

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)

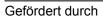
Morning Session: Raw material efficiency Chairman: Prof. Rüdiger Deike (Universität Duisburg)

- **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 maganese 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)
 - Part1) 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 Austria



