

# RAIL STEELS- Developments, Processing, and Use

Stone/Knupp, editors



STP 644



American Society for Testing and Materials

# RAIL STEELS— DEVELOPMENTS, PROCESSING, AND USE

A symposium  
sponsored by ASTM  
Committee A-1 on Steel,  
Stainless Steel, and Related Alloys  
AMERICAN SOCIETY FOR  
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D. H. Stone, Association of American Railroads  
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## Foreword

The symposium on Rail Steels—Developments, Processing, and Use was presented at a meeting held in Denver, Colo., 17–18 Nov. 1976. The symposium was sponsored by the American Society for Testing and Materials through its Committee A-1 on Steel, Stainless Steel, and Related Alloys. D. H. Stone, Association of American Railroads, and G. G. Knupp, Bethlehem Steel Corporation, presided as symposium chairmen and editors of this publication.

## Related ASTM Publications

Second Edition Unified Numbering System for Metals and Alloys, DS 56A  
(1977), \$49.00 (04-056001-01)

Inclusions in Steel—E 45 Adjunct, \$6.00 (12-500450-01)

Temper Embrittlement of Alloy Steels, STP 499 (1972), \$10.00  
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## A Note of Appreciation to Reviewers

This publication is made possible by the authors and, also, the unheralded efforts of the reviewers. This body of technical experts whose dedication, sacrifice of time and effort, and collective wisdom in reviewing the papers must be acknowledged. The quality level of ASTM publications is a direct function of their respected opinions. On behalf of ASTM we acknowledge with appreciation their contribution.

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# Contents

<b>Introduction</b>	1
AN INTRODUCTION TO RAIL STEELS	
<b>A Review of the Manufacture, Processing, and Use of Rail Steels in North America—A Report of AISI Technical Subcommittee on Rails and Accessories—G. G. KNUPP, W. H. CHIDLEY, J. L. GIOVE, H. H. HARTMAN, G. F. MORRIS, AND C. W. TAYLOR</b>	7
<b>The Effect of Mechanical Properties Upon the Performance of Railroad Rails—D. H. STONE AND R. K. STEELE</b>	21
Discussion	48
<b>Rail Wear Under Heavy Traffic Conditions—J. KALOUSEK AND A. E. BETHUNE</b>	63
<b>The Assessment of Rail Steels—K. MORTON, D. F. CANNON, P. CLAYTON, AND E. G. JONES</b>	80
<b>A Metallurgical Examination of Control-Cooled, Carbon-Steel Rails with Service-Developed Defects—D. E. SONON, J. V. PELLEGRINO, AND J. M. WANDRISCO</b>	99
<b>Welding of Railroad Rails—A Literature and Industry Survey—DANIEL HAUSER</b>	118
EFFECTS OF ALLOY ADDITIONS AND SPECIAL PROCESSING ON RAIL STEELS	
<b>Role of Alloying and Microstructure on the Strength and Toughness of Experimental Rail Steels—G. K. BOUSE, I. M. BERNSTEIN, AND D. H. STONE</b>	145
Discussion	162
<b>Development of High-Strength Alloyed Rail Steels Suitable for Heavy Duty Applications—S. MARICH AND P. CURCIO</b>	167
Discussion	198

<b>Alloy Steels for High-Strength, As-Rolled Rails—Y. E. SMITH AND F. B. FLECTCHER</b>	212
<b>Some Features and Metallurgical Considerations of Surface Defects in Rail Due to Contact Fatigue—H. MASUMOTO, K. SUGINO, S. NISIDA, R. KURIHARA, AND S. MATSUYAMA</b>	233
<b>United Kingdom Development of Rails Rolled from Continuously Cast Blooms—J. D. YOUNG</b>	256

#### STRENGTH AND FRACTURE OF RAIL STEELS

<b>Mechanism of Cleavage Fracture in Fully Pearlitic 1080 Rail Steel—YONG-JIN PARK AND I. M. BERNSTEIN</b>	287
<b>Fracture Mechanics Analysis of Rails with Shell-Initiated Transverse Cracks—P. M. BESUNER</b>	303
<b>Stresses Around Transverse Fissure Flaws in Rails Due to Service Loads—S. G. SAMPATH, T. G. JOHNS, P. M. MC GUIRE, AND K. B. DAVIES</b>	330
<b>Prediction of Rail Steel Strength Requirements—A Reliability Approach—R. I. MAIR AND R. GROENHOUT</b>	342

#### FATIGUE IN RAIL STEELS

<b>The Effect of Grain Boundary Ferrite on Fatigue Crack Propagation in Pearlitic Rail Steels—G. J. FOWLER AND A. S. TETELMAN</b>	363
Discussion	383
<b>Fatigue and Fracture Behavior of Carbon-Steel Rails—J. M. BARSOM AND E. J. IMHOF, JR.</b>	387
Discussion	410
<b>Fatigue Crack Propagation in Rail Steels—C. E. FEDDERSEN AND DAVID BROEK</b>	414
<b>An Evaluation of the Fatigue Performance of Conventional British Rail Steels—B. J. DABELL, S. J. HILL, AND P. WATSON</b>	430
<b>Cyclic Inelastic Deformation and Fatigue Resistance Characteristics of a Rail Steel—B. N. LEIS</b>	449

## SUMMARY

**Summary**

471

**Index**

475

