

Filtration Group application example – Factory Equipment

Oil mist separation for Bosch MAHLE Turbo Systems



Factory Equipment

Initial situation

Bosch MAHLE Turbo Systems (BMTS) produces **turbocharger systems** in St. Michael plant, Austria. In addition to high precise processing, **cleanness of components** plays an important role upon production of the turbocharger systems. The **reliable oil mist separation process** on grinding machine tools has a high significance. **Electrostatic filters, centrifugal separators as well as mechanical filters** have been compared at tooling machine centers of BMTS. After thorough testing BMTS decided for the LGA 600 FUW from Filtration Group thanks to the reliable performance and the virtually maintenance-free operation.



Solution statement

Overall **40 Filtration Group LGA type 600 FUW oil-mist separators** have been installed, piped, configured and launched per production line by Filtration Group service engineers.

Result

- **Compliance with** correct extraction volume and required values of German Federal Immission Control Act
- **Secured separation and recovery** of finest oil aerosols through the maintenance free coalescer principle
- A **significant increase** of the separation rate was achieved



Customer value

- Profitability through low maintenance and service costs
- **Reduction of machine downtime** to a necessary minimum
- The issue of **intensive cleaning efforts** for the removal of oil films in the production hall and in the tooling machine centers has been **eliminated completely**
- **Total recovery of the separated oil**
- Nearly **no wasted material** in the LGA-system
- Reliable **protection of the employees' health**



Challenge

Problem

- **Oil drops settle** in the factory hall and on the machines
- **High maintenance, downtime and service costs** as well as large expenses for **police-filter stages (H14) at classical separators**
- **Processing and installation** are not areal separated
- Machine operators and other employees have to **breath in harmful oily aerosols**
- **Short lifetime and frequent downtime** of tooling machines

Target

- **Increased separation rate** with significantly reduced remaining oil
- **Residual oil < 200 µm** on components
- **Reliable, low maintenance** requiring oil mist separator system
- **High protection** of employees through clean air in production line
- **High machine availability** through online-operation
- Compliance with prescribed values of German Federal Immission Control Act



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