

## Raychem Heat Management Solutions Protect Critical Processes for Biofuels Refinery Conversion



### PROJECT DETAILS



#### Applications:

- Pipe Freeze Protection
- Process Temperature Maintenance
- Longline Heating



#### Location:

Come By Chance, Newfoundland, Canada



#### Contract scope:

Engineering and Product Supply



#### Technology:

- Raychem Series Resistance (SC)
- Self-Regulating (XTV)
- Mineral Insulated (MI) heating cables
- Advanced Control & Monitoring



#### Completion Date:

2023

## KEY CHALLENGES

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The new owner of this Newfoundland refinery aims to convert this refinery into a world class renewable energy facility. The refinery is currently undergoing a major retrofit to manufacture renewable diesel and Sustainable Aviation Fuel (SAF). The main feedstock at the facility will be animal fats and plant oils which will arrive to the refinery via ships from the Northeast USA. The feedstock loading dock and distribution system were built to handle petroleum products that did not require heat tracing and therefore the dock area had limited power distribution available. However, because animal fats and plant oil feedstocks and some finished goods become waxy and solidify at ambient temperatures, they require heat tracing to maintain temperatures in the 120°F (50°C) range to keep them in liquid form.

The customer's mission critical objectives for the heat management solution include finding the optimal yet cost-effective system design for this project that would keep critical processes running and manage the additional demands for power distribution on the loading dock and in the distribution areas.

## SOLUTION

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Raychem engineers analyzed all possible heating technologies and the availability of power distribution. After all systems were analyzed, the Raychem series heating cables (SC) proved to be the ideal solution for the longlines of this project due their ability to meet the process maintain temperature needs, heat the long distribution lines, and manage the limited power distribution reliably, safely and with the lowest installed cost.

In addition, Raychem self-regulating and mineral insulated heating cables proved ideal for the branch lines that required process temperature maintenance or freeze protection. Finally, to ensure the reliability and successful operation of the feedstock unloading operations, we installed our advanced control and monitoring solutions to deliver energy savings, to minimize operational risk and maximize productivity, and to communicate with the operation staff.

## PROJECT FACTS

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To meet the mission critical needs of this Biofuels refinery conversion, our Raychem heat management solution included:

- Engineering design experts providing optimized design and support using TracerLynx 3D HMS Software
- Raychem SC series resistance longline heating cable
- Raychem XTV self-regulating heating cable
- Raychem XMI mineral insulated heating cable
- Raychem 920 control and monitoring system

## BENEFITS

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We met the customers' mission critical objective for keeping critical processes running with our optimized designs and proven complete heat trace solutions. Raychem SC heating cable is designed and supplied for ease of installation, process maintain capabilities and long circuit length capability. This longline heating solution addressed this refinery's requirement for feedstock flow assurance while working with the limited power distribution situation on the dock and in the distribution piping areas.

Our solution assures feedstock flow maintenance which is critical to the success of this Biofuels refinery conversion. Our Raychem 920 advanced control & monitoring solution delivers energy savings and full connectivity that minimize operational risk and maximize productivity.

Phase 2 of this project is planned and will increase the feedstock capacity and include the addition of a green hydrogen plant.

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