



HAMMANN

Comprex®-Cleaning
for industrial equipment

Reference project:
Biogas treatment



Figure 1: Biogas plant with treatment device [1]

Cleaning of a Shell & Plate-Heat Exchanger

Problem

- Strong drawback of the thermal performance of the heat exchanger due to fouling on the „amine side“
- Cleaning during regular shutdown of the plant (duration: 1 day)

Technical Data

- Shell & Plate Heat Exchanger:
Length: approx. 1000 mm,
diameter approx. 700 mm
- Medium 1: Thermal oil as heating medium
- Medium 2: amine solution for cleaning of raw bio gas
- Max. allowed pressure on the „amine side“ 11 bar

Cleaning of the Heat Exchanger with the Comprex®-Process

- Cleaning of the “amine side” of the heat exchanger during a shut down of the plant
- Access to the system via two connections
- The cleaned section ist separated by valves from the rest of the plant
- Supply of compressed air control of impulses with a Comprex®- unit
- Supply of water with a well which was available there
- Effort: approx. 6 hours with 2 technicians

Result

- Fouling material was mobilized and discharged
- Optimized performance of the heat exchanger
- Increased energy efficiency
- Increased process safety

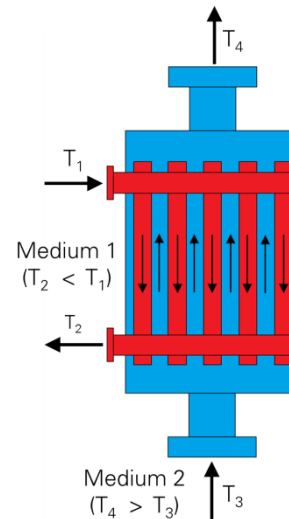


Figure 2: Sketch of Shell & Plate-Heat Exchanger

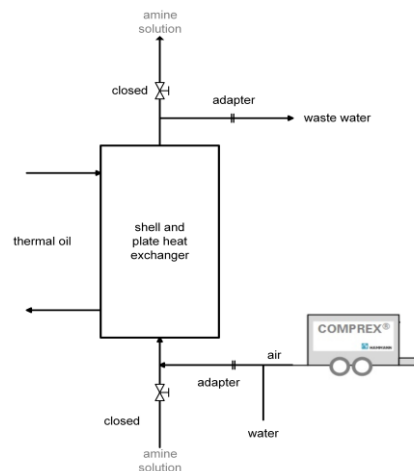


Figure 3: Comprex®- Cleaning Process of the heat exchanger

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