High Temp Water/ Sweet Crude Tank Lining

Case study 2004

Focus product: Enviroline® 405HT heat resistant coating

Location: USA

Temperature: Up to 82°C (180°F)

Project owner: Canadian Natural Resources Ltd. (CNRL)

Project size: 3 tanks (38.1m, 22.9m & 15.3m diameter)

Background

The 2nd largest oil producing company in Canada, Canadian Natural Resources Ltd. (CNRL), needed a lining capable of resisting cargos of produced water and crude oil stored at high temperatures. Not only this but the the cargos were to be stored at varying thermal gradients which creates a highly aggressive environment.

Once lined, CNRL hoped to avoid re-entering their tanks for at least 10 years.

The solution

To find the best coating for the job, Charter Coatings Services Ltd. was hired by CNRL to perform an evaluation of Enviroline 405HT Heat Resistant Coating in conjunction with other high temperature coatings, all reported to be capable of meeting CNRL's needs.

Enviroline 405HT performed exceptionally well in the test. The test results, coupled with the coating's high solids, single coat, fast cure formulation, encouraged CNRL to select Enviroline 405HT for the project.

As a result, 3 CNRL tanks in Northern Alberta were immediately coated with Enviroline 405HT. The coating was used to entirely line the first 2 tanks (a 22.9m diameter tank and a 15.3m diameter tank that each holds produced water at a maximum operating temperature of 82ºC (180ºF)). The third tank, a 38.1m diameter tank that holds sweet crude at a maximum operating temperature of 32ºC (90ºF) was lined with Enviroline 405HT on the tank floor and 1.2m up the sides.

High temperature

Enviroline 405HT resists high temperatures in continuous immersion for a wide range of chemicals, including crude oil, hydrocarbon water mixtures and associated equipment up to 135°C (275°F).

Fast return to service

Enviroline 405HT is designed as a fast cure, single coat lining providing a DFT of 500-1000µm (20-40mils). It is possible to return your asset to service in 14 hours, reducing overall installation costs.

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