

PRESS RELEASE



GUIDELINES FOR HYDROELASTIC MODEL DESIGN, TESTING, AND ANALYSIS OF LOADS AND RESPONSES

The Society of Naval Architects and Marine Engineers has published the new Technical and Research Bulletin No. 2-33 **Guidelines for Hydroelastic Model Design, Testing and Analysis of Loads and Responses.**

The efficiency of a ship design and its structural integrity hinge upon the extent to which design loads adequately represent the corresponding true service loads expected. Historical methods employed to determine hull-girder design loads are not suitable for the design of many of the newer types of surface ships that continue to be proposed.

A new way of model testing in waves was developed that includes at the same time the measurement of ship motions, wave loads (both ordinary wave induced and hydrodynamic impact), and the ship structural response. This approach became possible partially by evolving model testing techniques over the years, but especially through newly developed testing techniques, instrumentation, and data collection systems for this type of testing. This report documents these model testing techniques and provides a reference point for future testing and innovation in the field.

Development of this new far more accurate approach to measuring ship motions and wave loads required extensive collaborative discussion and speculation by previously separate and distinct technologies and practitioners and involved the close working relationships between T&R Panels HS-1 (Hull Loading) and HS-2 (Impact Loading & Response) with subsequent reviews by Panel H-7 (Seakeeping).

T&R Bulletin 2-33 is a 102-page report available as a PDF FOR \$40 (\$20 for SNAME members). It may be ordered through the SNAME web site (<http://www.sname.org/Libraries/ViewTechnicalPaper/?DocumentKey=63ad33e9-6c85-450e-ac6f-acfeef2fdb2c>) or by contacting Tommie-Anne Faix (tfaiz@sname.org or 201-499-5068).