

Digitalizing the Circular Economy

Prof. Dr. Dr. h.c. Markus Reuter

Helmholtz-Institute Freiberg for Resource Technology, Freiberg, Germany

The background of the talk is presented in the recent paper “Digitalizing the Circular Economy”: <http://link.springer.com/article/10.1007/s11663-016-0735-5>. While this paper provides the overall picture, the focus of the talk will be to show with various brief example how FACT Sage was used during the design and optimization of Outotec-Ausmelt's Top Submerged Lance (TSL) smelting technology (see paper for details), for both primary and secondary materials covering Cu, Pb, Ni, Sn, Zn-residues (jarosite/Goethite for In/Ge/Ag etc. recovery), copper scrap & ewaste, PGMs etc. processing. The talk will thus give a brief overview of the technology, its position in the bigger system of industrial applications and then how for example metal recovery and slag chemistry were optimized using FACT. The talk will end also showing how the FACT knowledge flows into work described in the following blog the presenter was involved in: <https://www.fairphone.com/en/2017/02/27/recyclable-fairphone-2/>.