

Filtration Group application example – Air filtration

Filtration Group dust collector SFR-09 during brazing



Factory Equipment

Initial situation

The efficient cooling of engines, transmissions and fuels is essential for maximum performance and reliability of machines and systems. Our customer is an automotive supplier and one of the leading manufacturers for vehicle air conditioning and engine cooling. **Brazing** is the key process for the production of cooling systems. Depending on the product type, the **bath of flux** is used during the brazing process. In the presence of oxygen, oxides occur while brazing the cooling components. The **Filtration Group dust collector SFR-09 012 020x16 S6S S3 65 3Z** is used for reliable evacuation of arising fume and flue gas during the brazing process.



Solution statement

- For this particular application, Filtration Group uses a compact dust collector with Quick Lock dust filter cartridges in conical design
- **Conical rotating wings** (Filtration Group RLK) have been installed for pressurized cleaning air process
- This type of cleaning is especially gentle with a reduced pressure of only 4.5 bar enhancing the performance of the dust filter cartridges significantly
- The dust filter cartridges are equipped with a microporous PTFE membrane (Ti 56) and guarantee an efficient surface filtration and a long service life
- The clean air is led into the atmosphere through the roof



Customer value

- Reduced element load and optimal flow conditions inside the filter thanks to the conical shape of the filter elements
- Compact, space-saving design as the **Filtration Group Quick Lock Technology** offers the possibility to choose smaller element distances
- Significantly increased cleaning effectivity by **Filtration Group rotating wing (Filtration Group RLK)**
- Cost-effective solution thanks to gentle cleaning
- Easy mounting on the dirty side with spring lock (Quick Lock system – no tools required)



Challenge

Flux is a non-metal material, whose main task is to remove any oxides, which are available on the surface. Furthermore fluxes decrease the surface tension. During the heating process, flux is reducing the surface area of the merging parts and avoids a new formation of oxides. Our customer is using a potassic aluminium fluoride (KAIF 4) as flux in order to reduce or to remove the magnesium content of the melt. The main problem of this process is the formation of fluorine gas, which is classified as harmful. These gases have to be fully removed from the ambient air.

Technical Data

- Volume flow: approx. 3.500 m³/h
- Type of dust: potassic aluminium fluoride (KAIF 4) flux
- Operating temperature: max. 40 °C
- Cleaning by Filtration Group rotating wing (RLK)
- Dust filter cartridges: 9 x 852 032 Ti 56/2-12

