Nonlinear fracture mechanics.

(STM; 995)


"ASTM publication code number (PCN) 04-995002-30."

Includes bibliographies and indexes.


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Dedication

It was with great sorrow that we learned of the death of William “Gomer” Pryle on July 6, 1987. Although Gomer seldom sought or received much public recognition for his work, he was a vital part of a team which advanced fracture mechanics from the earliest days. We have lost a great friend, one who enriched the lives of his fellow workers and made working in fracture mechanics a constant pleasure.

Gomer grew up near Pittsburgh, Pennsylvania, and served in the U.S. Air Force from 1947 to 1951. He began his technical career at Westinghouse R & D Center in February 1952, where he continued working until his death. During most of his career at Westinghouse he was part of a widely recognized team, headed by Ed Wessel, which made numerous contributions to the advancement of testing, analysis, and applications of fracture mechanics technology. Although his work is reflected in many places in the fracture mechanics literature, his contributions are not always readily apparent. The work was presented anonymously and can be recognized only by those associates of his who remember his contributions. This is most notable in fracture toughness test standards where, beginning with the development of the compact specimen and the ASTM E 399 $K_f$ test standard, his work on specimen design, machining, and precracking technique played a vital role in making this standard a model for those which would follow. He played a similar role in some of the newer fracture mechanics test standards, contributing to ASTM Standards E 647, E 813, and E 1152. Some of his important contributions include:

- Development of fracture mechanics specimen designs with emphasis on machining practices, including dimensions and tolerances.
• Development of testing and analysis techniques, including instrumentation, data recording, analysis, and reporting.

• Development of modern precracking techniques, taking the process from the earliest approach of thermal-mechanical induced cracking to the modern computer-controlled fatigue precracking techniques.

• Development of precracking techniques for difficult materials, including beryllium alloys and ceramics.

• Development of systems for identifying specimen size and orientation.

• Development of modern specimen inventory control methods.

• Author or coauthor of 36 fracture mechanics papers and reports, most notably ones relating to the development of the compact specimen and the testing of large (12T) compact specimens.

Besides his technical career, Gomer was dedicated to his wife Barbara, his three children Lynn, John, and Barbie, and his granddaughter Debbie. He also showed his concern for people through his association with the fracture mechanics family at Westinghouse. He was a continual source of encouragement, bringing hope with his familiar, “Hang in there, Tiger.”

Now that he is gone, the world of fracture mechanics has lost a colleague whose contributions have advanced the technology in more ways than can be counted. Those of us who knew him have lost a great friend; we will miss him.
Foreword

The publication, *Nonlinear Fracture Mechanics: Volume II—Elastic-Plastic Fracture*, contains papers presented at the Third International Symposium on Nonlinear Fracture Mechanics, which was held 6–8 Oct. 1986 in Knoxville, Tennessee. ASTM Committee E-24 on Fracture Testing sponsored the event. The cochairmen for the symposium section on Elastic-Plastic Fracture were J. D. Landes, University of Tennessee, and J. G. Merkle, Oak Ridge National Laboratory. Both men, along with A. Saxena, Georgia Institute of Technology, served as editors of this publication.
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