

Introduction

The purpose of this symposium is to describe the present “state-of-the-art” of electron fractography, and report the results of activity sponsored by Subcommittee II on Fractography of ASTM Committee E-24 on Fracture Testing of Metals. It is hoped that future symposia on this subject will benefit from contributions from invited authors from laboratories throughout the world where excellence of electron fractographic usage in research and failure analyses has been proved.

As the papers in the volume indicate, a great deal has been learned about the mechanisms of crack propagation, and the correlation of fine-scale fracture surface features with macroscopic stress and environment conditions.

This volume, however, does not cover all of the fractography subjects presently being studied, because this tool is versatile and is being used to complement other research tools in a variety of disciplines. Neither have the subjects discussed herein been fully explored. Therefore, this volume should serve as a progress report, and one should expect future symposia in electron fractography to include significant new applications of the tool and further refinements of existing theory and techniques.

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