FILCOM Application example – Factory Equipment

FG Dust filter cartridges in powder coating process

Factory Equipment

Initial situation

Dosing and distributing granules has been the core competence of RAUCH Landmaschinen since 1921. Already in its fifth generation, the family-owned company manufactures innovative products for fertilizer, municipal and seeding technology. Reliability, optimized work processes and qualified employees are the basis for the success of a solid business policy. All over the world, farmers, municipalities, large-scale operations and contractors trust in the quality, reliability and long service life of RAUCH products. RAUCH spreaders are not only top in processing quality and spreading precision, they also meet the highest demands for environmentally friendly production and assembly. This is supported, among other things, by the consistent use of an emission-free powder coating plant.

RAUCH

Lösungsansatz

- The filter components and systems from Filtration Group Industrial make an effective contribution to conserving resources, reducing wear and optimizing machine utilization in surface technology at RAUCH Landmaschinenfabrik GmbH.
- The FG cylindrical filter element used ensure reliable cleaning of dust-laden air during powder coating. The customer purchased 48 dust filter cartridges of type 852 908 Ti 08-10 NOK from FILCOM.
- For the exhaust system, an FG dust collector in rectangular design was already purchased several years ago through a leading global supplier of equipment and systems fro electrostatic powder coating.
- Thanks to FILCOM‘s logistics concept, a fast and efficient supply of spare parts in the field of filtration technology could be offered to the customer.

Kundennutzen

- By using a special pleat spacing technique with polyester-based filter media, the filter elements achieve improved cleaning behavior. The favorable flow conditions result in an increase in efficiency of up to 44 % and utilization of the entire filter surface of the filter cartridge.
- The cleaning process is favored by the embossed spacers in the filter material in the form of a cam. There is no blocking of the pleats, the air passage is constantly ensured to the hightest degree and filtered medium can be perfectly back-cleaned form the pleat to ensure an extremely low differential pressure.
- The filter material achieves good separation performance in the fine dust range and represents a cost-optimized solution for applications where electrical charges of the dust filter cake have to be dissipated.

Challenge

No wastewater is produced during washing and degreasing thanks to the company‘s own vacuum water treatment plant. Treated water is temporarily stored in tanks and fed back into the process as required. There are also no environmentlly harmful color residues in the powder chamber. Powder dust that does not adhere to the workpiece is extracted, cleaned and fed back into the coating process. In this way, the high-quality RAUC surface finishing contributes to the protection of people and environment at the same time.

In powder coating, electrically conductive materials are coated with power coating. The coating plant consists of a surface pretreatment, an electronic coating zone, and an intermediate and main dryer. The parts to be coated are transported by a conveyor system during the treatment process. Typical substrates for powder coating are steel, galvanized steel and aluminium. The power coating particles are first fluidized. In the process, the powder must be cleaned of fibers, coarse particles and dirt.

FILCOM GmbH
Schönbuchstr. 1
73760 Ostfildern

Tel.: +49 711 441 33 22-0
Mail: info@filcom.de
www.filcom.de

FILCOM FILTRATION