

Constant sub-zero temperatures for fertiliser production

Client:

Yara Deutschland

Construction / Assembly site:

Plants in Rostock, Brunsbüttel and Sluiskil (Netherlands)

KAEFER services:

Heat and cold insulation as well as scaffolding for tanks, columns and pipelines

Timeframe:

1991 until today

Established in 1905 in Norway, Yara is today one of the leading international producers of fertiliser products. For more than 20 years now, KAEFER has been the partner at Yara's side for maintenance services and project work. KAEFER's technical solutions and numerous benefits offered a compelling proposition when it came to installing cold insulation on four large NH₃ ammoniac tanks at the Rostock plant, which are used to keep the medium at a constant -33 °C. Having sand-blasted and conserved the surface of the tanks, they were sealed and insulated with PUR foam. This reduced the risk of corrosion to a minimum and extended the useful lives of the tanks considerably. We had up to 3 special machines on site at the same time applying PUR foam to a total of 8,000 m² of tank surfaces.

> Heat insulation



> Cold insulation



> Noise protection



> Fire protection



> Scaffolding



Scope of work

- > 4 tanks, each 33 m in diameter and 25 m high, with connecting pipes
- > Cold insulation on ammoniac tanks kept at a temperature of -33 °C
- > A total of some 8,000 m² of cold insulation using PUR foam

Implementation

- > PUR foam, applied in situ to form a bond between the tank and the sheet metal shell
- > Insulation thickness 200 mm on the tank walls and 220 mm on the roofs
- > Simultaneous use of 3 special machines for PUR foam
- > Installation of PUR substructures without cold bridges
- > Custom-made sheet metal covers

Customer benefits

- > Lower operating costs thanks to effective, optimised insulation
- > Short installation time due to the use of PUR foam
- > Reduced risk of corrosion due to bond between tank and insulation material
- > Extended useful life and greater efficiency of tanks



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Are you interested in more examples of our services? A selection of references is available from www.industrie.kaefer.com



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