

The background of the cover is a high-magnification micrograph of a metal microstructure, likely a steel. It shows a complex pattern of light-colored, elongated, and somewhat parallel lath-like structures (likely martensite) separated by darker, more irregular regions (likely ferrite or bainite). The overall texture is highly detailed and characteristic of a metallographic image.

# **applications of modern metallographic techniques**

**ASTM STP 480**

**AMERICAN SOCIETY FOR TESTING AND MATERIALS**

# APPLICATIONS OF MODERN METALLOGRAPHIC TECHNIQUES

A symposium  
presented at the  
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#### NOTE

The Society is not responsible, as a body,  
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*Cover:* Titanium-6Al-4V alloy (original magnification 2000, reduced two thirds for publication) heat-treated to above beta transformation temperature. The segmented light areas are partially spheroidized plates of alpha phase, which formed on cooling during the initial quench and then fragmented during heating at 1500 F. The dark-gray areas indicate beta phase that transformed to alpha plus beta on air cooling from this temperature.

Photograph courtesy of Theresea V. Brassard, Physical and Mechanical Metallurgy Lab, Watervliet Arsenal, Watervliet, N. Y. 12189.

## Foreword

ASTM Committee E-4 on Metallography and the American Society for Metals cosponsored the Symposium on Applications of Modern Metallographic Techniques given on 13 Oct. 1969. The session was presented at the ASM Annual Materials Engineering Exposition and Congress, held in Philadelphia, Pa., 13–16 Oct. 1969. The joint ASTM-ASM venture was arranged by the American Society for Metals, with W. D. Forgeng, Jr., United States Steel Corp., chairman of Committee E-4, presiding as symposium chairman.

## **Related ASTM Publications**

**Fifty Years of Progress in Metallographic Techniques,  
STP 430 (1968), \$25.75**

**Electron Fractography, STP 436 (1968), \$11.00**

**Electron Microfractography, STP 453 (1969), \$16.00**

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