



CONTAINER-FIT COOLING SUBSTATION CZECH REPUBLIC - FINLAND



Cetetherm s.r.o. in Czech Republic supplied an 8 m length cooling substation of 15 tons fitted in a specific designed container for delivery to Oulu, a Finnish town close to the Polar circle. Cetetherm cooling technology will be part of a formic acid production on site.

MATERIAL SUPPLIED

The cooling substation - also called in this project **HTF** (Heat Transfer Fluid) System - is composed of:

- 2 heat exchangers
- 2 Freezium pumps
- 1 expansion drum
- 1 make-up pump and Freezium reservoir
- Cooling water piping
- Valves and instrumentation
- Electrical “Ex” pre-wiring (explosion free)
- 12 m length insulated and reinforced container, including lighting, HVAC system and a window on top of the roof for maintenance





HOW IT WORKS

The **HTF** (Heat Transfer Fluid) System is an equipment assembly providing a heat transfer between cooling water received and Freezium -60 °C utilized for regasification of LNG (Liquified Natural Gas) in Shell & Tube heat exchangers of the LNG Plant. Heating medium (cooling water) enters the **HTF** system and cools down in heat exchangers. Heat transfer fluid (Freezium) enters the system, it is heated in heat exchangers, pressurised by pumps and discharged out of the system. There is an open expansion drum with a level transmitter installed maintaining static pressure at the pumps suction.



More information

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INDUSTRIAL APPLICATIONS

Industrial applications demand very high quality standards. Thus as requested in the purchase order, the welded pipelines have been tested by industrial radiography; the internal structure of the pipework has been tested with X-rays by an independent laboratory. Other tests have been made by videoendoscopy where a minus camera allows visual inspection of inaccessible area of equipment.

The Cetetherm Sales engineering team in Prague has experience with 100% tailor-made projects. They provide solutions following customer's need and the requirement of the buildings, or in this case the container.

A close collaboration was set up with Chart Ferox who specified the container, to make the cooling substation fit into the container with still enough room for maintenance.

TECHNICAL DATA

- Dimensions: length 8 350 x height 2 580 x width 1 450 mm
- Weight: cca 15 tons
- Outside temp. range: -40 °C / +40 °C
- Medium: water / freezium (50/50)
- Flow rate: 147 000 kg/hr
- Performance: 1 100 kW
- Pressure: PN16
- Substation's material: stainless steel
- Maximum DN: 150
- Temperature inlet: 23 °C
- Temperature outlet: 8 °C

