

**Benefit Analysis of SPC Panel SP-5 Projects &  
Evaluation of SPC Panel SP-5  
Management and Administration**

U.S. DEPARTMENT OF THE NAVY  
DAVID TAYLOR RESEARCH CENTER

in cooperation with

National Steel and Shipbuilding Company  
San Diego, California

# Report Documentation Page

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NSRP 0393

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• *Overall Quality of Report*

• Excellent • Good • Fair • Poor

• *Usefulness to You/Your Organization*

• Very Useful • Moderately Useful • N/A

• *Did/Will your organization implement the results of this project?* • Yes • No

If not, why? \_\_\_\_\_

• *How Did You Receive Report?*

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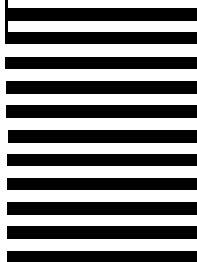
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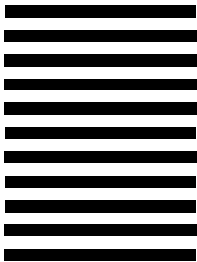
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**FINAL REPORT**



**BENEFIT ANALYSIS OF SPC PANEL SP-5 PROJECTS**

and

**EVALUATION OF SPC PANEL SP-5  
MANAGEMENT AND ADMINISTRATION**



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For  
NATIONAL STEEL AND SHIPBUILDING COMPANY  
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In Behalf Of  
SNAME SPC PANEL SP-5

HUMAN RESOURCES INNOVATION

Under the  
NATIONAL SHIPBUILDING RESEARCH PROGRAM



September 1993

## PREFACE

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-5 on Human Resources Innovation 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-5 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 Human Resources Innovation 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. MUI71117-D, began in October 1991 and was completed in September 1993.

## EXECUTIVE SUMMARY

This Task has investigated the benefits derived from the projects sponsored during the past 10 years by SNAME Ship Production Committee Panel SP-5 on Human Resources Innovation under the National Shipbuilding Research Program. It has found that those projects involving work teams and teaming techniques have yielded the most value in the shipyard community. A close second has been Human Resources workshops and similar opportunities for interaction among participants. The “responses from those interviewed clearly 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-5 itself. It has found that the practices currently in effect have been well received, and should be continued with only minor improvements. It has highlighted the fact that SP-5 is the only SPC Panel having representatives of organized labor among its members. Comments from those interviewed further reflect growing concern for the welfare of the NSRP under the present structure. Several points are of particular interest:

- Communications between Panel members and the ECB are weak and indefinite.
- The funding cycle for projects is too lengthy and unreliable.
- Communication of research activities and project results to those in the shipyard community who need such information continues to be a problem area.
- The relationship between the NSRP and organized labor is limited to only one Panel (SP-5), and needs to be expanded and strengthened.

Despite its small size in terms of regular active members, Panel SP-5 is strong and effective in the area of Human Resources Innovation, and continues to make substantial contributions to the body of information within the NSRP. The scope of Panel interests is extensive, embracing nearly every functional group within the shipyard community including safety and health considerations which affect virtually every employee. The performance of this Panel is a compliment to the dedication and continued support of its active members, and to the favorable mix of specialties and personalities that constitute its strength. With the future holding so many opportunities for improvements in human considerations as the transformation to commercial shipbuilding and repair is pursued, the NSRP is fortunate indeed to have Panel SP-5 already functional and effective in this critical area.



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# FINAL REPORT



## BENEFIT ANALYSIS OF SPC PANEL SP-5 PROJECTS

and

## EVALUATION OF SPC PANEL SP-5 MANAGEMENT AND ADMINISTRATION

### BACKGROUND

#### General Discussion

This Project was designed: (1) to investigate the benefits that may have resulted from SPC Panel SP-5 Human Resources Innovation projects carried out over the first 10 years of Panel operations; and (2) to evaluate how the management of Panel SP-5 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-5 might be improved.

This Project would consist of interviews with members of the Human Resources Innovation 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-5 Panel Members toward their action on panel operations and projects in the future.

This project was a direct follow-on to 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-5 on Human Resources Innovation.

## Overview

Information on both aspects of this effort was gained through personal and anonymous interviews with 20 members of the Human Resources Innovation community from 10 different shipyard locations. Those interviewed included 11 shipyard Human Resources Managers and assistants, 4 production or operations department people, and 5 representatives of organized labor. 18 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 December 1992 through June 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-5 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 11. Conclusions reached from the findings are on pages 24 and 25. The recommendations drawn from these conclusions are on page 26.

## BENEFIT ANALYSIS OF PROJECTS SPONSORED BY SPC PANEL SP-5

### General Discussion

This section contains information on all of the SP-5 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-5 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-5 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 Human Resources area. As such, these opinions reflect the overall industry attitude surrounding these projects, which should be of interest to SP-5 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.

Rerport No.    Benefit Value

NSRP 0056 \*  
NSRP 0252 \*\*\*\*\*  
NSRP 0254 \*\*\*  
NSRP 0263 \*\*\*\*  
NSRP 0264 \*\*\*\*\*  
NSRP 0265 \*\*\*\*\*  
NSRP 0282 \*\*

Report No.    Benefit Value

NSRP 0283 \*\*\*\*\*  
NSRP 0296 \*\*\*\*  
NSRP 0301 \*\*\*\*\*  
NSRP 0318 \*\*\*\*\*  
NSRP 0331 \*\*\*\*\*  
NSRP 0337 \*\*\*\*\*

### Detailed Discussion of Individual Projects

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

NOTE 1: The first project discussed, NSRP 0056, is listed in the NSRP Bibliography of Publications 1973-1992 under the section assigned to Panel SP-5, even though this project report was published 7 years before Panel SP-5 was formed. It is therefore discussed here, even though the work was not sponsored by Panel SP-5.

NOTE 2: 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.

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NSRP 0056 \*

*TITLE:* Study for the Improvement of Motivation in the Shipbuilding Industry.

