

■ Process: Production of patent plaster



caption on the reverse

■ The Task

In a factory for the production of patent plaster dust depositions and contaminations which can arise during the production steps mixing, dosing, sacking, etc. were cleaned off conventionally with a broom so far. As quartziferous substances are processed as well the responsible authorities demanded another cleaning procedure.

Initial tests carried out with mobile vacuum cleaners did not show the successful results required for the following reasons:

- ⇒ Up to four people should work at the same time
- ⇒ Several local exhaust points are spread on three different floors
- ⇒ High amounts of dust from e.g. damaged/torn-up sacks had to be exhausted at irregular intervals
- ⇒ Abrasive substances caused substantial wear and tear on the tested filter system
- ⇒ The dust collecting bins had to be emptied frequently due to the high amounts of dust

■ The Solution

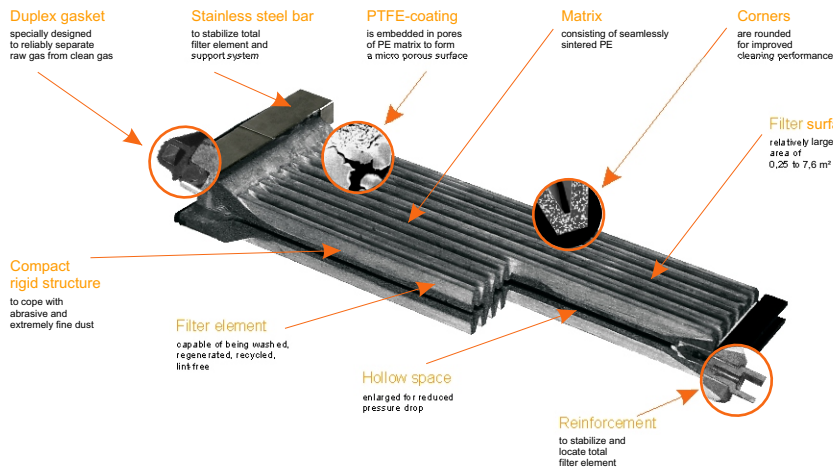
Herding® Vacuum Exhausting Filter System

In order to solve the existing problems and to meet the customer's requirements a centralized Herding® vacuum exhausting filter system was installed with the following technical features:

- ⇒ Herding® sinterplate filterelements for maximum separation performance rates und long useful life even with abrasive dusts and with high dust concentration. The first set of filter elements has still been in use since 1997!
- ⇒ Exhaust of up to four working points at the same time; maximum air flow about 1,400 am³/h
- ⇒ Two parallel connected vacuum pumps which are automatically started depending on the number of used exhaust points
- ⇒ Connecting port for suction tubes with inductive proximity switch for the vacuum pump

(Please turn over)

■ Production of patent plaster and the solution of the dust problem



(Continue: The solution)

- ⇒ Use of wear-resistant boiler pipes for the duct (up to 5 mm thick) with re-enforced elbows
- ⇒ Dust discharge via a vacuum air lock
- ⇒ Vacuum blowers placed in an acoustic hood for noise minimization



Summary of the advantages:

- ⇒ Long useful life of the filter elements
- ⇒ Maximum separation efficiency
- ⇒ No wear and tear on the filter elements even with abrasive materials
- ⇒ Energy-saving operation (the vacuum blowers are only activated if required)
- ⇒ Collection of high product loadings possible
- ⇒ High collection efficiency combined with excellent cleaning performance
- ⇒ Easy to operate thanks to the automatic control system
- ⇒ Constant dust discharge and thus no interruption of the suction

1. Filter unit
2. Acoustic hood with vacuum blowers
3. Access to the raw gas area for installation of the filter elements
4. Suction tube
5. Machinery to be cleaned
6. Connecting port for suction tube
7. Duct
8. Inductive proximity switch

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