

Coal Ash Behaviour in a Power Plant

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ABSTRACT

The Rhenish lignite mines cover a wide area with non-uniform geology. This in turn is the reason for very diverse behaviour of the different coals coming from the different open cast mines.

Some of the power stations have only minor problems with fouling and slagging while others are much more prone to developing for example large deposits in the boilers which sometimes even need mechanical removal. Even in a single mine coals from different locations can show very diverse behaviour because of their diverse chemical composition.

Careful analysis of the coal compositions from different test drillings in a mine can be used as input for FactSage Equilib calculations which reveal the temperature profile, i.e. melting range behaviour, of the respective coals.

These in turn help the plant engineers to plan for proper feeding of the power plant boilers in order to prevent fouling or slagging. Appropriate examples of such calculations will be demonstrated in conjunctions with recent test drillings.

NOTE:

We will visit the mine at Inden and the location of the related power station Weisweiler immediately after this talk. Please find your car-and-driver speedily.