*AUTHOR:* Dr. George A. Muench, for Newport News Shipbuilding and Dry Dock.

*DATE:* June 1976

*COST:* (Not available)

*ABSTRACT:* Objective research in the area of employee motivation has contributed significantly to our knowledge of human behavior in business and industry. Many companies have discovered a more efficient utilization of their work forces through a deeper understanding of worker motivation provided by research. Although some of the motivational research may be applicable to industry in general, minimal research has been conducted concerning employee motivation directly within the shipbuilding industry. The research reported in this study is one attempt to determine motivation techniques existing in the shipbuilding industry and to recommend alternative procedures which may offer potential for increased worker job satisfaction and productivity. (174 p.)

*BENEFIT ANALYSIS:* LOW VALUE. 72% of those interviewed had no knowledge of this report and no interest in the material. 22% would consider looking at it. It was revealed during one interview that organized labor was "afraid of awards being unbalanced", and so did not support this project. Another interviewee familiar with the report was less charitable. He found it "simplistic, naive, nothing new - all of this has been tried before", and worth a "D" grade as a freshman college paper.

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NSRP 0252 \* \* \* \* \*

*TITLE:* Problem-Solving Teams in Shipbuilding (Bethlehem Steel Corporation, Beaumont Yard).

*AUTHOR:* Bethlehem Steel Corporation.

*DATE:* November 1986

*COST:* \$51,169.

*ABSTRACT:* This report describes in detail the process involved at Bethlehem Steel Corporation's Beaumont Yard in developing and implementing an effective method of establishing problem-solving teams which can draw upon the knowledge of all shipyard employees. The process was modeled after the classic "quality circle" concept, employing major modifications adapted to the business conditions at Beaumont. (30 p.) (Project identified as 5-84-1.)

*BENEFIT ANALYSIS:* MIXED VALUE. Three shipyards (other than the author) indicated activity in this area. One cited use of an equivalent technique before this report was available. Another was quite successful in implementing a similar technique, winning 1st place regionally and 2nd place nationally in the award given by the Association for Quality and Participation. A third shipyard cited use of this material as a fundamental building block for improvements.

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NSRP 0254 \* \* \*

*TITLE:* Decentralizing Statistical Accuracy Control Responsibility to the Ship Production Work force.

*AUZHOR:* National Steel and Shipbuilding Company, for Bethlehem Steel Corporation.

*DATE:* January 1987

*COST:* \$34,100.

*ABSTRACT:* This paper presents the organizational structure, methods and results of National Steel and Shipbuilding Company's efforts to decentralize the responsibility of statistical accuracy control from a central Accuracy Control Department to the hourly production workforce. It includes an accounting of the problems and successes encountered during implementation. The results are both quantitative and qualitative in form, including methods for measuring reductions in rework. (37 p.) (Project identified as 5-85-3.)

*BENEIT ANALYSIS: LOW VALUE.* 83% of those interviewed had no knowledge of this report and no interest in the material. 2 people said that they might be interested in looking at it. Only one shipyard reported use of the material stating that it had contributed to their accuracy control program.

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NSRP 0263 \* \* \* \*

*TITLE:* Gainsharing-Employee Involvement in a Shipyard/Assembly Yard.

*AUTHOR:* Kaiser Steel Corporation.

*DATE:* June 1987

*COST:* . \$18,600.

*ABSTRACT:* This report describes and offers commentry on the process employed to accomplish the following objectives: to develop and test within a ship-building or ship repair environment, one or more techniques of improving productivity through group sharing of consequent productivity gains. It was the first attempt ever documented of a gainshring program in a product-oriented environment. The purposes of the project were to: 1) increase blue collar productivity by giving workers a voice in decision-making affecting their work; 2) protide a model productivity ehancing employee involvement activity that can be adopted by other stipyards; and 3) offer a successful option to industries hesitant to change their management styles. (32 p.) (Project identified as 5-85-4.)

*BENEET ANALYSIS: MIXED VALUE.* 61% of those interviewed had no knowledge of this report and no interest in the material 22% said that the material had been studied, but that no application had been intended. One interviewee its use as a catalyst for 3 different programs at his shipyard, but admitted that the material had been considered by some as a bit controversial. Another stated that the material had been used for reference during a gainsharing effort at his shipyard.

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NSRP 0264 \* \* \* \* \*

*TITLE:* Multi-Skilled Self-Managing Work Teams in A Zone Construction Environment.

*AUTHOR:* National Steel and Shipbuilding Company.

*DATE:* August 1987 *COST:* \$51,169.

*ABSTRACT:* This report documents National Steel and Shipbuilding Company efforts to develop self-managing multi-skilled work teams. The objective of this effort was to develop and test a new production workforce organization corresponding to the technical requirements of product-oriented work breakdown structure, also known as zone construction. (31p.) (Project identified as 5-84-3.)

*BENEFIT ANALYSIS:* HIGH VALUE. Although one shipyard stated that “zone construction scared people away”, other comments indicated that the idea of self-managing multi-skilled work teams has been found valuable in at least three shipyards (other than the author). One interviewee stated that this material had been used to “made a significant change” at his shipyard, and that it was a fundamental building block for setting up work teams. He rated this report as the best one produced by SP-5.

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NSRP 0265 \* \* \* \* \*

*TITLE:* Organizational Innovations in Shipyard Safety.

*AUTHOR:* Peterson Builders, Inc., with Bethlehem Steel Corporation.

*DATE:* May 1987 *COST:* \$51,169.

*ABSTRACT:* This publication details the creation, within Peterson Builders, of a Safety Action Team using Quality Circle training and techniques. The report includes: policy guidelines, candidate selection, training, identification of problems and team projects. The results show the benefits of the Safety Action Team concept for any shipyard regardless of size or location. (38p.) (Project identified as 5-84-2.)

