

Reference project

**Industrial cooling units
 automotive plant / paper mill**


Figure 1: Comprex® unit at work

Cleaning of industrial cooling units in an automotive plant and in a paper mill

Assignment

- cleaning of gasketed plate heat exchangers (Figure 2)
- cleaning of 7 heat exchanger in two industrial sites during regular shutdown
- biofilm deposits
- last cleaning procedure performed only a year ago
 → few deposits and low measurability expected

Technical Data

- heat exchangers with 128 to 220 plates
- inner volume of chambers: 111 to 133 L
- distance to Comprex® unit: between 20 and 70 m

Cleaning using the Comprex® process

- cleaning: ½ day incl. setup time per heat exchanger
- assessment of success by characteristic curves or temperatured before and after cleaning
- 4 heat exchangers at 18 m level above the Comprex® unit next to the building
- 2 technicians / engineers, 1 Comprex® unit
- 2 heat exchangers per day

Result of the Comprex® process

- hydraulically (Figure 3) and thermally (Figure 4) measurable success of cleaning (Example „HE1“ and „HE2“ Heating-(H) and Cooling-(C)-side)
- pressure drop has been reduced significantly
- decrease of performance demand of 15 %
- **conclusion:** regular cleaning is a good strategy to prevent strong ageing of deposits; similar standard assignments in various industries.



Figure 2: gasketed plate heat exchanger

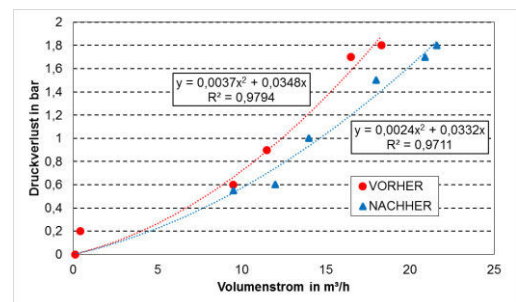


Figure 3: characteristic curve of heat exchanger before and after cleaning (pressure drop vs. volumetric flow rate)

P [kW]	P(before)	P(after)	Reduct.
HE1 (C)	356	315	- 12 %
HE1 (H)	326	292	-11 %
HE2 (C)	547	476	-13 %
HE2 (H)	557	474	-15 %

Figure 4: necessary cooling duty of heat exchanger „HE1“ and „HE2“ before and after cleaning; Reduction means increased efficiency of the plant