

Contents

Special Issue on “Challenge for Innovative Cokemaking Process”

Preface to the Special Issue “Challenge for Innovative Cokemaking Process” (Preface)	
<i>K. MIURA</i>	599
Expectation for Coke Quality Seen from Recent Blast Furnace Operation in Japan (Review)	
<i>I. OGATA and M. ICHIDA</i>	600
Strength of Coke (Review)	
<i>T. MIURA</i>	609
Development of the Innovative Cokemaking Process (SCOPE21) for the 21st Century (Review)	
<i>K. NISHIOKA, H. OSHIMA, I. SUGIYAMA and H. FUJIKAWA</i>	614
Coal Pre-treatment Technology	
Coal Particle Behavior in a Continuous Fluidized Bed	
<i>S. SUYAMA and K. TAKATANI</i>	620
Development of Basic Design Model for Fluidized Bed and Study of Coal Drying, Heating and Classification Process on Fluidized Bed/K. NAGAI, A. SUZUKI, T. SUNAGAWA and S. SUYAMA	627
Effect of Rapid Heating Conditions on Crack of Coal Particle	
<i>M. NISHIMURA and K. AMAMOTO</i>	634
Thermoplastic Behavior of Coal under Rapid Heating Conditions	
<i>K. FUKADA, S. ITAGAKI and I. SHIMOYAMA</i>	641
Heating-up Performance of the Coal Rapid Heating Process with Gas Flow Heating Tower	
<i>Y. MATSUDA, M. YOKOMIZO, M. SASAKI and M. MATSUURA</i>	648
Effects of Coal Blend Type and Preheating Temperature in Coal Rapid Preheating Process on Coke Strength/M. MATSUURA, M. SASAKI, K. KATO and Y. NAKASHIMA	656
Effect of Hot Briquetting Conditions on Briquette Quality	
<i>K. HANAOKA, K. NUSHIRO and K. IGAWA</i>	661
Effect of Hot Briquetting Conditions on Briquettability of Preheated Fine Coals	
<i>M. MATSUURA, M. SASAKI, K. KATO and Y. NAKASHIMA</i>	667
Development of Hot Coal Transport and Charging into Coke Ovens	
<i>H. KURIYAMA, S. YOSHIDA, H. TAKETOMI and S. SUYAMA</i>	673
Carbonization Technology	
Development of Low NOx Combustion Structure in Coke Oven	
<i>S. YOSHIDA, S. TAKASE, M. UCHIDA, T. SAJI, H. KOYAMA and M. YAMAMOTO</i>	679
Coke Quality Upgrading Technology	
Evaluation of Coke Strength and Coke Size in the SCOPE21 Process	
<i>Y. KUBOTA, T. ARIMA, K. KATO, M. MATSUURA, H. NAKAI, M. SASAKI and I. SUGIYAMA</i>	686
Further Heating of Medium Temperature Carbonization Coke	
<i>K. UEBO</i>	694
Research on Upgrading of Low Temperature Coke by Air Blowing in Operating CDQ	
<i>H. TAKETOMI, I. YAMAGUCHI and S. ITAGAKI</i>	701
Numerical Analysis of Effect of Partial Combustion Air Introduction on Coke Re-heating Behavior in CDQ	
<i>Y. MATSUSHITA, T. YAGI, Y. MOROZUMI, H. AOKI, T. MIURA and Y. MAENO</i>	707

Operation Technology

Effect of Hot Briquetting of Preheated Coal on Carry-over during Charging
M. MATSUURA, H. NAKAI, M. SASAKI and K. KATO715

Carbon Deposition in a Coke Oven Chamber at High Productivity Operation
K. UEBO, H. KUNIMASA and S. SUYAMA721

Effect of Coking Conditions on Rankin Coefficient of Coke Cake
T. ARIMA, K. FUKUDA and K. KATO728

Effect of Coking Conditions on Coke Pushing Force at the SCOPE21 Pilot Plant
T. ARIMA, Y. KUBOTA, K. KATO, M. MATSUURA, H. NAKAI, M. SASAKI, I. SUGIYAMA and M. YAMAMOTO734

Upgrade of Coal Coking Properties

Interrelation between Blend Ratio and Heating Rate on Thermoplasticity of Coal Blends
T. TAKANOHASHI, K. MASAKI, T. YOSHIDA, K. HANAOKA and A. DOBASHI739

Production of Metallurgical Coke from Low Grade Coals by Utilizing the Coal Extract Obtained at 350°C
R. ASHIDA, T. NAKAI, H. NAKAGAWA and K. MIURA743

ISIJ International, Vol.44 (2004), No.9, Synopses and TitlesA33
