
I L Ship Structure Committee

Plasticity

Author-title Catalog

Federal Register

Fracture-control Guidelines for Welded Steel Ship
Hulls

Hearings Before a Subcommittee of the
Committee on Appropriations, House of
Representatives, Ninety-fifth Congress, First
Session

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Departments of State, Justice, and Commerce,
the Judiciary, and Related Agencies

Appropriations for 1973

Merchant-ship Construction in American
Shipyards

Structures and Infrastructure Systems

Departments of State, Justice, and Commerce,
the Judiciary, and Related Agencies

Appropriations for 1978

Research Summary

Fourth Progress Report of Project SR-137 to the
Ship Structure Committee on Studies of the Strain
Distribution in Wide Plates During Brittle Fracture
Propagation

Monthly Catalogue, United States Public

Documents

Being the "Comprehensive Index" Provided for by

the Act Approved January 12, 1895
Fourth Progress Report of Project SR-137 to the
Ship Structure Committee
Analysis and Assessment of Major Uncertainties
Associated with Ship Hull Ultimate Failure
National Union Catalog
Catalog of Books and Reports in the Bureau of
Mines Technical Library, Pittsburgh, Pa
Ship Structure Committee Publications
Cumulative Index, 1976-1980
Low-Cycle, Full-scale, and Helicopters
WRC Bulletin
SSC.
A Cumulative Author List Representing Library of
Congress Printed Cards and Titles Reported by
Other American Libraries
Recommendations for the Interagency Ship
Structure Committee's Fiscal 1987 Research
Program
Welding Research Council Bulletin Series
Monthly Catalog of United States Government
Publications
Symposium on Fatigue Tests of Aircraft
Structures
Monthly Catalog of United States Government
Publications
Hearings Before the Committee on Merchant
Marine and Fisheries, House of Representatives,
Eighty-third Congress, Second Session, June
29 and 30, 1954
Ship Structure Committee Publications
Studies of the Strain Distribution in Wide Plates

During Brittle Fracture Propagation Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, Ninety-second Congress, Second Session
 Ship Structure Committee Technical Reports. [bibliography].
 Examination of Service and Stress Data of Three Ships for Development of Hull Girder Load Criteria Life-Cycle Performance, Management, and Optimization
 Underwater Nondestructive Testing of Ship Hull Welds
 Proceedings
 A Summary of Studies Conducted Prior to July 1952 and Related to the Field of Ship Structures

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**BRODY
 JOHNNY**

Plasticity
 Cleavage Fractures of Ship Plates, a Report of an Investigation Conducted by the Engineering Experiment

Station, University of Illinois, in Cooperation with the Ship Structure Committee, National Research Council. By Wilbur M. Wilson,... Robert A. Hechtman,... and Walter H.

Bruckner,...Ship Structure Committee PublicationsMonthly Catalog of United States Government PublicationsFourth Progress Report of Project SR-137 to the Ship Structure Committee on

<p>Studies of the Strain Distribution in Wide Plates During Brittle Fracture Propagation Monthly Catalogue, United States Public Documents Ship Structure Committee Technical Reports. [bibliography]. Ship Structure Committee Publications Studies of the Strain Distribution in Wide Plates During Brittle Fracture Propagation Fourth Progress Report of Project SR-137 to the Ship</p>	<p>Structure Committee Departments of State, Justice, and Commerce, the Judiciary, and Related Agencies Appropriations for 1973 Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, Ninety-second Congress, Second Session Recommendations for the Interagency Ship Structure Committee's Fiscal 1987 Research Program</p>	<p>osium on Fatigue Tests of Aircraft Structures Low-Cycle, Full-scale, and Helicopters This is a follow-on project to SSC-240, 'Load Criteria for Ship Structural Design', which proposed methods for the estimation and superposition of the primary loads and performed sample calculations for one conventional dry cargo ship. It involved the following bending</p>
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moments: still-water due to weight and buoyancy; ships own wave train; quasi-static wave-induced, vertical and lateral combined; dynamic loads, including slamming, whipping and springings; and thermal effects. Here the service and full-scale stress data of three larger and/or faster ships (Containership SL-7, Bulk Carrier FOTINI-L and very large Crude Carrier UNIVERSE IRELAND) are examined for the purpose of the eventual development of hull-girder criteria. The examination is limited to extreme midship bending moment loads which are related to the ultimate strength. An assessment is made of the compatibility between the service and stress data of the distinctly different study ships and the analysis methods of SSC-240 and their assumptions for cargo ship type. Considerable insight is obtained into the probable correct mathematical approximations of the loads and their interrelationships. It appears that still-water bending moments can be approached probabilistically, however, considerable additional information on experienced loading conditions must be gathered to determine the statistical distributions. Additional effort is

