

## Piping Specification

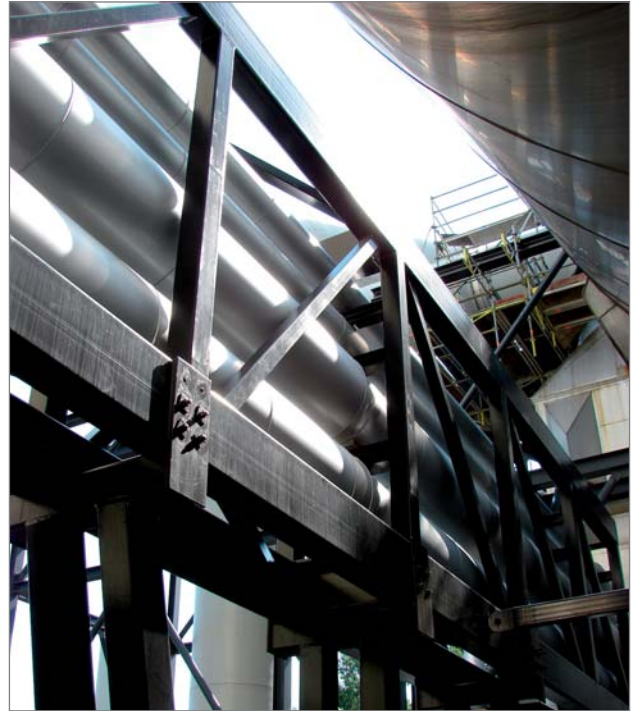
PlantWare delivers piping specifications according to EN 13480 as

- General Description
- Calculations of tubes and fittings for handling over to 3rd party / Notifying Body
- PDMS catalogues and specification ready to import

For example a EN piping specification PN63 in carbon steel

General Description  
+ Calculations ..... € 2,000

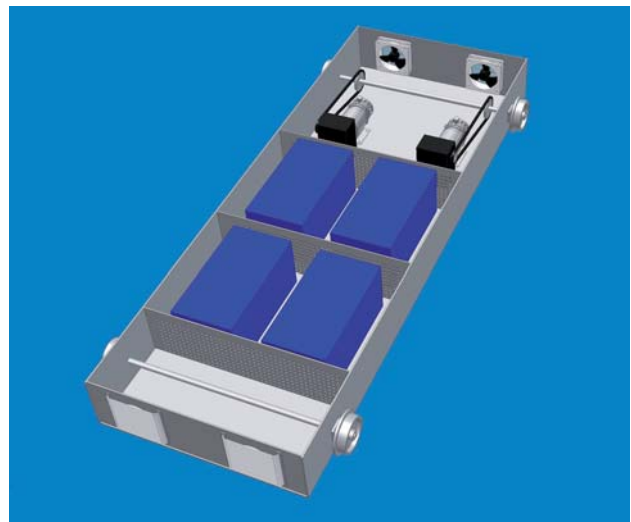
General Description  
+ Calculations  
+ PDMS Cats&Spec ..... € 4,000



## LH Rørbyg A/S; Service vehicle

PlantWare designed a service vehicle - one motorized vehicle and two transport vehicles - for the channel under the harbour in Copenhagen. The channel was drilled in order to bring the district heating pipes from Amagerværket to the central parts of Copenhagen. The vehicle is operated electrically on batteries and will carry a load of 3,6 tons with a maximum speed of 5 km/h.

The vehicle was engineered in 3D INVENTOR. PlantWare handled purchase of mechanical and electrical equipment and LH-Rørbyg manufactured the steel/aluminium casing and assembly.



## CONVAL 7.0

Calculation and selection of control valves, orifice plates etc.  
Design of blow-off systems and calculate de-pressurization.  
For more information mail to [conval@plantware.dk](mailto:conval@plantware.dk).



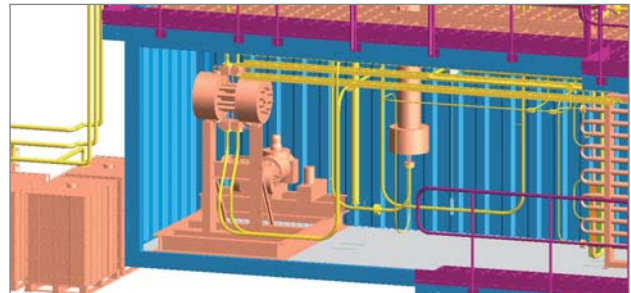
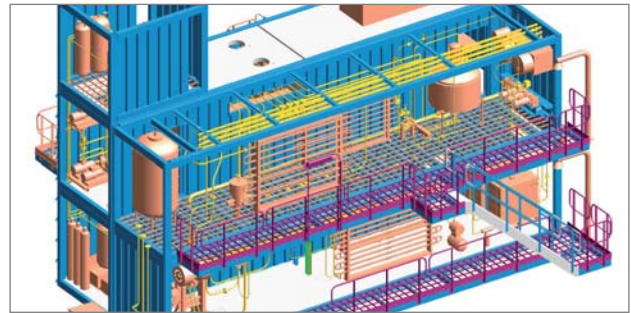
## SCF Technologies A/S / Grundfos Micro Refineries A/S CATLIQ BioDiesel unit

PlantWare has made mechanical engineering of a new CATLIQ plant. The plant is built in four 40' containers. The overall design data for the plant is a pressure of 350 bar and a temperature of 400°C.

PlantWare has made

- Overall arrangement of the process plant.
- Detail engineering of pipe work - detail calculations of wall thickness, olets, bends etc. according to EN 13480
- Pipe flexibility calculations according to EN 13480 based on ROHR2 software.
- Detail engineering of platforms, access stairs and ladders.
- Basic engineering of container modifications

Parts of the piping is made of INCONEL 625, and with a price above €1000 per kg an optimized pipe design has really been in focus.



The unit converts biological material to BioDiesel based on catalyst process. Please visit [www.scf-technologies.com](http://www.scf-technologies.com) for more information.

## Increased Gasturbine Output

PlantWare can supply engineering of a combined fogger system for increasing humidity of intake air, fan system for pressurize the intake air as well as duct system including dampers for a solution to enhance the output of gas turbines. This system is relevant for plants placed where the temperature of the intake air will be above 30-35°C (86-95°F), which reduces the output of the gas turbine based on reduced density of the intake air.

The pictures show a concept study at the Bergen 1 power plant in New Jersey, USA.

