

Process Control Unit Libelle



General machine data:

Machine type:	Process Control Unit Libelle
Machine no.:	30019
Measuring cells:	3
Memory for measuring data:	30 GB
Data collection interval:	4 sec

Details of the cleaning unit:

Machine type:	Rotocleaner DFS 1000 S
Machine no.:	2351
Washing medium:	H ₂ O + 3% alkaline chemistry
Medium temperature:	65°C
Tanks:	3
Tank volume:	each with 2.000 l
Spraying pressure:	each with 3.5 bar
Circulating capacity:	each with 800l/min

Bath maintenance systems:

- Plate-phase separator 500 for separation of oil, cleaning, rinsing I
- Softening plant and reverse-osmosis system
- Dosage of cleaning agent during washing period
- 25 µm bag filter in every pumping cycle
- Steam condensor

Registered contamination:

- Oil
- Particles

Equipment:

- One measuring cell per tank for optical control of contamination of the cleaning medium
- Three pressure sensors for control of the spraying pressure
- Control of the washing medium temperature
- Oil sensor as hand set for the quantitative assessment of oily surface contamination of the washed components
- Installation of the analyze unit in the control cabinet
- Integration into the SPS and the company network by Ethernet

Request of result:

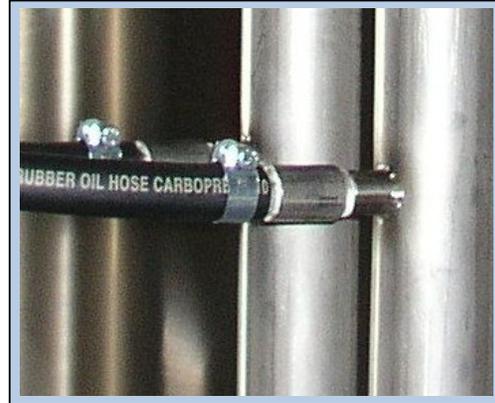
The washing medium should be continuously controlled in the process. If the process parameters do not lie in the specified tolerances an alarm message is displayed.

Process description:

During the cleaning process the washing medium is taken out of the pressure line after filtration and conducted through the measuring cell by the needle valve. In the measuring cell the Libelle analyzes the liquid and calculates the pollution degree from the change in terms of color of the medium. After the cleaning process the operator has the opportunity to check the components with the hand set for cleanliness or rather sufficient rust protection. The collected process data is stored on the system and is available for later purposes of documentation.



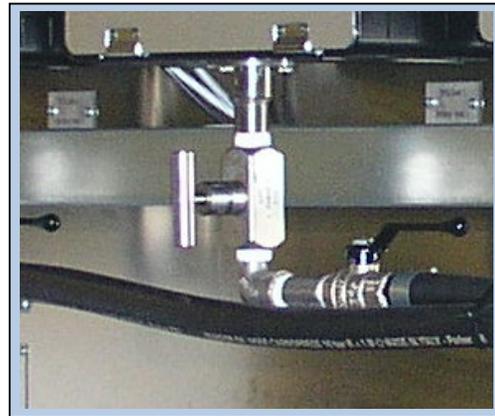
Pic. 1: Pressure sensors for pressure monitoring



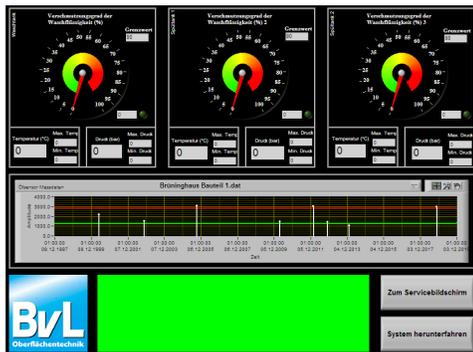
Pic. 2: Inflow from the pressure line behind the filter



Pic. 3: Measuring cell for analysis of medium



Pic. 4: Reduction of inflow by a needle valve



Pic. 5: Analysis monitor in the control cabinet



Pic. 6: Hand set for assessment of the component cleanliness