required to determine the suitable probabilistic expression and a synthesis method for the contribution of vibration to the extreme load. (Author).

Author-title

Catalog ASTM International Fracture: An Advanced Treatise, Volume IV: Engineering Fracture Design presents the development and status of knowledge on sudden, catastrophic failure of structures due to unexpected

brittle fracture of component materials. This book provides information pertinent to the engineering fracture design as well as the microscopic and macroscopic fundamentals of fracture. Organized into eight chapters, this volume begins with an overview of the evaluation of fracture tests. This text then presents an analysis of temperature effects on fracture. Other chapters

consider the fracture and carrying capacity of long, slender columns and related topics. This book discusses as well the problems in connection with columns, beams, and plates, and experimental evidence to support theories proposed for describing the strength and stiffness of these elements. The final chapter presents an analysis of the problem of brittle fracture in weldments. This book is a

valuable resource for engineers, students, and research workers in industrial organizations, education and research institutions, and various government agencies.

Federal Register
Routledge
This report provides an introduction to the elements of fracture mechanics for bridge design. Fracture mechanics concepts are introduced and used as the basis for understanding fatigue and

fracture in bridge structures. Various applications are cited. *Fracture-control Guidelines for Welded Steel Ship Hulls* Academic Press
Plasticity documents the proceedings of the Second Symposium on Naval Structural Mechanics held at Brown University, Rhode Island, 5-7 April 1960. It was sponsored jointly by the Office of Naval Research of the U.S. Navy

and Brown University. The symposium was devoted to plasticity. The intention was to provide critical reviews of recent developments in certain areas of plasticity of particular current interest and importance, and to supplement these with short accounts of related current research work. The papers presented at the symposium covered the following

areas: atomic theory of plastic flow and fracture; stress-strain relations including thermoplasticity and creep; basic theory including stability and uniqueness; boundary value problems including plates and shells; dynamic loading and plastic waves; and developments in design. Two talks were also held for the purpose of reviewing the present status of application of plasticity in

design of naval vessels. The symposium was opened by Captain J. C. Myers on behalf of the Office of Naval Research and by Professor W. Prager on behalf of Brown University. Professor Prager closed the symposium by presenting a brief resume of the main accomplishments and trends in plasticity brought to light during the symposium. *Hearings Before a Subcommittee*

of the Committee on Appropriations, House of Representatives, Ninety-fifth Congress, First Session Elsevier
The Report provides comprehensive toughness criteria for welded ship hulls that can be used for steels of all strength levels. Because of the fact that stress concentrations are always present in large complex welded structures and therefore high stresses as well as

discontinuities or flaws will be present in welded ship hulls, primary emphasis in the proposed fracture-control guidelines is placed on the use of steels with moderate levels of notch-toughness and on the use of properly designed crack arresters. In general, concepts of fracture mechanics are used to develop the material toughness level that is required for fail-safe

operation of welded ship hulls.
SSC.
Our knowledge to model, design, analyse, maintain, manage and predict the life-cycle performance of infrastructure systems is continually growing. However, the complexity of these systems continues to increase and an integrated approach is necessary to understand the effect of technological, environmental, economic, social, and

political interactions on the life-cycle performance of engineering infrastructure. In order to accomplish this, methods have to be developed to systematically analyse structure and infrastructure systems, and models have to be formulated for evaluating and comparing the risks and benefits associated with various alternatives. Civil engineers must maximize the life-cycle

benefits of these systems to serve the needs of our society by selecting the best balance of the safety, economy, resilience and sustainability requirements despite imperfect information and knowledge. Within the context of this book, the necessary concepts are introduced and illustrated with applications to civil and marine structures. This book is intended for an audience of

researchers and practitioners world-wide with a background in civil and marine engineering, as well as people working in infrastructure maintenance, management, cost and optimization analysis. The chapters originally published as articles in Structure and Infrastructure Engineering. Departments of State, Justice, and Commerce, the Judiciary, and Related Agencies

