

Customer: Saalfelder Werkzeugmaschinen



General machine data:

Machine type: Conveyour machine DTK
 Manufactured size: 200 / 200 / 12.700
 Machine no.: 1802
 Medium: H₂O + 2 % alkaline chemistry
 Medium temperature: 60 °C
 Treated parts: differential casings
 (end customer: Daimler)
 Tanks: 2
 Cleaning principle: Running through/
 cycle operation
 Cycle time: 0.4 min.

Cleaning:

Spraying pressure: 3 bar
 Circulating capacity: 250 l/min
 Driving capacity: 2.2 kW
 Heating capacity: 45 kW
 Tank volume: 650 l

Rinsing:

Spraying pressure: 2 bar
 Circulating capacity: 120 l/min
 Driving capacity: 1.1 kW
 Heating capacity: 18 kW
 Tank volume: 350 l

Blowing:

Delivery rate: 50 m³/min. (fan)
 Driving capacity: 2.2 kW (fan)

Equipment:

- Steam condensor
- Dosage of cleaning agent
- Double-switch filter cleaning
- Floor drip pan

Using dimensions:

Width: 200 mm
 Height: 200 mm
 Length (Depth): 200 mm

Request of result:

Max. temperature of the parts: 30 °C
 for the following measurement procedure.

Process description:

The casings to be cleaned are put onto the chain conveyor of the cleaning machine automatically by a handling system. The measurement station takes the part from the discharging station after the components were conveyed through the zones of the cleaning machine in cycle. Because of the separate discharging belt the parts are transferred from the cleaning machine belt to the feeding belt for the measurement station by a chute. From there the parts are conveyed forward with higher speed. In that way bottlenecks at the measurement station are avoided. The cleaning unit communicates with the charging and discharging device by Profibus (Length of cleaning machine: 12.700 mm).



Pic. 1: Blowing zone with a nozzle from above and below



Pic. 2: Backside of the unit: big maintenance doors, steam condenser, blow-off fan, dosing pump



Pic. 3: Double-switch filter as bag filter in the pressure line of the cleaning pump incl. optical/electrical integration in the system control



Pic. 4: Opened maintenance door with spraying system behind

Pic. 5: Transfer to the measurement station. The parts are conveyed through the cleaning process on a round steel link chain.

