

Reference project – air cooler in a waste incineration plant

Cleaning a partially blocked air cooler in a waste incineration plant

An air cooler was partially blocked by deposits, resulting in only partial flow through the tubes (see p. 2, Fig. 2). **As a result, heat dissipation was significantly reduced and the pressure drop increased.**

Objective:

- › Clean the air cooler using the Comprex® process
- › Remove solid deposits
- › Restore uniform flow through all tubes
- › Increase cooling performance

Technical data:

- › Multi-pass air cooler

Cleaning with the Comprex® process:

- › Purely mechanical cleaning using a controlled combination of compressed air from the Comprex® unit (see p. 2, Fig. 1) and water
- › Access to the system via standardized adapter connections
- › Discharge of flushing water and removed deposits into a concrete collection basin
- › Continuous monitoring of cleaning progress based on the turbidity of the discharge water
- › Targeted adjustment of the cleaning parameters
- › 2 technicians, approximately 8 hours on site (including setup and dismantling)

Customer feedback

regarding the cleaning carried out at Evonik Nutrition & Care GmbH, Marl (see p. 2):

"[...] Thank you very much for the excellent work. [...].

On Tuesday, [...] was cleaned with the Comprex® impulse flushing process.

The upper thermal image shows the condition before cleaning: only a few tubes were warm and carrying flow, while many tubes remained cold and blocked, resulting in poor heat dissipation and an increased pressure drop.

*The lower image shows the condition after cleaning. **Most of the tubes were successfully cleared and can now contribute to cooling again.***

*Considering the relatively low cleaning effort, **the result appears to be good.**"*

Results:

- › Deposits successfully mobilized and removed
- › Tubes restored to full flow (see p. 2, Fig. 3)
- › Improved heat dissipation and overall cooling performance

More Information:

comprex.de/en/industry



Figure 1:
Comprex® unit for industrial applications

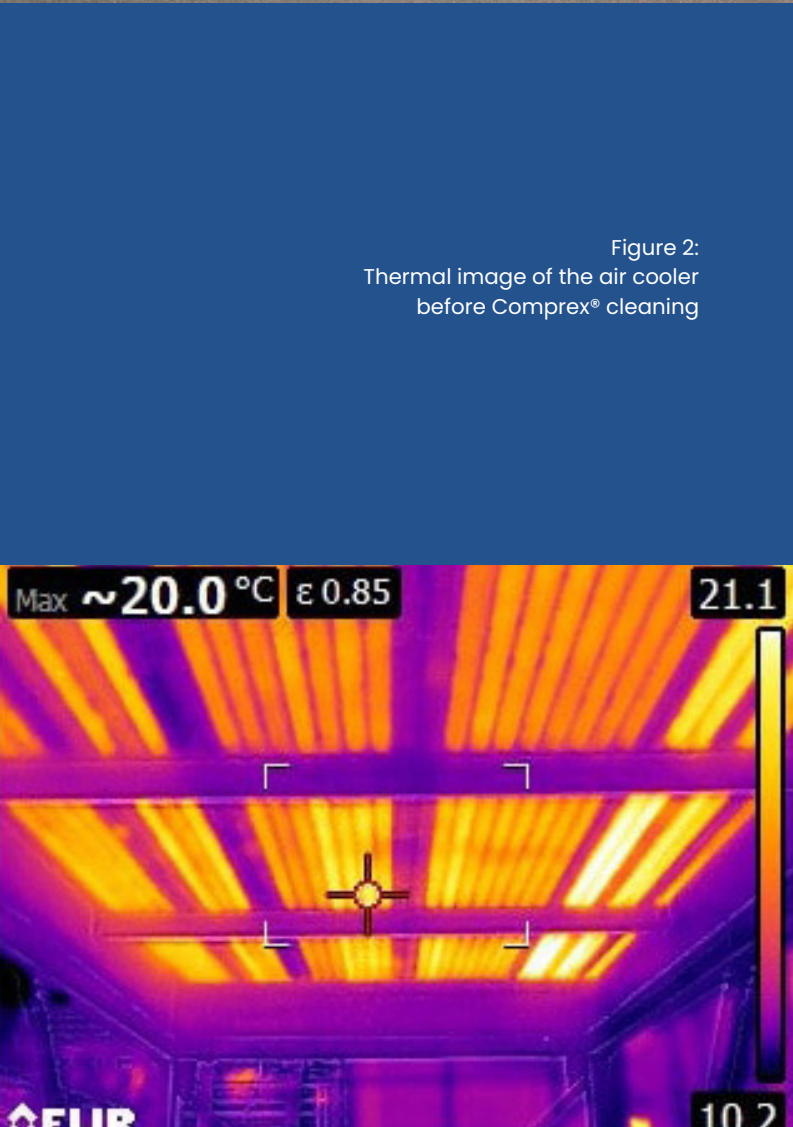


Figure 2:
Thermal image of the air cooler
before Comprex® cleaning

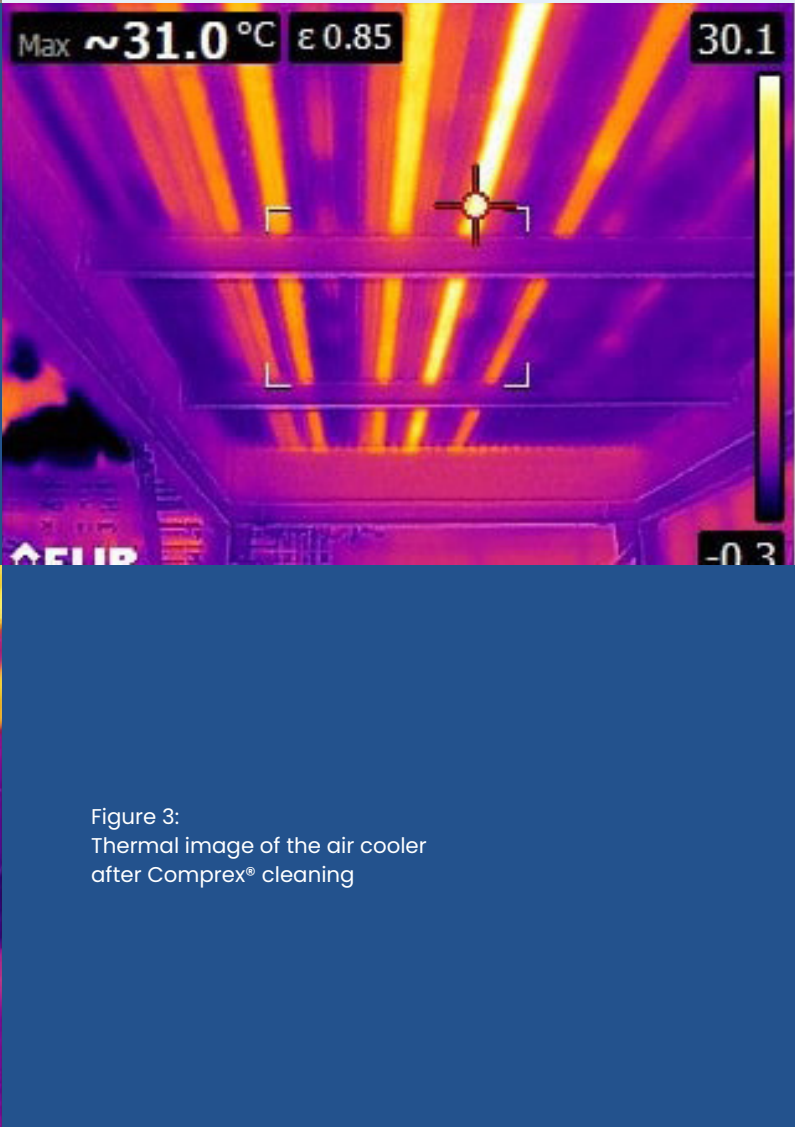


Figure 3:
Thermal image of the air cooler
after Comprex® cleaning

We would like to thank Evonik Nutrition & Care GmbH, Marl site, for kindly providing the thermal images.