

**Application Report No. A 04-2e**  
**Automatic Heat Exchanger Cleaning**  
**(Tube Bundle Cleaning)**

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Status: 03/2005

PTC, Italy



In large refineries, every year hundreds of heat exchangers (tube bundles) have to be cleaned of deposits.

The external and internal cleaning is done by automatic cleaning systems, as shown below.



Photo on the left:

Our partner in Italy is able to supply automatic cleaning systems, for both inner and outer cleaning.

This system is driven by a high pressure unit with a power rating of 400 kW.

Photo on the right :

Shows a drawn-out tube bundle before cleaning. The extremely heavy deposits on the heat exchanger are clearly visible.



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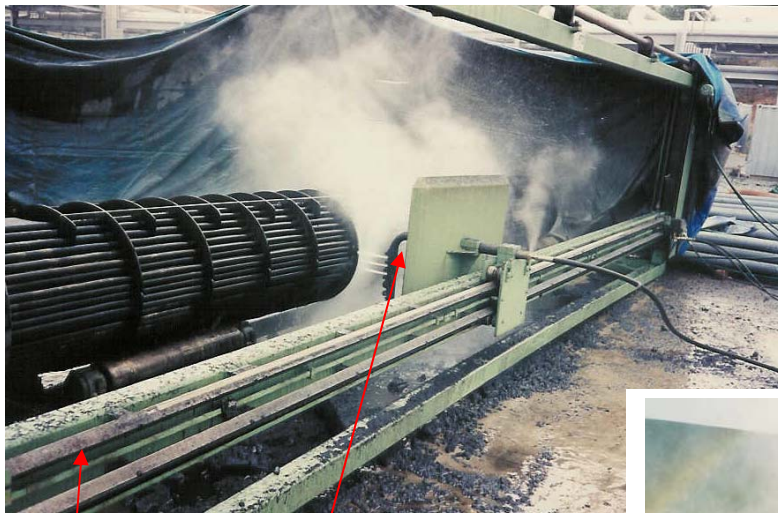
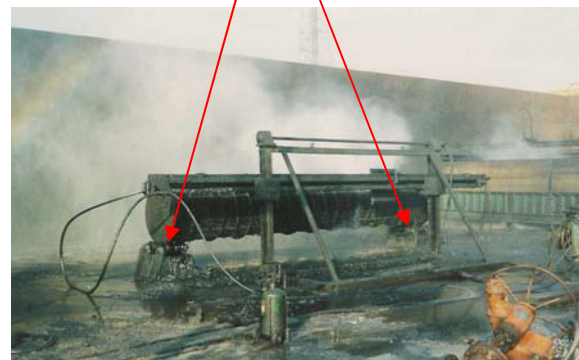


Photo on the left and below:

Automatic tube bundle cleaner in operation (external cleaning)

- Driven roller bearings



- Guide track

- Nozzle bar



The cleaning systems can be equipped with either 3, 4, 5 or 6 lances, to work simultaneously.

The length of the lances can be designed to match existing requirements.

The cleaning rate of an automatic system compared to manual cleaning can be increased to more than five times.

Scissor-type lifting table with lance unit for internal cleaning

On all of the jobs shown above a KAMAT High Pressure Unit type **K 33036 A - DW 350 B** was used (900 bar - 178 l/min.).