

fracture mechanics

Sixteenth Symposium

kanninen/hopper, editors



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FRACTURE MECHANICS: SIXTEENTH SYMPOSIUM

Sixteenth National Symposium
on Fracture Mechanics
sponsored by
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on Fracture Testing
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George E. Pellissier
1915–1982

Dedication

George E. Pellissier contributed significantly to the success of ASTM Committee E-24 on Fracture Testing. He was a member of the committee from 1966 until his death on 25 June 1982, and was the first chairman of Subcommittee 1 on Fracture Testing (now E24.01 on Fracture Mechanics Test Methods).

George received bachelor's (1936) and master's (1938) degrees in chemistry from Cornell and a bachelor's degree (1941) in metallurgical engineering from Carnegie-Mellon. The completion of his thesis for a doctor's degree was precluded by World War II. Early in his career he worked for Inco, Columbia University, Union Carbide, and Carnegie Illinois Steel Corporation in such diverse areas as powder metallurgy, nondestructive testing, corrosion, and mechanical metallurgy. He was considered a pioneer in the fields of electron microscopy and spectrographic analysis of molten steel.

George then went to the U.S. Steel Research Laboratory, where he held the posts of Research Associate, Di-

vision Chief, Manager of Advanced Applied Research, and Senior Research Consultant. He was involved in the areas of chemical, crystal, and microstructural analyses; defect detection; oxidation and chemisorption; and toughness and failure mechanisms of high-strength steels. He originated the concept of dual-mechanism strengthening of alloy steels; developed a noncontact thickness gage for thin sheet and coatings; and helped develop a new class of low-carbon, weldable, high-strength/high-toughness alloy plate steels.

From 1968 to 1982 George worked for E. F. Fullam, RRC International, and Mechanical Technology, where he used his extensive experience to provide internal and external consulting services on a broad range of metallurgical problems. George was a charter member of the Electron Microscopy Society of America, a Fellow of the American Society for Metals and the American Institute of Chemists, a member of various ASTM committees (including E-2 on Emission Spectroscopy, E-4 on Metallography, and E-24 on Fracture Testing), a member of The Electrochemical Society and Sigma Xi, and a licensed professional engineer in Pennsylvania. He published 26 technical papers.

Foreword

The Sixteenth National Symposium on Fracture Mechanics was held at Battelle's Columbus Laboratories, Columbus, Ohio, on 15–17 August 1983. ASTM Committee E-24 on Fracture Testing was the sponsor. M. F. Kanninen, Southwest Research Institute, and A. T. Hopper, Battelle's Columbus Laboratories, served as symposium chairmen and have edited this publication.

Related ASTM Publications

Methods for Assessing the Structural Reliability of Brittle Materials, STP 844 (1984), 04-844000-30

Damage Tolerance of Metallic Structures: Analysis Methods and Applications, STP 842 (1984), 04-842000-30

Fracture Mechanics: Fifteenth Symposium, STP 833 (1984), 04-833000-30

Fractography of Ceramic and Metal Failures, STP 827 (1984), 04-827000-30

Environment-Sensitive Fracture: Evaluation and Comparison of Test Methods, STP 821 (1984), 04-821000-30

Fracture Mechanics: Fourteenth Symposium—Volume I: Theory and Analysis, STP 791 (1983), 04-791001-30

Fracture Mechanics: Fourteenth Symposium—Volume II: Testing and Applications, STP 791 (1983), 04-791002-30

Elastic-Plastic Fracture: Second Symposium—Volume I: Inelastic Crack Analysis, STP 803 (1983), 04-803001-30

Elastic-Plastic Fracture: Second Symposium—Volume II: Fracture Resistance Curves and Engineering Applications, STP 803 (1983), 04-803002-30

Fracture Mechanics (Thirteenth Conference), STP 743 (1981), 04-743000-30

A Note of Appreciation to Reviewers

The quality of the papers that appear in this publication reflects not only the obvious efforts of the authors but also the unheralded, though essential, work of the reviewers. On behalf of ASTM we acknowledge with appreciation their dedication to high professional standards and their sacrifice of time and effort.

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