

Contents

Page No.

Representation of coal and coal derivatives in process modelling J.A. Theron and E. Le Roux	1
The recovery of platinum group metals from low grade concentrates to an iron alloy using silicon carbide as reductant C.W.D. Malan, G. Akdogan, S.M. Bradshaw, and G.A. Bezuidenhout	17
Value-in-use model for chlorination of titania feestocks S. Maharajh, J. Muller, and J.H. Zietsman	33
Modelling and optimization of a rotary kiln direct reduction process H.P. Kritzinger and T.C. Kingsley	51
Development of an iron ore sinter process model to predict sinter strand operating parameters using the finite difference method J. Muller, T.L. de Vries, B.A. Dippenaar, and J.C. Vreugdenburg	61
Interaction of dust with the DC plasma arc—a computational modelling investigation Q.G. Reynolds	79
Sonic injection into a PGM Pierce Smith Converter: CFD modelling and industrial trials D.K. Chibwe, G. Akdogan, G.A. Bezuidenhout, J.P.T. Kapusta, S. Bradshaw, and J.J. Eksteen	99
Mathematical modelling of slag dispersion in CLU reactor K. Kabezya and R.H. Eric	109
Effect of feed composition fluctuations on a platinum furnace energy balance and slag temperature N.J. Andrew, B. van Beek, A. Lexmond, and J.H. Zietsman	117
Modelling of fluid flow phenomena in Pierce-Smith copper converters and analysis of combined blowing concept D.K. Chibwe, G. Akdogan, P. Taskinen, and J.J. Eksteen	127
Modelling of a steel belt sinter process W.J. Leipoldt and J.H. Zietsman	147
Physical and numerical modelling of a four strand steelmaking tundish using flow analysis of different configurations J.H. Cloete, G. Akdogan, S.M. Bradshaw, and D.K. Chibwe	157