*BENEFIT ANALYSIS:* MIXED VALUE. 67% of those interviewed had no knowledge of this report or interest in the material. 22% had read the report, but intended no action to implement the results. One shipyard representative stated that there was “lots of interest in this one”, but offered no information on actual application of the findings. Another shipyard representative cited use of this report as reference material for a new safety program being established. This user gave the report a high rating.

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NSRP 0282 \*\*

*TITLE:* Employee Involvement and Work Redesign in U.S. Shipbuilding: Analytical Review.

*A UTHOR:* Cornell University for Bethlehem Steel Corporation.

*DATE:* April 1988

*COST:* \$30,000.

*ABSTRACT:* This report presents the results of a 1986 survey of innovations occurring within U.S. shipyards in the areas of human resources and manufacturing processes. commonly referred to as employee involvement and work redesign activities. It documents the nature of the economic challenge and the variety of responses chosen to meet that challenge within the shipbuilding industry and other industries facing similar pressures in the U.S. and abroad. It begins with a general description of traditional shipyard organization. It then presents the industry's movement in the direction of a new, more flexible organizational design which better meets current economic demands. (77p.)

*BENEFIT ANALYSIS:* LOW VALUE. Only 17% of those interviewed had read this report, and none of them intended any application of the material. The rest had no knowledge of the report and no interest in the material. One interviewee had read the report as background data. but found it of no practical use to him. Another said that the material was already dated when the report was issued.

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NSRP 0283 \* \* \* \* \*

*TITLE:* Problem-Solving Teams in Shipbuilding (General Dynamics, Electric Boat Division).

*A UTHOR:* WIN/WIN Strategies and General Dynamics, Electric Boat for Bethlehem Steel Corporation.

*DATE:* May 1988

*COST:* \$24,780.

*ABSTRACT:* Abstract: The purpose of this report is to document General Dynamics Electric Boat Division's efforts in developing and implementing an effective method of establishing problem solving teams in the shipyard. The purposes of the project are several and include: increasing blue collar productivity by giving workers a voice in the making of decisions that affect their work providing a model productivity-enhancing employee involvement activity which is transportable, in whole or in part to other yards in the industry; and perhaps also piquing the curiosity of those in the industry who are hesitant to test or expand changes in management style. (19 p.) (Project identified as 5-85- 1.)

*BENEFIT ANALYSIS:* HIGH VALUE. 5 shipyards indicated use of this material, with two of them citing on-going application of it. Another shipyard representative stated that the report had provided useful reference information. One interview at the author shipyard revealed that funding did not support continuing with this project. He added that a labor strike at that time also added a problem, as "relations became distant".



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NSRP 0296 \* \* \* \*

*TITLE:* Product Oriented Workforce.

*AUTHOR:* Bethlehem Steel Corporation.

*DATE:* November 1989

*COST:* \$27,585.

*ABSTRACT:* This report represents documentation by General Dynamics Electric Boat Division to develop and implement a plan to achieve a multi-disciplined work force. The intent was to determine the mechanics of developing a work force in which employees have more than one skill, identify the skills and skill levels. then determine the manner in which to assign those employees so their skills *are* optimally utilized. (17p.) (Project identified as 5-85-2.)

*BENEFIT ANALYSIS: MIXED VALUE.* Although 67% of those interviewed had no knowledge of this report and no interest in the material, one shipyard representative cited its use in “many discussions on labor issues, and as background information for team activities”. Another shipyard representative admitted that this approach had been “tried once - what a disaster”. Two other shipyards had studied the material, but intended no application of it.

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NSRP 0301 \* \* \* \* \*

*TITLE:* Employee Involvement/Safety.

*AUTHOR:* Bethlehem Steel Corporation.

*DATE:* June 1990

*COST:* \$45,000.

*ABSTRACT:* The purpose of this report is to document General Dynamics-Electric Boat Division’s efforts in employing problem solving teams, under the leadership of union representatives, to improve safety performance, thereby reducing injuries to their personnel and the associated costs of medical treatment and claims due to occupational injuries and illnesses. Electric Boat was awarded a grant from the Human Resource Panel (SP-5) of the Ship Production Committee of the Society of Naval Architects and Marine Engineers (SNAME) to test, in a shipyard environment, the effectiveness of such problem solving teams in the safety area. (25p.) (Project identified as 5-87-3.)

*BENEFIT ANALYSIS: HIGH VALUE.* This report was rated the highest of the SP-5 sponsored projects under investigation, with 6 shipyards ideating application of the material. It was the forerunner of the Union Driven Safety Action Teams that have recently proven to be quite effective. At least one shipyard also has established equivalent Non-Union Safety Action Teams with considerable success, as recorded injuries at that shipyard were reduced by 33% last year. Another shipyard cited use of this “excellent report” as a building block for their safety program.

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NSRP 0318

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*TITLE:* A Survey: The Principal Elements of Safety Program of Nine Major American Shipyards.

*AUTHOR:* WIN/WIN Strategies (Frank Long)

*DATE:* January 1991

*COST:* \$33,471.

*ABSTRACT:* A questionnaire and the results thereof on health and safety programs at the following shipyards are contained in this report Avondale, Bath Iron Works, Bethlehem Steel/Sparrows Pt, General Dynamics-Electnc Boat, Ingalls Shipbuilding, Mare Island Naval Shipyard, National Steel and Shipbuilding Company, Newport News, Norfolk Naval Shipyard, Norshipco, Philadelphia Naval Shipyard. and Puget Sound Naval Shipyard. (43p.) (Project identified as 5-87-4.)

*BENEFIT ANALYSIS:* HIGH VALUE. This report has received considerable usage as reference material. which was its basic purpose. Several of those interviewed cited the participation of their shipyard in the actual survey. Four shipyards indicated specific usage of this material - in the safety office, during safety program development as safety reference information, and as support for the on-going OSHA efforts being pursued by SP-5 members. Only 28% of those interviewed had no knowledge of this report and no interest in the material.

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NSRP 0331

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*TITLE:* National Workshop on Human Resource Innovations in Shipbuilding/Ship Repairs.

