

"Tetsu-to-Hagane"

Vol. 57 No 13, Nov., 1971

Contents

"Special Issue on Deoxidation of Steel and Effect of Inclusions on Some Properties of Steel"

Technical Review

Principles of Deoxidation.....	Hiroshi SAKAO, Koin ITO, and Yoshimoto WANIBE	1863
Identification of Nonmetallic Inclusion in Steel.....	Minoru SASAKI and Isamu TAGUCHI	1883
Relationship between Nonmetallic Inclusions and Mechanical Properties of Steel.....	Iku UCHIYAMA and Masae SUMITA	1897
Machinability of Steel and Metallurgical Factors.....	Toru ARAKI and Shigeo YAMAMOTO	1912

Technical Papers

On the Dissolution Process of Deoxidizer into Molten Iron and the Mechanism of Formation of Oxide Inclusions.....	K. ITO, K. KONDO, M. MAEDA, and K. SANO	1933
Deoxidation of Molten Steel with Deoxidizer Containing Aluminum.....	K. ASANO and T. NAKANO	1943
On the Deoxidation of Liquid Iron with Silicon and the Formation of SiO ₂ Inclusions during Solidification	R. SAKAGAMI and T. SASAI	1953
Influence of Crucible Material on the Deoxidation of Liquid Iron with Si	T. SASAI, R. SAKAGAMI, and T. OTOTANI	1963
The Deoxidation of Liquid Iron with Calcium.....	Y. MIYASHITA and K. NISHIKAWA	1969
Deoxidation of 18-8 Stainless Steel Si, Mn and Al	S. KATO and H. YOSHIDA	1976
Phase Relations of Fe-Mn-S System at 1330° and 1615°C	N. SANO, M. IWATA, H. HOSODA, and Y. MATSUSHITA	1984
Non-Metallic Inclusions in Calcium-Aluminum Complex Deoxidized Steel	T. SHIRAIWA and N. FUJIO	1990
Effect of Ingot-Making Conditions on Non-Metallic Inclusions in Rimming Steel Ingots.....	K. ASANO, T. SAEKI, and Y. NURI	2010
The Effect of Pouring Conditions on Large Inclusion in Bottom Part of Low-Carbon Rimming Steel Ingot	T. IKEDA, K. SUMITOMO, K. MARUKAWA, and S. URA	2022
On the Effect of Nonmetallic Inclusions on Ductility and Toughness of Structural Steels.....	I. KOZASU, T. SHIMIZU, and H. KUBOTA	2029
The Effects of Non-metallic Inclusions and Structure on the Fatigue Properties of Al-, Si-Mn-and Ca-Si- Deoxidized 0.45% Carbon Steels	T. ARAKI, T. SHIH, and R. SAGAWA	2042
Effect of Sulphide Shape on the Cold Forming Properties of SCM22Ca-S Free Cutting Steels	K. KUSAKA and M. IWAMARU	2057
Effects of Zr Addition on the Cold Workability of Resulphurized Steels	T. ARAKAWA, T. YAMAMOTO, and T. AIZAWA	2067
Effect of Deoxidation on Nonmetallic Inclusions in Steel and Machinability	K. TASAKA, T. AKASAWA, S. KATAYAMA, and K. KUROIWA	2076

Machinability of Deoxidized Steel.....	T. ARAKI and S. HAMABATA...2090
Effects of Deoxidation on the Machinability of Resulphurized Steels in Machining with High Speed Steel Tool	T. FUJITA, Y. YAMAGUCHI, Y. HAGIHARA, T. KANEDA, and Y. YANAGI...2100
On the Relationship between Machinability and Inclusion Morphology of Ca Bearing-Free-Machining Steels	H. YAMADA, S. YOSHIDA, A. KIMURA, K. KATO, and T. ITO...2111
On the Morphology of Non-metallic Inclusions and the Machinability of Calcium Deoxidized Steel.....	A. KOYANAGI, T. SAKAJO, and T. KARASUDANI...2128
The Effect of S, Se and Te on Machinability and Machined Surface Layer in High Carbon Chromium Bearing Steels.....	K. KISHI and H. EDA...2141
Effect of Non-metallic Inclusions on the Rusting of 17% Chromium Stainless Steel Exposed to Salt Spray Test...N. KINOSHITA, N. OHASHI, and M. TAKEDA...2152	
<hr/>	
Library News.....	2164, Notices to Members..... N185, Proceedings of the Institute..... N192

Overseas membership: Annual charges: \$ 10.00 (incl. postage) Initiation fee: \$-1.00