they did not have their own personal copy.

Have you ever ordered a Report from the NSRP Library?

Only one person had ordered a publication personally. However, several people indicated that reports had been ordered for them, and that they had received the reports promptly and in good order. It is clear that the procedure for obtaining project reports from the NSRP Library is working satisfactorily.

Is the NSRP Newsletter of value to you?

Only three out of 8 interviewees answered this question in the affirmative. Four answered in the negative. 2 of those interviewed asked to have their names added to the mailing list for the Newsletter, which is a favorable indication that they feel the Newsletter has the potential of being useful to them. One person commented that the Newsletter "reminds people that there is an NSRP, but the substance is weak". He added that the Newsletter "could be much better".

How can NSRP information be communicated more effectively?

Since it was apparent at the beginning of this Project that communications were a major weakness of the NSRP, this question was added to explore with those interviewed how improvements might be made. Responses to this question were as follows:

- We should look for a common denominator, like SNAME, but we might not get the desired coverage. Perhaps Marine Technology can help us.
- Automate!
- Brochures are OK, but there are so many in the mail that they are ignored.
- We need to improve the credibility of the message. We have plenty of ways to communicate, but we are weak on substance and confidence in the authors. We do not have the credibility needed to support a major communication campaign. We need to improve our public relations,
- The ECB, the management of the SCA and the management of the NSRP all need to deal at higher levels in the shipyard organizations.

Would you prefer to have a single point of contact within your company for information on meetings, availability of NSRP reports on projects, and other NSRP matters?

This question was included on the list to suggest the idea of a single point of contact to those who have not as yet tried it. It would also provide some feedback from those who have attempted this idea in their shipyard. Responses were all favorable to this idea.

What person in your company would best serve as this point of contact?

This follow-up question prompted the response that the shipyard person closest to the NSRP should be the point of contact.

CONCLUSIONS FROM THE FINDINGS

Analysis of the responses offered by those interviewed suggests the following conclusions on matters of interest to SPC Panel SP-6.

Those Associated with the Benefits derived from Project Reports

1. The projects yielding the MOST benefit value were those offering direct shipyard implementation.

2. The projects involving "analytical review" of certain areas were considered low in value.

Those Associated with the Suitability of Panel Meeting Administration

3. The present administration of Panel Meetings is not satisfactory. There are major problems with interest focus, goals, and leadership.

4. Several specific points are pertinent:

A. Meetings of 2 day's duration, three times per year, at varying locations, are favored.

B. The present meeting format and content have been satisfactory and should be continued. However, there might be a need for:

- l Establishing more formality during the meetings;
- l Creating more structure for the meeting content;
- l Concentrating on Panel focus, direction, goals, and leadership.

C. The present mix of attendees is marginally satisfactory. The addition of more high-level people, more shipyard representatives, and reducing the involvement of consultants and vendors should be beneficial to meeting deliberations.

D. Meeting agenda might be improved by:

- l Providing an agenda update two weeks prior to each meeting;
- l Adding appropriate information from other industries;
- l Spending less meeting time on the administration of projects.

E. A meeting in conjunction with another SPC Panel or a technical symposium would be beneficial to Panel interests.

F. Meeting minutes should allow follow up on action commitments.

Those associated with the Administration of Project Reports and Information

5. Project reports have been available to Panel members.
6. The NSRP Bibliography of Publications has been available to those who need it.
7. The procedure for obtaining project reports and training materials from the NSRP Library has been working satisfactorily.
8. Distribution of the NSRP Newsletter is too narrow and restricted. It often contains information weak in substance, and could be improved.
9. A single point of contact within a shipyard for obtaining information on NSRP matters would be helpful.

Those associated with NSRP matters in general

10. There is major concern about the focus and leadership of the NSRP, and with the overall posture of this Program as viewed by the shipyard community.
11. The finding cycle for projects has been too long and uncertain.
12. In summary, SPC Panel SP-6 is active, moderately supported by the shipyard community, and has been effective in providing contributions to the National Shipbuilding Research Program in behalf of the shipyard industry in general, and the Marine Industry Standards area in particular. The role of Panel SP-6 relative to the larger standards community (ISO, ASTM, IEEE, etc.) is not clearly established, causing frustration and bother among Panel members.

RECOMMENDATIONS FROM THE CONCLUSIONS

The following recommendations have been drawn from the conclusions.