*AUTHOR:* WIN/WIN Strategies (Frank Long)

*DATE:* July 1991

*COST:* \$40,000.

*ABSTRACT:* *This* report details the proceedings of the workshop held October 16-18, 1990 at the Maritime Institute of Technology in Linthicum Heights, Maryland. Participants included representatives of private and public shipbuilding repair organizations, labor unions, universities, the United States Navy, Maritime Administration and United States Government Agencies. (233p.)

*BENEFIT ANALYSIS:* HIGH VALUE. This First National Workshop was eminently successful. as comments from those in attendance will attest. Among those interviewed, 33% had read the material which is essentially a verbatim transcript of the Workshop proceedings (a formidable document). Even though this projeet was a workshop, and the proceedings were not intended for direct application, the project has been given a rating. This Workshop was found to be sufficiently valuable that similar workshops are planned to follow when funding allows.

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**NSRP 0337** \* \* \* \* \*

*TITLE:* Employee Involvement - White Collar Work Force.

*AUTHOR:* Robinson - Page - McDonough and Associates, Inc. (Rodney A. Robinson)

*DATE:* August 1991

*COST:* \$59,979.

*ABSTRACT:* *This* report details the investigation into the improvement of white collar productivity in a shipyard through employee involvement. Two functional areas of the host shipyard, electrical and structural (hull), were investigated through the use of Action Teams composed of both white-collar and blue-collar workers. The approach was (1) to improve communications in both directions, and (2) to strengthen working relationships among the groups represented on the teams. The teams met one hour per week for six months. This report explains the actions taken to set up and implement the action teams, and the advantages that can be gained by doing so. (Project identified as N5-89-4.)

*BENEFIT ANALYSIS:* MIXED VALUE. 50% of those interviewed had studied this report, but intended no application of these techniques. Three shipyards found the material valuable. as it “contributed to team efforts”, “involved production people”, and “was good information”. (This project was found to be sufficiently valuable that Phase II was approved and conducted during 1992.)

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## MANAGEMENT OF SPC PANEL SP-5 ACTIVITIES

### General Discussion

This section describes the opinions of those interviewed relative to the administration of SPC Panel SP-5 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-5.

The discussions that produced these opinions were most gratifying, as without exception each person interviewed was open, serious, and anxious to offer a position on the matter at hand. The persons interviewed constitute the core of Panel SP-5 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-5 Meeting Attendees for the 10 most recent meetings. This matrix reveals which shipyards and other activities have been supporting SP-5 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 60% of these companies have had a representative at three at more of these meetings.

Attendee Affiliation	Date - Location									
	Mar '91 - New Orleans, LA	Jun '91 - Groton, CT	Sep '91 - San Diego, CA	Dec '91 - Tampa, FL	Mar '92 - Mobile, AL	Jun '92 - Virginia Beach, VA	Oct '92 - Bath, ME	Dec '92 - San Diego, CA	Mar '93 - Folly Beach, SC	Jun '93 - Sturgeon Bay, WI
Atlantic Marine, Inc.									X	X
Avondale Industries, Inc.								X		
BAO New London, CT		X								
Bath Iron Works	X	X	X	X	X	X	X	X	X	X
Bay Shipbuilding Corp.										X
Bethlehem Steel Corp.	X	X	X	X	X	X	X	X	X	
BMS and Associates			X					X	X	
Boilermakers International Union		X	X	X			X	X	X	X
DTRC (NSWC - Carderock)	X	X	X	X	X	X	X	X	X	
GD/EB Div.	X	X	X	X	X	X		X	X	X
GD/Quonset Point		X	X	X		X	X	X	X	X
IAM - AW					X		X	X	X	
Ingalls Shipbuilding Div.	X				X					
Intermarine USA									X	
Ironworkers Local 627 NASSCO								X		
JJG Associates		X	X	X						X
Mare Island NSY					X					
Maritime Administration, U. S. DoT	X	X			X	X	X	X	X	X
Metal Trades Council - Tampa, FL				X						
Metal Trades Council - New London, CT	X	X	X	X	X	X	X	X	X	X
Moon Engineering Co., Inc.						X				
NASSCO	X	X	X	X	X	X	X	X	X	X
NavSea		X								
Newport News Shipbuilding	X	X	X	X	X	X	X	X	X	
Norfolk NSY						X				
OSHA, U. S. Dept. of Labor				X	X	X	X		X	
Peterson Builders, Inc.		X	X			X	X	X	X	X
Philadelphia NSY	X	X				X		X	X	X
Port of Portland, OR								X	X	X
Portsmouth NSY		X								
Puget Sound NSY	X									
R-P-M and Associates, Inc.	X	X	X	X	X	X	X	X	X	X
Saint John Shipbuilding Ltd.								X	X	X
Win/Win Strategies	X	X		X	X	X	X	X	X	X

Meeting Attendees  
SPC Panel SP-5  
Human Resource Innovation

## 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?**

44% of those interviewed attended all of the meetings. 50% of those interviewed attended 1 or 2 meetings each year. One interviewee had attended one time only, and that was several years ago.

#### **Do/should others in your Company attend?**

One interviewee said that the Head of his Shipyard should attend regularly. 4 interviewees said that one additional person should attend along with them. The rest answered the 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?**

67% answered this question favorably. One interviewee said “half of the time”, and the rest offered no response to the question. Several interesting comments were made during the discussion of this question that illustrate what sort of “values” are involved here. These comments are summarized below, as nearly verbatim as possible:

- Meeting attendees represent the entire cross-section of shipbuilding. Personal attendance offers an opportunity to visit other shipyards and to learn what goes on in “your” area. You can learn much by just walking through a shipyard and looking at such things as line heating or frame straightening operations. You will get information from your direct involvement in Panel activities that you will simply not get if you are distant from the Panel. This sort of information may be published, but it does not reach the “troops” effectively.
- Some topics are familiar and relevant, and some are not. The discussions of OSHA standards preparation were interesting and valuable. So was the discussion on the confined space standard.
- Seeing other shipyards, and finding out how things are done there. Talking to other shipyard people who are experts in their field. These things broaden your outlook on the whole Human Resources way of doing things.

