

# **Thermochemical modeling of the Combustion of Rheinland lignite coal Application of Simusage**

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The aim of the SIMEX project is the development of models in order to improve the understanding of ash formation and deposition mechanisms in coal fired boiler. The thermochemical model has been validated with experimental results. An overview of the present state of the project is given.

While using Simusage a model for the combustion process has been derived can calculate the formation of ash in different combustion atmospheres (reducing & oxidizing) depending on the temperature profile in a steam plant. More over the amount of the excluded and included minerals in the ash are considered through appropriate spilt factors.

Furthermore, a summary of the results of the thermochemical calculations pertaining to the SIMEX project is given and the results are discussed. An outlook regarding the generic model of temperature profiles in furnace with slag is given.