

# Filtration Group application example – Chemical industry

## Filtration of tile adhesive with FG automatic metal edge filter AF 43



Factory Equipment

### Initial situation

Modern tile adhesive consists of cement, sand and various additives, i.e. so-called additives. For the development of tile adhesives the different raw materials are weighed in as powder in certain quantities and mixed homogeneously. Then the processing properties are tested on a sample surface and the adhesive is checked for its suitability for craftsmen. In addition, various tests are carried out in the laboratory, e.g. the adhesive tensile test, which is carried out after various stresses such as wetness or frost. Using a strip of mortar, the deflection and thus the flexibility of the adhesive are tested. During the industrial production of the tile adhesive, the different raw materials are mixed together and filled into bags.

### Solution statement

- Filtration Group has selected for this kind of application an automatic metal edge filter **type AF 43** with perforated edge foil elements
- Due to the nature of the product, a highly viscous thixotropic material with varying dirt load, the filter elements are permanently turned **against 3 scrapers each**
- The particles to be cleaned off are gel-like agglomerates
- The filter construction was chosen in such a way that the unit can be dismantled into several parts to ensure that the components can be cleaned as easily as possible



### Challenge

Our customer is part of a globally active specialty chemicals company. Under this brand, solutions in the field of bonding ceramics and floor coverings for professional processors are offered. The range includes tile adhesives, flooring adhesives, jointing and filling compounds. In the manufacturing and production process, the adhesives were previously filled via simple filter bags. Here there was a technology-related **high consumption of filter bags** and, due to the nature of the product, also a corresponding product rejection. The manual work involved in changing bags is not significant.



### Technical data

- Flow rate: 15 – 18 m<sup>3</sup>/h
- Retention rate: 500 µm
- Operating pressure: 7 -8 bar
- Operating temperature: ca. 35 °C
- Material: stainless steel, 1.4571

### Customer value

- No need to change filter bags
- Significant cost savings by eliminating the disposal of consumables
- Considerable **reduction of product loss by more than 85 %**; corresponds to approx. 20 kg per bag change
- By eliminating the need to change the filter bag and thus reducing the downtime of the plant, the total throughput could be increased significantly