- Human factors are valuable. The people at the meeting are different than those dealt with at (his shipyard), but it was enlightening to see their perspectives. Union problems are similar. The safety slant with the Union people was particularly good, especially the colored safety glasses idea.
- Meeting attendance is an opportunity to learn what the (shipyard) industry is all about, and to contribute on an equal basis with the other participants. Attendance teaches the “meat and potatoes” of the shipyard industry-
- Interacting with other shipyard people. This is the only forum available for discussing matters with your counterparts in other shipyards.
- Sharing thoughts and ideas, and information exchange, is the principal benefit.
- I am impressed by the type of attendees, their individual interest levels, and the continuing involvement of people at virtually all levels.
- Unfortunately my shipyard was “not in a listening mode” when I reported back to them after attending a meeting.

**How can the meetings be improved?** In particular,

**Increase/decrease number of meeting days?**

44% felt that the present meeting arrangement of 1 to 1-1/2 days should be continued. 3 interviewees would add one day, while 1 other interviewee would add two days. The rest had no opinion. It is interesting to find no hint that meeting duration’s should be shortened.

**Continue/change meeting format?**

While 39% said that no changes were needed, and 39% voiced no opinion, there were four specific comments on this matter, as follows:

1. The agenda should be followed more closely.
2. There should be more action commitments.
3. Information is needed in advance of the meeting to permit identification and development of meaningful comments.
4. Meetings should be professionally facilitated.

Comments in response to this question also supported the continuance of holding a dinner in connection with each meeting as a good way to encourage relaxed and effective discussions on matters of mutual interest, especially among those in attendance for the first or second time.

### **Continue/change content of meeting?**

Responses to this question indicated satisfaction with the present meeting content, although three specific suggestions for improvement were made, as follows:

1. More information provided in advance of the meeting would help to encourage meaningful comments during the meetings.
2. Increasing the length and depth of discussions should be invited.
3. A presentation at each meeting on some appropriate topic would help to attract additional attendees.

### **Broaden/restrict who should attend?**

Those interviewed cited the present mix of attendees at Panel meetings as quite satisfactory. There were no comments on restricting the attendees, but four comments on increasing the attendees, as follows:

1. More high level people.
2. More production people.
3. More representatives from organized labor.  
(Note: This comment was not from a Union member).
4. More people who are willing to share information.

### **What should be added to the agenda?**

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

1. More depth to brainstorming segments.
2. More discussions of common issues.
3. More information on the activities and desires of the ECB.
4. More discussion on what panel information should be presented to the ECB, and how it should be packaged and delivered.
5. Regular discussions of abstracts, that should also be compiled regularly.
6. Consideration of adding Quality Assurance and also Safety issues to the scope of Panel matters.

### **What should be dropped from the agenda?**

The consensus here was that “nothing” should be dropped from the agenda.

### **Should meetings be held in conjunction with other organizations?**

56% 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, and would assist some potential attendees in their efforts to obtain approval of the



associated travel expenses. 2 interviewees said that Panel meetings should not be coupled to other activities. The rest offered no opinion.

### **Are meeting minutes of value to you?**

72% answered “yes”, and 11% said “no”. Three specific constructive comments were made in response to this question, as follows:

1. Minutes need to be published earlier.
2. Minutes need specific action items, with follow-up as appropriate.
3. Minutes need to be bound, and have an index.

(Note: Some SPC Panels are doing this already, notably Panel SP-3).

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:

- The whole Panel structure keeps matters too separated. We need better cross-communications and pollination. We need to have training in 4 Panels. We need both inter-Panel and cross-Panel projects.
- We need to get more information to the production workers - more copies of reports, more distribution of the (NSRP) Newsletter, more information on production-interest matters. This will help to solve the major communication problem of awareness of the NSRP . . . eventually.
- Improve the timing of the availability of the good things from the NSRP. Improvements are real and are expected, but they take too long to get there.
- Continue to help people attend meetings by allowing Government rates for rooms, etc.
- Much research has been done, but not much related to repair work - which is all that some shipyards do.
- Find a way to reach the people in Washington, DC who make a difference. We need a “champion” to reach the proper people and ask them: “Do you want to have a shipyard industry? Do you want to treat the problem of getting into the international commercial shipbuilding market? If so, then you need to pay attention to the NSRP in the following ways: ⇒ ”.
- Correct the finding for projects, both time and dollar amount. Get this area under control.

- Consider some ways to help fund people who wish to attend Panel meetings.. Today travel costs are a problem, and some financial help would make a difference - especially for the shipyard people.
- Get the word out on what is going on with projects and ideas through the use of roadshows and demonstrations (not just through written material). Better communications is the whole thing.
- We need more involvement by the CEO's of the shipyards. We need to know what the ECB is doing so that we can support it, and also because we may have different approaches to what is needed. We need more dialog between the Panels and the ECB. Each Panel Chair should be a member of the ECB with a full voice.
- We need something to make the reports easier to handle. We probably need more presentations and workshops, but to make them timely we need to include them as part of the basic projects. Information has been helpful in solving problems, but we need to keep it coming.
- Human Resource Workshops have been good. The first one involved 26 shipyards and lots of Union people. The key to success was the splinter groups and the working sessions, not the presentation of papers. The key was “active research”.
- We need to face the question of fundamentals in the area of international competition. We (the NSRP) have hidden behind “technical research”. We (the shipyard community) need to be team players, and not enemies. Naval Architects and Marine Engineers have been the driving force (so far). We need a much broader approach.
- The NSRP must establish a relationship with (organized) Labor, carefully and with great consideration in both directions.
- Speed up the money for the follow-on project of roadshows for the Union Driven Safety Action Teams. Things are going pretty well, and we need to capitalize on our successes.
- The NSRP should provide more pertinent information to help do the job. There is no other location (for the shipyards) to learn from. The NSRP should provide tailored programs to the shipyard industry.

