

Filtration Group application example – Industrial Parts Cleaning

Filtration Group Metal Edge Filter AF 7373-522, Wehrle & Weber GmbH



Factory Equipment

Initial situation

For a **reputable German armature manufacturer** the high content of oil and chips in his dissolvent cleaning system was a big problem.

For the filtration of **high chips content in closed dissolvent cleaning systems** usually strainers, filter bags or cyclone filters are used. The disadvantages are a high consumption of filter bags, a not acceptable drying time of the chips as well as required interruptions of the cleaning process. The results are high operating costs and emissions of the machine. The remedy was found with a **dissolvent cleaning system** with an **innovative filter system**.

Solution statement

Due to the load-chips up to 10 kg per charge be employed a metal edge filter with a filter fineness of 200µm.

- The chips would be automatically introduced in two vacuum-tight containers
- The new filter system is integrated into the system
- Removable basket strainer elements for removing the dried chips
- Use a bag fine filter for the filtration of the remaining chips <200µm



Customer value

- The automatic pre-filtration facilitates **up to 90% longer maintenance intervals**
- **Increase of the lifetime** of the dissolvent cleaning system during 3 shift work **without process interruption**
- **High cost reduction** thanks to saving on filter bags
- Time & cost savings thanks to the **possibility of direct chips reuse**
- **Reduction of storage costs**
- **Maximization** of the cleaning **system life time**

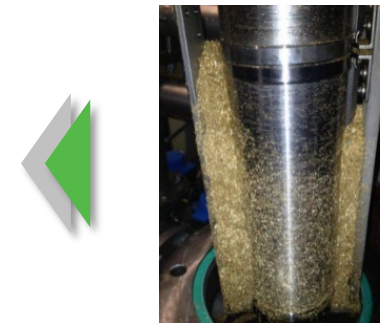


Challenge

- Delivery of a new dissolvent cleaning system with modified alcohol for the **cleaning of the metal parts** from CNC controlled machines
- For each cleaning batch **10 kg of brass chips** need to be cleaned and evacuated dryly, so they can be reused directly
- Cleaning capacity: 12 iron-barred boxes/charge with a load of up to 800 kg
- A **fully automatic feeding system** shall supply the system with so called adapters to handle the 12 iron-barred boxes
- The dissolvent cleaning system shall provide **optimal and efficient results** even in 3 shift work and for a high variety of complex parts

Technical data of the filtration system

Volume flow: 200 l/min
Filtration rate: 200 µm
Operating pressure of the vacuum:
200 mbar



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