Programme Scientific Exchange Day
Tuesday, March 12th 2013, 9:00, TU Graz

Main goal of the Scientific Exchange Day is to stimulate the interaction between researchers of the research institutes and the industrial partners of K1-MET. The official program consists of 14 speeches, there will be plenty of time for discussion and interaction.

9:00-9:30 Come together, Registration
9:30-9:40 Welcome and Introduction (Prof. Kepplinger)

Morning Session: Raw material efficiency
Chairman: Prof. Rüdiger Deike (Universität Duisburg)

9:40-10:00 a) Enhancement of efficiency in crude iron production using an increased amount of pellet feed (Schmidt; RA 4, RA 5)
10:00-10:20 b) Characterization of raw materials for efficient use in iron making processes (Kain-Bückner, Rantitsch; RA 4)
10:20-10:40 c) Efficient use of reductands in iron making (Lohmeier, Maier; RA 4)
10:40-11:00 Break
11:00-11:20 d) Efficient recovery of Zn and Fe from steel mill residues with the RecoDust Process (Delfs, Pilz; RA 1)
11:20-11:40 e) Application of thermodynamic and kinetic model for converter steelmaking to optimise manganese yield in crude steel (Lytvynyuk; RA 5)
11:40-12:00 f) Wet vs. Dry top gas cleaning technology for blast furnaces (Klugsberger; RA1)
12:00-13:30 Lunch

Afternoon Session: Process efficiency and productivity
Chairman: Prof. Heinrich-Wilhelm Gudenau (RWTH Aachen)

13:30-13:50 a) Efficient scalable simulation of burden flow using a non-spherical particle DEM approach (Kloss, Feilmayr; RA 5)
13:50-14:10 b) Numerical modelling of moving bed inside the COREX melter gasifier (Nietrost; RA 3)
14:10-14:50 c) Thermochemical wear of refractory linings associated to gas firing in metallurgical plants (Drózd-Ryś, Rieger; RA 1, RA 2)

Part 1) Influence of NOx formation on stress corrosion cracking of the cowper steel shell (Rieger, RA 1)
Part 2) Decarburisation of magnesia-carbon refractories during steel ladle preheating (M. Drózd-Rys, RA 2)
14:50-15:10 d) Dissolution behaviour of Al2O3 and MgO*Al2O3 in MgO-saturated Secondary Metallurgical Slag (Goriupp; RA 5)

15:10-15:40 break

15:40-16:00 e) Thermomechanical behaviour of steel ladle linings and the influence of insulations (Harmuth; RA 2)

16:00-16:20 f) Modelling Bubble Stirring in Metallurgical Vessels (Pirker; RA 3)

16:20-16:40 g) Stresses and Crack formation in continuous cast steel slabs (Requena; RA 5)

16:40-17:00 h) Electric arc furnace off-gas heat recovery and experience with a testing plant (Steinparzer; RA 1)

Location
TU-Graz
Kopernikusgasse 24, 1. Stock, Hörsaal E
8010 Graz
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