## What Projects would you like to see carried out?

39% of those interviewed had specific comments on this question, as follows:

- We should determine what is needed to enter the international commercial market, and then establish a coalition of shipyard people who would get together and work toward solving this problem. SP-5 has started talking about regulations, financial matters, and marketing needs in this new area, but the problem is much bigger.
- We need to develop the leadership and skills of salaried foremen, and a project in that direction would help. People get promoted from the ranks without the necessary training for the job.
- Projects having little to do with ship construction or repair should not be promoted. Money is tight, and we need to use it for projects that will assist in these areas. We must improve our competitiveness in commercial markets, or we won't make it.
- We need to understand the strategy of the Departments of Labor, Commerce, Transportation, for instance. We need some input to guide our efforts. We tackle "hard" problem areas, but neglect the "soft" areas of concern. This might cause duplication with the other Panels, but it needs to be done.
- We need more projects in line with the original charter of Human Resources Innovation. Employee involvement is still a key. We have drifted off into safety issues and compensation problems. The marketing issue could use a whole new Panel - to work on strategic planning and marketing for the international commercial market.
- We could use an abstract for a safety training program for employees in an inspection team environment.
- We should study the role of QA in a TQM shipyard environment.
- We should find out how to tie awards to productivity. Gainsharing is easy in an assembly atmosphere, but tough in a shipyard where repetitive products are not available for reference.

Do you have on-going NSRP Projects?

The responses to this question were all negative. Several people stated that projects that they would perform were awaiting finding, but no projects were underway at the moment.

### **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:

- How can we make TQM work in the shipyards. TQM must be an integral part of everything in shipyards - all Panels. It is not a separate entity, and must not be a separate Panel.
- We have covered this area OK. We need Workshops to attract interest and to communicate to others what we do and what we have available.
- The support personnel for the SPC Panels need to have visibility - on the mailing lists, or somehow. There are many “underground” people out there who have much information (to share), and we don’t even know who they are! There have been administrative support people at a shipyard in the past. We need to code these entries (on the mailing lists) so that continuity at that shipyard can be maintained.
- Morale in a downsizing atmosphere should be examined.
- Awards and recognition programs - how to implement in a shipyard. We need measuring sticks, budgets, schedule references. A service-based program is easy, but a performance-based program is tough.
- How to communicate changes in employee policy to the people affected.
- How to talk to the ‘high priced help’ about the NSRP - overview and direction.

### **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-5 area, but notice how they collectively cover quite a spectrum of concern. Responses were as follows:

- We are passing up academic opportunities. We need (to get) schools involved in setting up programs in the TQM area at the Masters or Ph.D. levels. We need the academics to find out what we need to do, and then go set up the appropriate training.
- Push the information from SP-5 out to the production people - don’t just keep it within the “inner circle”. Share with production. SP-5 is the worst Panel in this regard - others do better at reaching the ‘troops’. What SP-5 does is supposed to benefit the production people, not just the HR community.

- Money is tight in the shipyards - even tighter in the Union areas. If money were available, more Unions might be able to participate.
- Get on with the international commercial market matters.
- The project queue is too long and too indefinite. You cannot hold a project 'at the ready' in order to do it when. and if the money arrives.
- We need information from the ECB.
- Our emphasis has been on generating reports. We have not addressed the implementation of good ideas. Facilitators and teams are the way that things get implemented. It does not happen by accident. We need a strategy, and ways to implement within a shipyard. HR is where it happens - HR and training.
- SP-5 is going in the right direction. It is expanding and getting stronger. Keep going. Better things are going to evolve.

#### PROJECT REPORTS AND NSRP INFORMATION

Do you receive adequate information on NSRP Project Reports?

67% of those interviewed answered "Yes", although the remaining 33% answered "No". This surprisingly high percentage of "No" answers, 1 out of 3, came from a group closer to SP-5 activities than most other shipyard people. It is apparent that there is a problem in getting NSRP reports out to the shipyard people who need to see them.

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

Here 39% answered "Yes", and 50% answered "No". When questioned further, however, only one interviewee stated that he had never seen this publication before. The others 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. Similar comments were received about the AVMAST Library of training materials. It is clear that the procedure for obtaining project reports and training materials from the NSRP Library is working satisfactorily.

## Is the NSRP Newsletter of value to you?

Only four out of 18 interviewees answered this question in the affirmative. Eight answered in the negative. Most of these people saw the Newsletter only when it was routed to them by someone else. 50% 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” Most of the comments surrounding the Newsletter contents were that the items in it were old news when the Newsletter was received. Several people thought that the Newsletter needed a regular feature article on a subject of timely and broad interest, so as to attract a regular readership- All felt that a much wider distribution was necessary in order for the Newsletter to be effective.

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:

- Much of SP-5 information stays within the “inner circle” and does not get to the production people who need it. Improvement is necessary in getting reports to the shipyard people that need them, and not only to the Panel attendees. All reports should go to at least to the Department Head level in all shipyards.
- When a Panel meeting is local, a strenuous effort should be made to get a large exposure for other people in the shipyard. Invite Production Department Heads, and others that we want to reach. Push the production side of the shipyard. They are the ones who need it.
- The NSRP Newsletter can help keep things in the forefront. Build on this basis.
- Perhaps SP-9 (the Education and Training Panel) should be asked to devise a summary, periodically, of projects and panel activities, and put it into our in-house Newsletter, and also offer it to shipyard local newspapers on a regular basis. Certainly any participating shipyard should agree to publish these items.
- Mailing lists are way out of date. They need to be fixed - formally, and by each shipyard. We need to decide who should receive what items.
- We need Newsletter expansion.
- We need better integration of the ECB with the Panels and attendees.
- The ECB and the Panels need closer communications. The reverse direction also needs improvement. We may need a special group to guide the ECB on projects, panel activities, etc.

