

LNG Terminal Cold insulation for best product quality

Within six months, G+H insulated the pipelines of three LNG tanks at the Gate („Gas Access To Europe“) terminal in Rotterdam, Netherlands.



Insulation

Fire Protection

Noise Control

Liquefied natural gas (LNG) represents a more environmentally friendly way of supplying energy in comparison to other fossil energy media. When liquefying the gas at -160°C , its volume reduces enormously and can then be stored and transported in large quantities. To prevent premature regasification it is important that the storage tanks, including the pipelines, in the terminals are well insulated.

CUSTOMER

Gate Terminal B.V., Netherlands and
SMM – Sociedade de Montagens
Metalomecânicas SA, Portugal

PROJECT

Low temperature insulation on
pipelines for three LNG tanks

PERIOD OF EXECUTION

06/2010–01/2011

SURFACE INSULATED

8,500 m²



At the beginning of the complex project, G+H installed three to four layer combination insulation (150 to 200 mm) using prefabricated PIR shells and foam glass insulation shells to insulate the tank pipelines of the terminal. In tight spaces, they mounted up to eight layers of Cryogel® Z blankets with a thickness of 10 mm per layer. The inner and outer vapor barrier was glued on by using reinforced aluminum foil and modified bitumen membrane with aluminum foil, which protects against corrosion and moisture.

The production of expansion joints at a distance of every six meters as well as vapor barriers ensures that the insulation will be able to handle vibrations, impact shocks, and expansion of the plant. Stainless steel sheeting fastened in place with stainless steel band was used as a casing. Due to optimal maintenance of all technical parameters, finishing on time, and careful quality monitoring, the customer was very satisfied – also in terms of energy efficiency.



TASK

- Low temperature insulation of a surface of 8,500 m²
- Prevention of ice formation
- Optimization of the production processes
- Maintenance of occupational safety

SOLUTION

- Multiple layers of PIR or foam glass insulation shells
- Lining of inner and outer vapor barrier with aluminum foil and modified bitumen membranes with aluminum foil
- Expansion joints at a distance of 6 m and vapor barriers
- Jacketing with stainless steel sheeting

ADVANTAGES

- Quality assurance of the product LNG
- Energy-efficient work processes
- Greater protection for employees
- Expansion of insulation activities and expertise in the area of low temperature insulation for the LNG sector