



Contents

Fundamentals of High Temperature Processes

Formation of Iron Carbide in Fluidized Bed by the Reactions of Partially Pre-reduced Iron Ore with CO-H ₂ -H ₂ S Mixtures: Influence of the Reduction Degree/K. YAGITA, Y. IGUCHI and S. HAYASHI	1005
Kinetics of Iron Carbide Formation from Reduced Iron Ore in CO-H ₂ -H ₂ S Mixtures K. HORII, Y. IGUCHI, S. HAYASHI and T. MORIYA	1011

Steelmaking

Desulfurization of Steel Melt by Pulverized CaO Blasted through Top Lance of Vacuum Vessel in RH Degasser/T. KIRIHARA, H. UEHARA, H. NAKATO and Y. KATO	1018
---	------

Casting and Solidification

Improvement of Hot Ductility in Continuously Cast Strand by Ferrite Precipitation Control Y. ITO, T. KATO, A. YAMANAKA and T. WATANABE	1023
---	------

Chemical and Physical Analysis

Structural Analysis of Slag Using Multinuclear Solid State NMR K. KANEHASHI, M. HATAKEYAMA, K. SAITO and T. MATSUMIYA	1031
--	------

Forming Processing and Thermomechanical Treatment

Thermo-mechanical Treatment with Multi-direction Upsetting for Improvement of Superplasticity in SUS304/M. KATO and Y. TORISAKA	1038
---	------

Surface Treatment and Corrosion

Evaluation by Statistics of Extreme of the Effect of Boron Addition on the Penetration Behaviour of Oxide Scale of Hot Forged Structural Steel (Note)/S. ISHINO, S. KURASAKO and K. ONISHI	1090
--	------

Transformations and Microstructures

Migration of Low Angle Grain Boundaries during Secondary Recrystallisation in Silicon Steel Sheet H. HOMMA and B. HUTCHINSON	1044
---	------

Effect of Cu Addition on Formation of Reversed Austenite and Hardness in 9% Ni Steels N. NAKADA, T. YAMASHITA, J. SYARIF, T. TSUCHIYAMA and S. TAKAKI	1050
--	------

Mechanical Properties

Strengthening Mechanism in Hot-rolled High Strength Sheet Steel with Increase in Tensile Strength Induced by Bake Hardening/S. KANEKO, S. MATSUOKA, K. SAKATA and T. HOSHI	1057
---	------

The Effects of Heat-treatment Conditions on Stretch-flangeability and Bendability of High-strength Low Alloy TRIP-aided Sheet Steels with Annealed Martensitic Matrix K. SUGIMOTO, R. KIKUCHI, M. TSUNEZAWA, S. HASHIMOTO, T. KASHIMA and S. IKEDA	1065
---	------

Hot Deformation Behavior in Mg-Al Alloy, AZ91D Grain Refined by Isothermal-rolling Y. TORISAKA, S. FUDETANI and M. HIROHASHI	1071
---	------

Evaluation of Mobile Dislocation Density of Modified 9Cr-1Mo Steel by Stress Change Test H. HAYAKAWA, D. TERADA, F. YOSHIDA, H. NAKASHIMA and Y. GOTO	1076
--	------

The Effect of Modified-ausforming on Giga-cycle Fatigue Properties in Si-Mn Steels Y. FURUYA and S. MATSUOKA	1082
---	------