Flue gas treatment for building material industry

During production of plasters and paints gaseous hydrogen fluorides (HF) were emitted. The limit value for HF was exceeded. A packed bed filter developed by sonUtec now reduces the emissions.

Perlite is fed into a rotary kiln. The flue gas is then dedusted and treated in a bed packed filter. The absorbing fixed bed exists of limestone chippings. The active ingredient is natural calcium carbonate.

Design of the flour absorber is simple: The bed is fixed by vertical plates. The flow direction is radial from inside to outside. There, the reaction of the pollutants with the calcium carbonate takes place, fluorspar CaF_2 is generated.
Fluorspar is also a natural mineral. It can be used for road construction for example.

In the gap between outer perforate plate and filter shell the clean gas is collected and released to the air with the help of a fan.

Packed bed filter

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