- Middle managers should be promoting the NSRP to their own people - up, down, and sideways. In-house communications need to be improved.
- The Panels need to be responsive to the shipyard group that will implement their products. For example, safety procedures are developed (by HR), but the Operations Department is the place where they will be implemented, not the safety group or the engineering group. Keep the using department people involved in the project while it is being performed. This will help to ensure application when that time comes.
- We must digest reports to see about their application. We must work them into the existing workload. Some kind of a summary would be helpful in directing a more detailed look at the whole report, and would show what might be helpful from the other shipyards.
- The 'leaning' (in the NSRP) is toward commercial shipyards, rather than the Federal people. We need to make the (Government shipyard people) feel more comfortable and welcome.
- Workshops are the answer. Events where people can interact. Working sessions where people can realize that we are in it together, and the competition is the rest of the world.
- Tapes are OK. We do not use hard copy manuals much at all.
- Communications are pretty good now. The discouraging part is the level of information being communicated (too low).

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 as follows:

- Our shipyard library has the documents.
- Yes, but in our case lots of people did not take advantage of it when a common location was tried several years ago.
- That would be nice. We do not have it now.
- Good idea.
- We have such a setup, and so far it is going well. We have had a meeting of all participants in the NSRP to share information about ECB activities and actions, and also to decide which projects we should pursue as a shipyard.

Ž We would like to have such an arrangement with quarterly meetings. Our ECB representative should meet with this group and provide an in-house dialog on what is going on.

Ž If we attempted this arrangement, we would need someone who is familiar with all of the panels. When, and if, our shipyard decides to participate on all panels, we might like to try it. It would at least provide a good point of contact for everyone.

Ž This is a good idea. It would centralize the situation and improve the visibility of that person.

- We do this now. We meet regularly on NSRP matters. We have a central library. It has been a struggle to keep our NSRP library, but it has been maintained. This arrangement has given us a "Company strategy" for NSRP activities. We call it our "NSRP User's Group".

. We have this setup in our IE group.

| We do this now, in our IE group.

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

This follow-up question prompted the following responses:

. Our Librarian has done OK so far. This, coupled with our other sources of information, has been satisfactory.

- Perhaps the SP-5 representative, since he covers the whole gamut.

. Our SP-5 representative would be the person at our shipyard. He is a people person, is HR oriented, and would be a good first contact. Whoever it is would need direct reporting to the General Manager, our Directors, etc.

. The head of our NSRP User's Group is located in Production Engineering, which is where we apply this research. Corporate reorganizations and realignments of departments are disruptive to NSRP libraries, meeting attendees, project participation, etc. Human Resources is somewhat sheltered from these things, and therefore is a good resting place for our NSRP library.

| We have it in our IE group.

| IE is a good central location for it.



## **CONCLUSIONS FROM THE FINDINGS**

Analysis of the responses offered by those interviewed suggests the following conclusions on matters of interest to SPC Panel SP-5.

### **Those Associated with the Benefits derived from Project Reports**

1. The projects yielding the MOST benefit value were those dealing with work teams and teaming techniques.
2. Also considered highly beneficial were: (1) the Safety Survey of 9 Shipyards; and (2) the National Workshop on HR Innovations in Shipbuilding/Ship Repair.
3. The projects involving “analytical review” of certain areas were considered low in value.

### **Those Associated with the Suitability of Panel Meeting Administration**

4, The present administration of Panel Meetings is quite satisfactory, including the usual “attendance encouraged” informal dinner arranged for the evening following the first portion of the meeting.

5. Several specific points are pertinent:

A. Meetings of 1- 1/2 to 2 day’s duration, three to four times per year, at varying locations, are favored. Meeting duration’s might be lengthened by 1/2 to 1 day, but should not be shortened.

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

- l Following the agenda more closely;
- l Establishing more action commitments and follow-up;
  - Publishing agenda information further in advance of the meeting;
- l Engaging the services of a professional facilitator to make the meetings more effective.

C. The present mix of attendees is satisfactory. However, the addition of more high-level people, more production people, and more members of organized labor should be beneficial to meeting deliberations.

D. Meeting agenda might be improved by providing for:

- More depth to brainstorming discussions;
- More discussion of common issues;
- More information on the activities and desires of the ECB;
- More discussion of Panel input to the ECB;
- Regular discussion of project abstracts.

E. A meeting in conjunction with another SPC Panel or a technical symposium would assist some attendees in justifying their attendance and obtaining travel approval.

F. Meeting minutes published sooner, and in a bound format, would improve action item response and information retrieval.

### **Those associated with the Administration of Project Reports and Information**

6. Improvement is needed in making project reports available to the shipyard people who need them, specifically production and operations people.

7. The NSRP Bibliography of Publications has been available to those who need it.

8. The procedure for obtaining project reports and training materials from the NSRP Library has been working satisfactorily.

9. Distribution of the NSRP Newsletter is too narrow and restricted. It often contains stale information that does not enkindle a dedicated readership.

10. A single point of contact within a shipyard for obtaining information on NSRP matters would be helpful.

### **Those associated with NSRP matters in general**

11. Communications between the Panel members and the ECB have been hazy and distant.

12. The finding cycle for projects has been too long and uncertain.

13. The present NSRP ECB/Panel structure keeps matters too separated, and does not enable cross-communications and pollination.

14. The relationship between the NSRP and organized labor has been limited to one Panel (SP-5), and needs to be expanded.

15. In summary, SPC Panel SP-5 is active, well supported, and has been effective in providing meaningful contributions to the National Shipbuilding Research Program in behalf of the shipyard community in general, and the Human Resources Innovation area in particular.

## **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-5 should continue to weigh the potential for indementation of each proposed project, and to temper their decisions accordingly. Workshops and other interactive opportunities should receive prime consideration. 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. The present practices for Panel meetings should be continued, with only minor adjustments (see pages 24 and 25 under Conclusions for a discussion of several pertinent points).

### **Those Associated with the Administration of Project Reports and Information**

3. The distribution of project reports to shipyard people outside of the HR area, specifically to production and operations people, should be studied and improved.

