

FRACTURE *Twenty-First Symposium* MECHANICS

Gudas / Joyce / Hackett

Editors

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Fracture Mechanics: Twenty-First Symposium

J. P. Gudas, J. A. Joyce, and E. M. Hackett, editors



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Foreword

The ASTM Twenty-First National Symposium on Fracture Mechanics was held in Annapolis, Maryland, on 28–30 June 1988. Its sponsor was Committee E-24 on Fracture Testing.

The co-chairmen for this symposium were John P. Gudas, David Taylor Research Center; James A. Joyce, United States Naval Academy; and Edwin M. Hackett, David Taylor Research Center. They have also served as editors of this volume.

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Introduction

The success of the Twenty-First National Symposium on Fracture Mechanics, held on 28-30 June 1988 in Annapolis, Maryland, and sponsored by ASTM Committee E-24 on Fracture Testing, demonstrated the continued rapid development occurring in this field. Papers were solicited from all areas of fracture mechanics and its applications. Contributions representing a wide range of topics came from the United States and six foreign countries. New work is presented in elastic-plastic fracture, dynamic fracture, transition fracture in steels, micromechanical aspects of the fracture process, computational mechanics, fracture mechanics testing, and applications of this technology. Each area poses its own challenges, and developments proceed somewhat independently. This volume aids the researcher in keeping abreast of these varied aspects of the discipline of fracture mechanics.

The diligent work of the Symposium Organizing Committee, the authors, and the reviewers is gratefully appreciated. We would particularly like to recognize the efforts of the ASTM staff including Mr. Hans Greene, Ms. Kathy Friend, Ms. Wendy Dyer, Ms. Kathy Greene, Ms. Monica Armata, Ms. Rita Harhut, and Mr. Allan Kleinberg. Finally, the assistance of Mrs. Mary Cropley and Ms. Amanda Ewen of the David Taylor Research Center is gratefully acknowledged.

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