

Filtration Group application example – Air filtration

Filtration Group aerosol separator in the production of oil pumps



Factory Equipment

Initial situation

High aerosol concentrations in production can be harmful to health and lead to absenteeism and complaints among employees. Expensive damage to processing machines can also occur. For metal cutting processes of metals, the primary measures for cooling lubricants must be observed according to the state of the art. If the formation of cooling lubricant aerosols cannot be avoided, a ventilation system for aerosol separation of cooling lubricant aerosols is necessary. The aerosol separation units from Filtration Group are ideally suited for the extraction of cooling lubricant aerosols for encapsulated machines or for spot extraction.



Solution statement

- Separation of harmful aerosols directly at the machine tool
- Extraction of two machine tools with the unit type ASL 2.2 – volume flow rate up to 900 m³/h
- Installation of the devices with sliding frames directly next to the processing machines
- Clean gas connection of the ASL unit is via the central exhaust air system of the hall



Customer value

- Use of the cost-effective ASL device series
- Installation of the ASL devices on sliding racks
- On-Off switch with motor protection function of the ASL was installed directly on the sliding frame
- The clean gas connection of the ASL unit is connected to the central hall extraction system (on site)
- Supply of ASL units, push frames and piping, planning, installation, commissioning by Filtration Group GmbH Öhringen



Challenge

Our customer is a leading manufacturer for the production of controlled oil and tandem pumps for common engine applications, which are installed in combustion engines of almost all well-known car manufacturers. During the manufacturing and machining process, housing parts are made of aluminium. Aqueous coolant lubricant is used for lubrication and cooling in the processing machines. The resulting aerosols are to be extracted directly at the machines.

Info

Filtration Group's ASL series is ideal for direct separation of harmful aerosols at the processing machine. One of the reasons for this is that they are insensitive to coarser particles. They are designed for applications where water-soluble cooling lubricants are used and **the oil mist concentration does not exceed 20 mg/m³**. Optimum results are achieved by ASL aerosol separators at low raw gas concentrations, for higher requirements a **HEPA filter** can be installed downstream.



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