



Curing the sulphur dilemma

Proven design – premium technology – best product qualities

The Sulphur Bypass System provides for an effective solution for the rotary lime kiln dilemma. Installed at the transfer chute between the Multiple Shaft Preheater and the rotary kiln inlet this system is capable of **reducing the sulphur content in the lime product** and at the same time reduces the formation of build ups.

Any new construction or conversion project in the lime industry strives for minimum fuel operation expenditure at suitable lime product quality. There are two handles for positive influence via minimization of the specific heat consumption through applying state of the art technology or the usage of sub-quality fuel, which usually contains high contamination levels.

Less specific heat expenditure of 25% or even more makes pre-heater kiln technology first choice over standard long rotary lime kiln systems. The dilemma that comes along intrinsically derives from the preheater technology. Any lump lime shaft preheater works as perfect filter capturing exhaust and dust emissions returning them to the kiln system together with the precalcined stone. While drastically increasing the contamination load of the kiln process thus inducing stress on the internal cycles, higher concentrations of e.g. sulphur in the product are inevitable. In addition operation problems occur due to intense coatings, which have to be faced by higher efforts in maintenance.

The heart of the sulphur bypass system is a hot roller grate where the preheater output is screened. The oversize is directly fed into the rotary kiln, where the undersize fraction is charged to an air-swept separator with a variable cut size. Here the contaminant laden fines are extracted from the kiln system and collected in a separate dedusting system. The size and the total quantity of fine particles are adjustable as each feed material and fuel will process differently. All oversize is returned to the kiln, calcined completely and converted into product.

As side effect other airborne contaminants such as chlorine and alkali metals significantly aiding to incrustations will also be removed by the extraction mechanism. This leads to a smoother kiln operation and less maintenance work.

The Sulphur Bypass System is the perfect opportunity for the customer to deliberately use cheaper fuel with higher contaminants while maintaining market lime product quality.

Sulphur Bypass System



Fields of application

Extraction of sulphur and other contaminants from rotary lime kiln systems

Main features

Two step separation minimizes product and energy losses

Variable speed rollers, individual drives

Highly sophisticated roller cooling system

Allows the use of raw material and fuels with high sulphur content

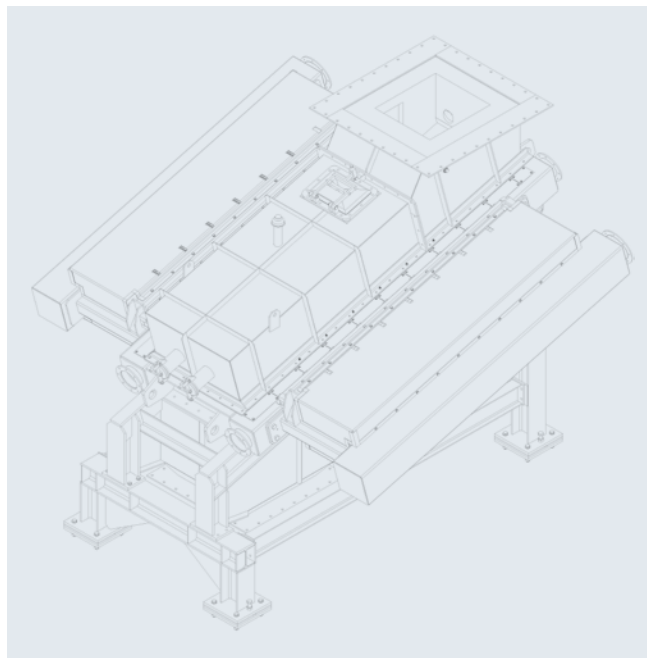
Separation parameters adjustable to fulfil required lime qualities

Removal of chlorine and alkali metals

Design parameters

Daily kiln production of up to 1200 tons

Layout according to lime dust potential



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