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**1985 Ship Production Symposium
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Paper No.5:
Overview of Panel SP-2
Outfitting and Production Aids**

**U.S. DEPARTMENT OF THE NAVY
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PANEL SP-2

OUTFITTING & PRODUCTION AIDS

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A Presentation to the
National Shipbuilding Research Program Symposium
11-13 September 1985 - Long Beach, California

by Louis D. Chirillo* for SNAME Panel SP-2

Despite there not having been any formal presentation of Panel SP-2 research since the September 1983 IREAPS Technical Symposium, much information has been disseminated. Since then, the following additional National Shipbuilding Research Program (NSRP) publications were widely distributed:

- o Design for Zone Outfitting
- o Design Modeling
- o Pre-Contract Negotiation of Technical Matters
- o Product Oriented Material Management

Because of demand, "Process Analysis Via Accuracy Control", originally issued in February 1982, has been revised and is about to be reissued.

Various papers and comments which further promote SP-2 research were presented in Hampton Roads, Seattle, Los Angeles, San Antonio, New York, Norfolk and Washington, D.C. In addition, responses were made to two extraordinary opportunities. One was 20 June 1984 testimony to the House Merchant Marine Subcommittee, published in the February 1985 issue of the SNAME Journal of Ship Production. The second involved participation in a work group for the Marine Board, National Research Council, which resulted in the report 'Toward More Productive Naval Shipbuilding', distributed about March 1985. Of all, the latter is the most significant because U.S. shipyard managers becoming as effective as the world leaders in Japan, is now very dependent upon how the Navy administers programs for building, converting and overhauling ships.

'Toward More Productive Naval Shipbuilding' is replete with references to SP-2 end products, descriptions of their acceptance by shipbuilders even for building naval ships, and recommendations for their acceptance by the Navy. Specifically the report advises 'To foster the use of zone oriented ship construction, the Navy should: (1) develop means to apply the technology in preliminary and contract design, (2) educate its personnel in the advances being embraced by shipbuilders so that Navy practices and procedures can be adapted in support of them, and (3) work together with its shipbuilders to provide a receptive environment for the use of productivity improving technology.' The report also addresses the benefits of a Product Oriented Work Breakdown Structure (PWBS) and relates statistical control of accuracy variations in process, to abilities to withstand high-impact shock and great submergence depths. Both are military requirements.

Except for the application of zone logic for ship alteration and repair by Puget Sound Naval Shipyard and the inclusion of pertinent courses in the curriculum at the Engineering Duty Officer School (both started before the report was issued), at this time there are no known Navy responses to the Marine Board's recommendations concerning Panel SP-2 end products.

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