

Magnetohydrodynamics 51, 1 (2015)

Special issue: Selected papers of the 7th International Scientific Colloquium "Modelling for Electromagnetic Processing" (MEP 2014), Hannover, Germany, September 16--19, 2014.

Bernard Nacke and Egbert Baake. PREFACE	3
J. Barglik and S. Golak. Modelling of filling a mold with molten metal in the presence of an electromagnetic field	5
V. Geza, B. Nacke, E. Baake and A. Jakovičs. Anisotropy of flow and transition between mixing regimes in physical model of directional solidification	15
M. Plāte, A. Krauze and J. Virbulis. 3D simulation of feed rod melting in floating zone silicon single crystal growth	25
M. Ščepanskis, E. Yu. Koroteeva, V. Geza and A. Jakovičs. Simulation of liquid metal flow induced by counter-rotating permanent magnets in a rectangular crucible	37
F. Baltaretu, J. Wang, S. Letout, Z. M. Ren, X. Li, O. Budenkova and Y. Fautrelle. Thermoelectric effects on electrically conducting particles in liquid metal	45
A. Minakov, M. Khatsayuk, V. Demidovich and M. Pervukhin. Mathematical modeling of casting processes in electromagnetic field	57
S. Pavlovs, A. Jakovičs, V. Sushkovs and B. Nacke. LES-study of heat transfer in the melt for metallurgical MHD devices with power supply by inductor and over electrodes	67
Z. Tigrine, F. Mokhtari and A. Bouabdallah. 3D computational investigation of vertical magnetic field effect on heat transfer and 83Pb-17Li flow	83
R. Khalilov and I. Kolesnichenko. Annular linear induction pump for liquid sodium	95
S. M. H. Mirhoseini, K. Van Reusel and J. Driesen. Meltpool deformation by magnetic pressure: analytical and experimental approach	105
S. Spitans, E. Baake, B. Nacke and A. Jakovičs. New technology for large scale electromagnetic levitation melting of metals	121
A. Cramer, V. Galindo and M. Zennaro. Frequency dependence of an alternating magnetic field driven flow	133
N. Dropka and Ch. Frank-Rotsch. Enhanced VGF growth of single- and multi-crystalline semiconductors using pulsed TMF	149
A. Sabanskis, K. Surovovs and J. Virbulis. Three-dimensional modelling of dopant transport in gas and melt during FZ silicon crystal growth	157
B. Mikhailovich, O. Ben-David and A. Levy. Liquid metal rotating flow under permanent magnetic system impact	171