

Case story | SEM-SAFE® high-pressure water mist system

# Sachtleben Chemie GmbH in Germany

Fire protection of electronic rooms and steam turbines

Danfoss Fire Safety A/S



Sachtleben is a leading manufacturer of top-quality chemical products with a unique range of white pigments and extenders. Fire protection systems installed at Sachtleben Chemie GmbH are local application systems for protection of electronic rooms and steam turbines.

The local application system is a SEM-SAFE® fire extinguishing system. It is a fixed high-pressure water mist system approved to protect high fire risk objects or areas.



The system in the turbine house located at Sachtleben's production facility protects four steam turbines that generate electricity produced from excess heat from the production. The system was installed and commissioned in April 2008 in corporation with our business partner in Germany: Callies Brandbekämpfungssysteme GmbH.

During normal operation, the system is powered by two PAH 50 high-pressure pumps mounted on the SEM-SAFE® high-pressure pump unit. To fulfil Sachtleben Chemie's specifications, the system has been customized with the possibility to feed the pipe and nozzle system from a fire truck equipped with a super power pack from Callies Brandbekämpfungssysteme GmbH. This ensures full system redundancy.

### SEM-SAFE® high-pressure water mist system

The pipe and nozzle system for each turbine consists of four local application nozzles placed above and four nozzles placed below the turbine plus two additional nozzles for protection of the turbine oil lubrication systems. The system is operated manually from either locally placed alarm push buttons or an operation panel in one of Sachtleben's operation centres.

Several electronic rooms, production lines and service areas are also protected by local application systems, powered by only two fire trucks equipped with "Super Power Packs" from Callies Brandbekämpfungssysteme GmbH. They ensure water supply on more than 180 nozzles all over the facility since 2003.

High-pressure couplings in wall cabinets ensure safe connections from the Callies fire truck to the SEM-SAFE® fixed installations with dry piping.

The Callies fire trucks are equipped with special high-pressure water mist jet nozzles on 100 m hoses which have a very low water consumption achieving a maximum effectiveness on almost all kinds of fires. The jet nozzles from Callies are part of the built in wall cabinets with a length of 40 m hoses.

The customer is very pleased with the combination of the Callies and SEM-SAFE® high-pressure water mist system for fire fighting from Danfoss.

**SEM-SAFE®**

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