

Reduction of Tyre Chips Build-up in a Polysius Combustion Cyclone Calciner

A detailed thermo-chemical analysis of the plant has been undertaken in order to reduce tyre-chip related build-up and increase the tyre substitution with increased burnout of the tyre-chips within the precalciner. To achieve this, a number of variables were studied using computational fluid dynamics directly coupled with the calcination model and a novel tyre combustion model. The work started with a data collection campaign, in order to establish the operating conditions for the modeling work.

A number of computer simulations have been performed in order to provide solution to the above-mentioned problems and also to draw a comprehensive picture of the behaviour of the precalciner. The recommendations will be implemented during the next plant outage.

