Introduction

The papers grouped in this volume include two which employ photoelastic methods of stress analysis. Stress wave effects from a hole approached by a running crack are of interest in one paper and variations of K through the thickness of a compact tension specimen in the other. Several papers in which the experimental measurements appeared to be supplementary to analysis ideas were included in this volume as illustrated by papers discussing the J-integral and combinations of Mode I and Mode II stress fields. Other topics of special interest are discussed including test specimen calibrations, comparison of J characterization to the "equivalent energy" method, use of characterization in terms of strain intensity factors for a mixed mode plastic zone, and treatment of the nuclear reactor vessel "loss of coolant" problem.

This volume will prove of particular interest to the engineers and scientists concerned with the analysis of the fracture phenomenon as well as designers who must integrate the information available into their plans.

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G. R. Irwin

Dept. of Mechanical Engineering,
University of Maryland,
College Park, Md.