

## APPLICATION

### THE TASK

With a hardness of 7 on the Mohs' scale of hardness, quartz is one of the hardest of all minerals and is therefore highly abrasive. As a result, conventional textile filter media suffer considerable wear when used for the filtration of silica sand or similar types of sand and therefore need to be replaced regularly. However, operators want to concentrate on production on the one hand, but on the other hand are also required to comply with stringent regulations concerned with occupational health and safety and environmental protection because of the carcinogenic classification of quartz dust (alveolar fraction).

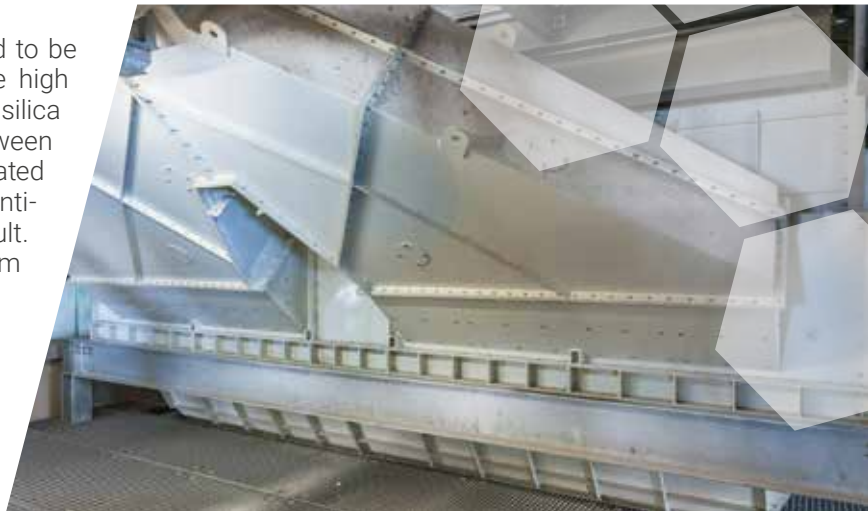
In many cases sand is dried with gas-fired rotary kilns in continuous 24-hour operation. In the case described here, the sand and the air that passes through have a temperature of approx. 90 °C at the outlet of the kiln. The maximum air throughput of the kiln is 60,000 m<sup>3</sup>/h, with a maximum air load of 50 g/m<sup>3</sup>.



### THE SOLUTION

The hose filters which were used previously had to be completely replaced every year because of the high volumes of dust and the wear caused by the silica sand. Breaches of the filters also occurred between the replacement cycles, and these had to be located using a costly color analysis system. Long downtimes and high maintenance costs were the result. The Herding® sinter-plate filter offers an optimum solution to the problem.

The filtersystem from the Herding® MAXX series which has been installed is notable in particular for its compact design. Thanks to pre-assembled segments, it was possible to install the system quickly and easily without the need for any welding work.



## PROCESS // SAND DRYING



*Pneumatic dust discharge*

*Jet-Pulse Cleaning*

## FEATURES OF THE FILTERSYSTEM Herding® MAXX

- » Extraction air rate 60,000 m<sup>3</sup>/h
- » Designed for a permanent temperature of up to 100 °C
- » Discharge of the separated sand by means of a wear-protected screw conveyor
- » Radial fan with silencer mounted next to the unit
- » Operation with frequency inverter

## ADVANTAGES WITH THE Herding® SINTER-PLATE FILTER

- » High material recovery rate due to the high separation rate
- » Constant operating conditions and extraction volume due to pure surface filtration
- » Low maintenance costs due to the rigid filter medium (no flexing and no wear)
- » Low space requirement due to compact and customer-specific system design
- » Long service lives ensure low servicing costs
- » Herding Filtertechnik as engineering partner and problem solver
- » Very low clean gas values

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