Those Associated with Panel Projects

1. The voting members of Panel SP-6 should continue to weigh the potential for implementation of each proposed project, and to temper their decisions accordingly. Analytical studies offering little practical application in shipyard production or operations areas should have other redeeming features of major proportions before they are supported.

Those Associated with Panel Meeting Administration

2. Panel SP-6 should promptly establish a clear interest focus, resolve its relationship relative to the larger standards organizations, and develop a multi-year strategic plan for specific standards activities deemed to be of direct interest throughout the shipyard industry.

3. The present practices for Panel meetings should be continued, with some adjustments (see page 29 under Conclusions for a discussion of several pertinent points).

Those Associated with the Administration of Project Reports and Information

4. Extension of the NSRP Newsletter to a broader distribution, and the introduction of timely feature articles of interest to most readers, should be supported.

5. The idea of establishing of a single point of contact within each shipyard for NSRP information should be developed and implemented.

Those Associated with NSRP Matters in General]

6. Efforts to establish and promote a meaningful focus for the NSRP should be supported.

7. Actions to shorten and strengthen the NSRP project finding cycle should be assisted.

APPENDIX A

Project Benefit Analysis Worksheet

SPC Panel SP-6

SP-6 PROJECTS LISTING

NSRP	KEY	REMARKS
0042	Propulsion Plant Feasibility Study Report - Subtask 1- Forecast for Propulsion Plant Standards -1974	
0046	Propulsion Plant Feasibility Study - Subtask II - Technical Analysis on Determination of Standards Candidates -1975	
0047	Propulsion Plant Feasibility Study Report - Subtask III - Economic Analysis of Selected Standards Candidates -1975	
0049	Executive Summary - Propulsion Plant Standards Feasibility Study 1975	
0050	Ship Producibility Task S-1: Propulsion Plant Standards Feasibility Study 1975	
0052	Final Report - Propulsion Plant Standards Feasibility Study 1975	
0057	Standard Structural Arrangements 1976	
0059	Executive Summary - Feasibility of Shipbuilding Standards 1976	

N S R P	SP-6	KEY	REMARKS
0061 Castine Report S- 15 Project: Shipbuilding Standards 1976			
0078 A Compendium of Shipbuilding Standards - Consolidated Pilot Phase Report 1978			
0082 Interim Report on Subtask 1, Regulatory Body and Classification Body Shipbuilding Standards 1979			
0087 Interim Report on Subtask III, Foreign Shipbuilding Standards 1979			
0088 A Compendium of Shipbuilding Standards - Index to Shipbuilding Regulations and Standards 1979			
0089 Interim Report on Subtask II, Industrial Standards in Shipbuilding Use 1979			
0093 A Compendium of Shipbuilding Standards - Final Report 1979			
0107 Weld Defect Tolerance Study 1980			

NSRP	SP-6	KEY	REMARKS
0108 National Shipbuilding Standards Program Status Report No. 1 1980			
0116 National Shipbuilding Standards Program Status Report No. 2 1980			
0126 Navy Weld Defect Tolerance Study 1981			
0133 National Shipbuilding Standards Program Status Report No. 3 1981			
0144 Recommended U.S. Shipbuilding Standards Program Long Range Plan - Final Report (IHI) 1982			
0160 Consensus QA/QC Acceptance Standards 1982			
0161 Jigs and Fixtures Handbook Development 1982			
0174 Feasibility Study for the Commercialization of U.S. Navy GENSPECS - 1982 Edition 1983			

NSRP	SP-6 KEY	REMARKS
0212 Computerized Application of Standards 1985		
0344 Marine Industry Standards Planning Workshop Mar 1992		
0349 Balloting of Hull and Mechanical Standards Jun 1992		
0354 Standard Practice for the Selection and Application of Marine Deck Coverings Jul 1992		

KEY	RATING	DESCRIPTION
-----	--------	-------------

0	No knowledge/no interest
1	Interested; will look at information
2	Have information; considering it
3	Have studied information; no application intended
4	Information looks useful; application planned
5	Applied once; no further application seen
6	Have applied on limited scale; may apply again
7	Have applied substantially; information useful
8	Constant application on-going; information valuable
9	Need more information; wider application

RATING SYSTEM FOR NSRP PROJECTS EVALUATION

APPENDIX B

SPC Panel Meeting
Management and Administration

Questionnaire/Worksheet

NATIONAL SHIPBUILDING RESEARCH PROGRAM
+ + +
PROJECT BENEFIT ANALYSIS
and
EVALUATION OF PANEL MEETINGS AND ADMINISTRATION
+ + +
INTERVIEW QUESTIONNAIRE

Date _____

Shipyard Coded Identity _____

(Note: Shipyard identity **will** not be revealed in the published report.)

