

Raychem Heat Management Solutions Provide Critical Operational Reliability for Texas Liquefied Natural Gas (LNG) Plant

Mission Critical Solutions in LNG



PROJECT DETAILS

**Applications:**

- LNG Storage Tank - Frost Heave Prevention

**Location:**

Corpus Christi, Texas

**Contract Scope:**

- Engineering, Product Supply, Start Up Support

**Technology:**

- Raychem Constant Wattage Cables (FHP-C)
- Raychem advanced control & monitoring

**Date:**

2019

KEY CHALLENGES

A major global LNG firm chose Corpus Christi as the location for a world class greenfield Liquefied Natural Gas (LNG) facility. The site has access to abundant natural gas and premier marine access with two loading berths large enough to receive the largest LNG carriers in the world.

The customer's mission critical objective is operational reliability and an optimal frost heave prevention system design for three LNG storage tanks, which each have the capacity to store 160,000 cubic meters of LNG. The project specification included very detailed control and monitoring capabilities to minimize operational risk and maximize productivity of the LNG storage system.

SOLUTION

Raychem engineers engaged our Strategic Applications Group (SAG Team) who specialize in frost heave applications. Together we reviewed the application and attended a series of technical meetings with the owner's engineer. After thorough analysis, we determined that a custom designed product solution and an engineered control and monitoring strategy best met the needs of the owner. Raychem constant wattage heat cable (FHP-C) proved to be the ideal solution as it is industry proven for frost heave prevention applications. The electric heat trace cable design included a fully redundant system including the cables, connection kits and RTD's.

We designed the power distribution optimization utilizing 277/480V power supply, followed by the design and supply of redundant control and monitoring capabilities utilizing the industry proven Raychem NGC-30 heat tracing controller to deliver energy savings, to minimize operational risk and maximize productivity.

PROJECT FACTS

To meet the mission critical needs of this LNG plant, our Raychem heat management solution included:

- Engineering design experts providing optimized design and support using TracerLynx 3D HMS Software
- Raychem FHP-C constant wattage heating cables (54,000 feet)
- Raychem RTD temperature sensing
- Raychem NGC-30 control and monitoring skids including power distribution (6)
- Field Service experts deployed for onsite system start-up support

BENEFITS

We met the customers' mission critical objective for operational reliability and maximum productivity with our turnkey heat management system services – from detailed engineering design and procurement to onsite system start up support. As a result of successfully meeting the customers objectives, we were granted ongoing MRO business at the owner's main site. Additionally, our early involvement on this project and in the Gulf Coast LNG industry, has strengthened our relationships and reputation with the engineering firms and owners in the region, leading to ongoing success in providing Heat Management System support to the industry. Current plans for the Corpus Christi LNG facility include a major expansion in the number of compressor trains and in their LNG storage capacity.

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