

*The dissolution behaviour of different additives has a large impact on the metallurgical reactions which occur at the basic oxygen furnace (BOF). In this case the focus lays at the dissolution of lime, because it is well known that CaO is the reason for an effective remove of phosphorus from the iron. The dissolution of solid oxides in molten slags is depending on the composition of slag and added lime, further on the temperature, the mixing conditions and the properties of lime. Following parameters are used for describing the dissolution in a BOF-model: First the density of the slag and the lime, the difference between saturated concentration and slag concentration of lime, the mass transfer coefficient in slag phase, the effect of the content of MgO and also the amount of dicalciumsilicate (C2S). Results of a simulation model show the influence of the dissolution behaviour on composition of metal and slag. The amount of undissolved lime is also calculated.*

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