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. The area of communications between the ECB and Panel members should be studied, and improvements should be effected as soon as possible.

7. Steps to shorten and stabilize the funding cycle for projects should be supported.

8. The presence and participation of representatives from organized labor in NSRP activities, specifically SPC Panel membership and ECB composition, should continue to be encouraged and supported.

**APPENDIX A**

**Project Benefit Analysis Worksheet**

**SPC Panel SP-5**

## SP-5 PROJECTS LISTING

NSRP	KEY	REMARKS
0056		Study for the Improvement of Motivation in the Shipyard Industry 1976
0252		Problem-Solving Teams in Shipbuilding (Bethlehem Steel Corporation, Beaumont Yard) 1986
0254		Decentralizing Statistical Accuracy Control Responsibility to the Ship Production Workforce 1987
<b>0263</b>		Gainsharing - Employee Involvement in a Shipyard Assembly Yard 1987
0264		Multi-Skilled Self-Managing Work Teams in a Zone Construction Environment 1987
0265		Organizational Innovations in Shipyard Safety 1987
0282		Employee Involvement and Work Redesign in U.S. Shipbuilding: Analytical Review 1988

NSRP	SP-5 KEY	REMARKS
<b>0283</b> Problem-Solving Teams in Shipbuilding (General Dynamics, Electric Boat Division)		
<b>0296</b> Product Oriented Workforce 1989		
0301 Employee Involvement/Safety 1990		
0318 The Principal Elements of Safety Programs of Nine Major American Shipyards Jan 1991		
<b>0331</b> National Workshop on Human Resource Innovations in Shipbuilding/Ship Repair Jun 1991		
<b>0337</b> Employee Involvement - White-Collar Work Force (Phase I) Aug 1991		

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<b>KEY</b>	<b>RATING</b>	<b>DESCRIPTION</b>
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- |   |  |                                                     |
|---|--|-----------------------------------------------------|
| 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-5 Projects Listing based on Benefits Evaluation**

## APPENDIX C

### SPC Panel SP-5 Projects Listing based on Benefits Evaluation

This is an abbreviated listing of SPC Panel SP-5 projects, based on the benefit value (number of ★'s) assigned to each project, highest to lowest. This listing 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 the user comments received during this survey.

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**NSRP 0301** \* \* \* \* \*

**TITLE: Employee Involvement/Safety.**

*AUTHOR:* Bethlehem Steel Corporation.

*DATE:* June 1990

**COST: \$45,000.**

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*NSRP 0283* \* \* \* \* \*

**TITLE: Problem-Solving Teams in Shipbuilding (General Dynamics, Electric Boat Division).**

*AUTHOR:* WIN/WIN Strategies and General Dynamics, EBDiv, for Bethlehem Steel Corporation.

*DATE:* May 1988

**COST: \$24,780.**

**NSRP 0318** \* \* \* \* \*

**TITLE: A Survey: The Principal Elements of Safety Program of Nine Major American Shipyards.**

*AUTHOR:* WIN/WIN Strategies (Frank Long)

*DATE:* January 1991

**Cost \$33,471.**

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*NSRP 0264* \* \* \* \* \*

**TITLE: Multi-Skilled Self-Managing Work Teams in A Zone Construction Environment.**

*AUTHOR:* National Steel and Shipbuilding Company.

*DATE:* August 1987

**COST: \$51,169.**

**NSRP 0331** \* \* \* \* \*

**TITLE: National Workshop on Human Resource Innovations in Shipbuilding/Ship Repairs.**

*AUTHOR:* WIN/WIN Strategies (Frank Long)

*DATE:* July 1991

**COST: \$40,000.**

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NSRP 0252 \* \* \* \* \*

**TITLE: Problem-Solving Teams in Shipbuilding (Bethlehem Steel Corporation, Beaumont Yard).**

*AUTHOR:* Bethlehem Steel Corporation.

*DATE:* November 1986

*COST :* \$51,169.

NSRP 0337 \* \* \* \* \*

**TITLE: Employee Involvement - White Collar Work Force.**

*AUTHOR:* Robinson - Page - McDonough and Associates, Inc. (Rodney A. Robinson)

*DATE:* August 1991

*COST:* \$59,979.

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NSRP 0265 \* \* \* \* \*

**TITLE: Organizational Innovations in Shipyard Safety..**

*AUZHOR:* Peterson Builders, Inc., with Bethlehem Steel Corporation.

*DATE:* May 1987

*COST* \$51,169.

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NSRP 0263 \* \* \* \* \*

**TITLE: Gainsharing-Employee Involvement in a Shipyard/Assembly Yard.**

*AUTHOR:* Kaiser Steel Corporation.

*DATE:* June 1987

*COST:* \$18,600.

NSRP 0296 \* \* \* \* \*

**TITLE: Product Oriented Workforce.**

*AUTHOR:* Bethlehem Steel Corporation.

*DATE:* November 1989

*COST:* \$27,585.

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NSRP 0254 \* \* \*

**TITLE: Decentralizing Statistical Accuracy Control Responsibility to the Ship Production Workforce.**

*AUTHOR:* National Steel and Shipbuilding Company, for Bethlehem Steel Corporation.

*DATE:* January 1987

*Cont :* \$34,100.

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NSRP 0282 \*\*

**TITLE: Employee Involvement and Work Redesign in U.S. Shipbuilding: Analytical Review.**

*AUTHOR:* Cornell University for Bethlehem Steel Corporation.

*DATE:* April 1988

**Cost \$30,000.**

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*NSRP 0056 \**

*TITLE: Study for the Improvement* of Motivation in the Shipbuilding Industry.

*AUZHOR:* Dr. George A. Muench, for Newport News Shipbuilding and Dry Dock.

*DATE:* June 1976

*COST* (Not available)

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Additional copies of this report can be obtained from the National Shipbuilding Research Program Coordinator of the Bibliography of Publications and Microfiche Index. You can call or write to the address or phone number listed below.

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