

Industrial Application of SimuSage for Metallurgical Processes Simulation

Elena Jipnang.
SMS Siemag AG, Germany.

ABSTRACT

SMS Siemag is a manufacturer of steel making plants. This presentation briefly explains why SMS Siemag opted for SimuSage and gives examples of their day to day work with SimuSage. The basic concept in the use of SimuSage is the local equilibrium. This approach permits the simulation of a complex processes (steady states as well as dynamic, equilibrium as well as non equilibrium) as a network of multiple equilibrium cells and other unit operations interlinked by material streams that transport both matter and heat. The simulations with SimuSage at SMS Siemag aim to evaluate and optimise new steelmaking processes concepts. The other point of SimuSage application at SMS Siemag is the modelling of conventional steelmaking processes for the customer support. The description and simulation of steelmaking in electric arc furnace (EAF), basic oxygen steelmaking and argon oxygen decarburisation of liquid steel are presented in the presentation.