

“Tetsu-to-Hagané” Vol. 67 No. 16, December, 1981

Contents

Forward

Technical Development in Iron and Steel Industry.....*H. KOJIMA*...2571

Review

Prospective View of Development of Steels and Relative Materials.....*T. ARAKI*...2573

Commentaries

New Techniques in Cast Iron.....*K. IKAWA*...2580

Fatigue Properties of Steels at Low Temperature.....*K. HIRAKAWA*, and *K. TOYAMA*...2590

Finite Element Method and Boundary Element Method.....*J. KIHARA*, and *T. AIZAWA*...2597

Metallic Resources Series —Chromium—.....*S. OKITA*...2622

Report of the Joint Research Society of ISIJ

Preparation of Steel Standards for Isolation and Determination of Carbides.....*K. NARITA*...2603

Technical Papers and Technical Reports

Effect of Heat Supply on the CO and NO Formation in the Sintering Process
of Iron Ores.....*Y. HIDA*, *M. SASAKI*, *K. ITO*, and *T. ENOKIDO*...2625

Effects of Operating Factors of Blast Furnaces on the Contents of Silicon
and Sulphur in Pig Iron..... *K. TAMURA*, *K. ONO*, and *N. NISHIDA*...2635

Phosphorus Distribution between Liquid Iron and MgO Saturated
Slags of the System CaO-MgO-FeO_x-SiO₂.....*H. SUITO*, *R. INOUE*, and *M. TAKADA*...2645

Behavior of Injected Gas Observed at the Exit of a Submerged Orifice
in Liquid Metal*Y. OZAWA*, *K. MORI*, and *M. SANO*...2655

Kinetics of the Nitrogen Desorption of Liquid Fe-Cr Alloys under
Reduced Pressure.....*T. CHOH*, *T. TAKEBE*, and *M. INOUE*...2665

Development of Slag Minimum Refining Process by Desiliconization
of Hot Metal*Y. ITOH*, *S. SATOH*, and *Y. KAWAUCHI*...2675

Investigation of the Factors Having Effects on the Circumference
of Spiral Pipe and Its Control.....*I. IMAI*, *K. KAKITA*, *M. NARAZAKI*, and *Y. AMANO*...2685

Effects of Alloying Elements on the Mean Thermal Expansion Coefficient of Austenitic
Manganese Steel in the Temperature Range between 0°C and 100°C
.....*T. KATO*, *M. FUJIKURA*, and *S. YAHAGI*...2692

Effect of Microstructures on the Ductility and Toughness of
Ultra-high Strength Maraging Steels*Y. OKADA* and *T. KUNITAKE*...2700

Grain Refinement and Superplastic Behavior in a Commercial Bearing
Steel*M. OKADE*, *M. TOKIZANE*, and *O. D. SHERBY*...2710

Study of Predictive Equations of Thermal Factor and Hardness Related with Weld Cold Cracking	T. TERASAKI...2715
Determination of Microamounts of Sulfur in Iron and Steel by the Reduction Distillation-Methylene Blue (Solvent Extraction) Spectrophotometric Method	K. NARITA, M. TANIGUCHI, N. OTA, and R. MOROOKA...2724

Technical Topics

Dawning of Chemical Analysis on Iron and Steel.....	M. NAKAZAWA...2734
---	--------------------

Letters

9th International Forging Conference.....	Y. KUBO...2739
After a Small Duty	K. GUNJI...2741
Report of the Fourth Japan-Germany Seminar.....	M. INOUE...2744

Abstracts	2751, Columns...2674, 2699, 2709, 2733, 2740, 2750, 2755, 2756
Notice to Members	N305, Proceedings to the Institute

編 集 委 員 会

委員 長 加藤 健三

編集運営委員会

荒木 透	安藤 卓雄	大井 浩	大森 康男	川合 保治
川上 公成	邦武 立郎	小指 軍夫	近藤 真一	佐藤 忠雄
佐野 信雄	鈴木 朝夫	田中 良平	中村 正久	春山 志郎
萬谷 志郎	宮川 松男	渡辺 敏		

和文会誌分科会

主 査 加藤 健三	幹事 佐野 信雄			
委 員 朝野秀次郎	一伊達 稔	井上 正文	入江 敏夫	岩永 寛
江見 俊彦	大西 敬三	大森 靖也	梶岡 博幸	勝谷 良碩
金尾 正雄	川合 保治	川上 公成	菊池 実	岸 輝雄
木原 諄二	國岡 計夫	近藤 真一	佐々木 徹	佐々木 稔
清水 彰	鈴木 朝夫	須藤 正俊	槌谷 暢男	角山 浩三
徳田 昌則	中岡 一秀	西田礼次郎	根本 実	原 富啓
萬谷 志郎	古林 英一	牧 正志	松田 福久	丸川 雄浄
水野 博司	宮川 大海	森 隆資	森田善一郎	安田 浩
吉越 英之				

© COPYRIGHT 1981 社団法人 日本鉄鋼協会

本書に掲載されている記事の無断転載ならびに無断コピーを禁じます。

This publication, or any part thereof, may not be reproduced in any form without the written permission of the ISIJ.