Shipyard/Company Name _____
Location/Address _____

Persons Contacted _____	_____	_____
Position/Title _____	_____	_____
Mailing Address _____	_____	_____
_____	_____	_____
Telephone _____	_____	_____
Panel Interest _____	_____	_____

Shipyard/Company Size (#) _____ Production Workers (#) _____

Ship Types _____

New Construction (Y/N) _____ Repair (Y/N) _____ Union (Y/N) _____

current Workload Size _____

Remarks _____

QUESTIONNAIRE

Panel SP-_____

Name_____Company_____Date_____

PANEL MEETINGS AND ADMINISTRATION

How often do you attend _____

Do/should others in your Company attend _____

Are the meetings of value to you _____

How can the meetings be improved _____

Increase/decrease number of meeting days _____

Continue/change meeting format _____

Continue/change content of meeting _____

Broaden/restrict who can attend _____

What should be added to the agenda _____

What should be dropped from the agenda _____

Should meeting be held in conjunction with other
organizations _____

Are meeting minutes of value to you _____

How can the NSRP be of more assistance to your company _____

What Projects would you like to see carried out _____

Do you have on-going NSRP Projects (identify) _____

What would you like to see investigated - problem areas _____

What message would you like transmitted to this Panel _____

PROJECT REPORTS AND NSRP INFORMATION

Do you receive adequate information on NSRP Project Reports _____

Do you get the 'Yellow Book' NSRP Bibliography of Publications

Have you ever ordered a Report from the NSRP Library _____

Is the NSRP Newsletter of value to you _____

How can NSRP information be communicated more effectively _____

Would you prefer to have a Single point of contact within your company for information on meetings, availability of NSRP reports on projects, and other NSRP matters? _____

What person in your company would serve best as this point of contact?

APPENDIX C

SPC Panel SP-6 Projects Listing
based on
Benefits Evaluation

**SPC Panel SP-6 Projects Listing
based on
Benefits Evaluation**

NSRP 0057 * * * * *

TITLE: Standard Structural Arrangements.

AUTHOR: General Dynamics Quincy, for Bath Iron Works.

DATE: July 1976 *COST:* (Not available)

NSRP 0344 * * * * *

TITLE: Marine Industry Standards Planning Workshop.

AUTHOR Thomas Soik and Douglas Rusch

DATE: March 1992 *COST:* (Not available)

NSRP 0107 * * * *

TITLE: Weld Defect Tolerance Study.

AUTHOR: Dr. Leslie W. Sandor (Sun Ship), for Bath Iron Works.

DATE: June 1980 *COST:* (Not available)

NSRP 0126 * * * *

TITLE: Navy Weld Defect Tolerance Study.

AUTHOR: Dr. Leslie W. Sandor (Sun Ship). for Bath Iron Works.

DATE: March 1981 *COST:* (Not available)

NSRP 0212 * * * *

TITLE: Computerized Application of Standards.

AUTHOR: Newport News Shipbuilding

DATE: 1985 COST: (Not applicable)

NSRP 0059 * *

TITLE: Executive Summary - Feasibility of Shipbuilding Standards.

AUTHOR: Bath Iron Works Corporation.

DATE: October 1976

COST: (Not available)

NSRP 0061 * *

TITLE: **Castine Report S-15 Project: Shipbuilding Standards.**

AUTHOR: Bath Iron Works Corp.

DATE: October 1976

COST: (Not available)

NSRP 0078 * *

TITLE: A Compendium of Shipbuilding Standards - Consolidated Pilot Phase Report.

AUTHOR: Corporate-Tech Planning, Inc.. for Bath Iron Works.

DATE: October 1978

COST: (Not available)

NSRP 0082 * *

TITLE: Interim Report on Subtask I Regulatory Body and Classification Body
Shipbuilding Standards.

AUTHOR: Corporate-Tech Planning, Inc., for Bath Iron Works.

DATE: 1979

COST: (Not available)

NSRP 0087 * *

TITLE: Interim Report on Subtask 111, Foreign Shipbuilding Standards.

