

Contents

Ironmaking	
Numerical Analysis of Microscopic Coke Strength Factors Using a Homogenization Method K. UEOKA, T. OGATA, Y. MATSUSHITA, H. AOKI, T. MIURA, K. FUKUDA and K. MATSUDAIRA	728
Analysis of Fracture Behavior in Metallurgical Coke Using Rigid Bodies-Spring Model T. OGATA, K. UEOKA, H. HAYASHIZAKI, Y. MATSUSHITA, H. AOKI, T. MIURA, K. FUKUDA and K. MATSUDAIRA	736
Steelmaking	
Generation Mechanisms of Non-metallic Inclusions in High-cleanliness Steel K. KAWAKAMI, T. TANIGUCHI and K. NAKASHIMA	743
Forming Processing and Thermomechanical Treatment	
Development of Simplified Model for Gauge and Plate Crown on Work Roll Shift Mill Y. MORIMOTO, T. NISHIKAWA and T. ISHIKAWA	753
Surface Treatment and Corrosion	
Effect of a Small Amount of Mo, W and Sn Additives on the Morphology and Orientation of Electrodeposited Zn H. NAKANO, S. OUE, S. TANIGUCHI, S. KOBAYASHI and H. FUKUSHIMA	763
Transformations and Microstructures	
Investigation on Mn Distribution between Ti_2O_3 and Austenite-iron Y. OYA, T. YOSHIKAWA and K. MORITA	769
Mechanical Properties	
Giga-cycle Fatigue Properties of Induction Hardened 0.40% C Carbon Steels T. ABE, Y. FURUYA and H. HIRUKAWA	775
Social and Environmental Engineering	
World Outlook for Iron Source Demand —Comparison with Energy Outlook— (Review) S. KOZAWA, K. YONEZAWA and F. TSUKIHASHI	715
Estimation of Steel Consumption and Obsolete Scrap Generation in Japan and Asian Countries in the Future Y. IGARASHI, E. KAKIUCHI, I. DAIGO, Y. MATSUNO and Y. ADACHI	782
Changes in Carbon Content of Materials of the Japanese Sword under Traditional Forging Process N. SASAKI and T. MOMONO	792
<hr/>	
ISIJ International, Vol.47 (2007), No.12, Synopses and Titles	A41
Instructions for Authors	A44
Tetsu-to-Hagané Index	A51
