



Case Study LNG #13

LNG Power Barge



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LNG@chartindustries.com

P/N 21125490

Highlights:

Location — Hamburg, Germany

Scope of Project:

- Close collaboration with Becker marine and other project partners
- Commercial operations began in spring 2015
- Application of good engineering practice
- Engineered and built at Chart Ferox facility in the Czech Republic
- Chart Vacuum Technology®
- Proven cryogenic tank design incorporates stainless steel inner and outer vessels for enhanced safety

Application:

LNG fueling system for Hummel, a hybrid power barge and the world's first environmentally-friendly floating power plant providing energy to cruise ships during layovers in the port of Hamburg, Germany. In accordance with MARPOL regulations, using LNG instead of distillate fuel significantly reduces harmful gas emissions, including sulphur and other soot particles, nitrogen oxide and carbon dioxide. The barge was built by Becker Marine Systems who partnered AIDA cruises; the AIDA Sol being the first cruise ship to be supplied with electricity from the LNG fuelled power plant. Hummel's environmental footprint is further enhanced through being outfitted with equipment to supply electricity during peak times and to other ships during winter.

Project Brief:

Provide the LNG fueling solution in accordance with the following criteria

- Maximum LNG payload within standard intermodal container envelope
- Demonstrate enhanced safety (first of its kind)
- Eliminate the need for a bunkering station (for the initial phase)
- Minimize footprint
- Quick and efficient change over

Solution:

Chart's LNG fueling system is housed in two 40' ISO containers complete with a skid mounted gas processing unit, interconnecting pipe work, control and safety appliances. The system provides cryogenic storage of almost 23,000 gallons of LNG capable of powering two CAT3516 generator sets (rated at 1555kW each).

- Compact, lightweight design to minimize valuable real estate
- Fully modular
- Full for empty swap basis
- Incorporates option to fill from bunkering station (at a later date)
- High-pressure fueling system for optimum engine feed
- Docking station