AUTHOR: Corporate-Tech Planning, Inc., for Bath Iron Works.

DATE: March 1979

COST: (Not available)

NSRP 0042 *

TITLE: Propulsion Plant Feasibility Study Report - Subtask I -
Forecast for Propulsion Plant Standards.

AUTHOR: M. Rosenblatt and Son, Inc., for Bath Iron Works.

DATE: June 1974 *COST:* (Not available)

NSRP 0046 *

TITLE: Propulsion Plant Feasibility Study - Subtask II -
Technical Analysis on Determination of Standards Candidates.

AUTHOR: M. Rosenblatt and Son, Inc., for Bath Iron Works.

DATE: January 1975 *COST:* (Not available)

NSRP 0047 *

TITLE: Propulsion Plant Feasibility Study Report - Subtask III -
Economic Analysis of Selected Standards Candidates.

AUTHOR: M. Rosenblatt and Son, Inc., for Bath Iron Works.

DATE: February 1975 *COST:* (Not available)

NSRP 0049 *

TITLE: Executive Summary - Propulsion Plant Standards Feasibility Study.

AUTHOR: M. Rosenblatt and Son, Inc., for Bath Iron Works.

DATE: June 1975 *COST:* (Not available)

NSRP 0050 *

TITLE: Ship Producibility Task S-1: Propulsion Plant Standards Feasibility Study.

AUTHOR: Ingalls Shipbuilding for Bath Iron Works.

DATE: June 1975 *COST:* (Not available)

NSRP 0052 *

TITLE: Final Report - Propulsion Plant Standards Feasibility Study.

AUTHOR: Ingalls Shipbuilding Division. for Bath Iron Works Corporation,

DATE: August 1975 *COST:* (Not available)

NSRP 0088 *

TITLE: A Compendium of Shipbuilding Standards - Index to Shipbuilding Regulations
and Standards.

AUTHOR: Corporate-Tech Planning, Inc., for Bath Iron Works.

DATE: April 1979 *COST:* (Not available)

NSRP 0089 *

TITLE: Interim Report on Subtask II, Industrial Standards in Shipbuilding Use.

AUTHOR: Corporate-Tech Planning, Inc., for Bath Iron Works.

DATE: May 1979 *COST:* (Not available)

NSRP 0093 *

TITLE: A Compendium of Shipbuilding Standards - Final Report.

AUTHOR: Corporate-Tech Planning, Inc., for Bath Iron Works.

DATE: September 1979

COST: (Not available)

NSRP 0108 *

TITLE: National Shipbuilding Standards Program Status Report No. 1.

AUTHOR: Bath Iron Works.

DATE: June 1980

COST: (Not available)

NSRP 0116 *

TITLE: National Shipbuilding Standards Program Status Report No. 2.

AUTHOR: Bath Iron Works.

DATE: November 1980

COST: (Not available)

NSRP 0133 *

TITLE: National Shipbuilding Standards Program Status Report No. 3.

AUTHOR: Bath Iron Works.

DATE: November 1981

COST: (Not available)

NSRP 0144 *

TITLE: Recommended U.S. Shipbuilding Standards Program Long Range Plan Final Report.

AUTHOR: IHI Marine Technology, for Bath Iron Works.

DATE: February 1982

COST: (Not available)

NSRP 0160 *

TITLE: Consensus QA/QC Acceptance Standards.

AUTHOR: Newport News Shipbuilding and Dry Dock Co., for Bath Iron Works.

DATE: November 1982

COST: \$25,677.

NSRP 0161 (Not rated)

TITLE: Jigs and Fixtures Handbook Development.

AUTHOR: Bath Iron Works Corporation.

DATE: August 1982

COST: (Not available)

NSRP 0174 *

TITLE: Feasibility Study for the Commercialization of U.S. Navy GENSPECS -1982 Edition.

AUTHOR: John J. McMullen Associates.. Inc., for Bath Iron Works.

DATE: July 1983

COST: \$52,567.

NSRP 0349 *

TITLE: Balloting of Hull and Mechanical Standards.

AUTHOR: William O'Sullivan Associates

DATE: June 1992

COST: (Not available)

NSRP 0354 *

TITLE: Standard Practice for the Selection and Application of Marine Deck Coverings

AUTHOR: Joseph F. O'Donnell

DATE: July 1992

COST: (Not available)

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