

Contents

Fundamentals of High Temperature Processes

- The Effect of Gangue Composition on the Behavior of the Fe₃C Synthesis 427
M. EGASHIRA, T. MAEDA, H. NAKAGAWA and M. SHIMIZU

Casting and Solidification

- "In-situ" Observation of Phase Transformation and MnS Precipitation in Fe-Si Alloys 433
H. HASEGAWA, K. NAKAJIMA and S. MIZOGUCHI

Instrumentation, Control and System Engineering

- Nonlinear Phenomena of Spectral Emissivity during the Steel-oxidizing 441
T. YAMAGUCHI, M. YAMAMURA and I. NAGASAKA

Chemical and Physical Analysis

- Sensitive Determination of Antimony in Steels by High Power Nitrogen Microwave Induced Plasma Atomic Emission Spectrometry Coupled with Hydride Generation Technique 449
A. MATSUMOTO, A. OHEDA and T. NAKAHARA
- Effect of Heating Rate on Structural Changes of Heat-treated Coals 454
T. TAKANOHASHI, T. YOSHIDA, M. IINO, M. TOYODA, T. KOJIMA and K. KATO

Surface Treatment and Corrosion

- Development of an Electrolytic Descaling Process for Titanium Plates 459
S. KIYA, T. SHIBATA, S. IWASAKI, S. HONDA, H. KITA and M. TAKAHASHI