Appropriations for 1973
Cleavage Fractures of Ship Plates, a Report of an Investigation Conducted by the Engineering Experiment Station, University of Illinois, in Cooperation with the Ship Structure Committee, National Research Council. By Wilbur M. Wilson,... Robert A. Hechtman,... and Walter H. Bruckner,... Ship Structure Committee Publications Monthly Catalog of United

States Government Publications Fourth Progress Report of Project SR-137 to the Ship Structure Committee on Studies of the Strain Distribution in Wide Plates During Brittle Fracture Propagation Monthly Catalogue, United States Public Documents Ship Structure Committee Technical Reports. [bibliography]. Ship Structure Committee Publications Studies of the Strain	Distribution in Wide Plates During Brittle Fracture Propagation Fourth Progress Report of Project SR-137 to the Ship Structure Committee Departments of State, Justice, and Commerce, the Judiciary, and Related Agencies Appropriations for 1973 Hearings Before a Subcommittee of the Committee on Appropriations , House of Representatives, Ninety- second Congress, Second	Session Recommendations for the Interagency Ship Structure Committee's Fiscal 1987 Research Program Symposium on Fatigue Tests of Aircraft Structures Low-Cycle, Full- scale, and Helicopters ASTM International Welding Research Council Bulletin Series Research Summary A Summary of Studies Conducted Prior to July 1952 and Related to the Field of Ship Structures Corr
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relation of
Theoretical
and Measured
Hydrodynamic
Pressures for
the SL-7
Containership
and the Great
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Carrier S.J.
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Merchant-ship
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in American
Shipyards
The different
uncertainties
associated
with ship
longitudinal

strength and
external
loading are
reviewed
when
considering
probabilistic
analysis and
design. The
uncertainties
are
represented in
the form of
coefficients of
variation,
where that
information
can then be
used in
evaluation of
the safety
index and/or
related
quantities
used for
determination
of structural
failure
probability.
The emphasis
is directed
toward

longitudinal
strength, with
the failure
mode due to
ultimate
compression
failure as the
major
consideration.
Numerical
values for
coefficients of
variation are
found by data
analysis and
computation
for different
types of loads
(wave-
induced,
springing,
slamming,
etc.) together
with
suggested
means of
determining
the
uncertainty for
the combined
loads acting
on a ship.

Methods for determining ship strength uncertainties are examined, with application to modern commercial ships illustrating the important prospective failure mechanisms and the limits of present mathematical models in predicting such failures. Proposed procedures for determining uncertainties for such ship structures by use of computationally efficient numerical computer

programs are described.
Keywords: Probabilistic design; Ship longitudinal strength; Load variability; and Hull girder failure.

Structures and Infrastructure Systems

Includes entries for maps and atlases.
Departments of State, Justice, and Commerce, the Judiciary, and Related Agencies Appropriations for 1978
Research Summary Fourth Progress Report of

Project SR-137 to the Ship Structure Committee on Studies of the Strain Distribution in Wide Plates During Brittle Fracture Propagation
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Provided for by the Act Approved January 12, 1895
Fourth Progress Report of Project SR-137 to the Ship Structure Committee

**Analysis and
Assessment
of Major
Uncertainties
Associated
with Ship
Hull Ultimate
Failure
National**

**Union
Catalog
Catalog of
Books and
Reports in
the Bureau
of Mines
Technical**

**Library,
Pittsburgh,
Pa**
Ship Structure
Committee
Publications
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1976-1980