

# CASE

**At a remote northern Montana location, an American pipeline company required a suitable crude oil tank lining that could be installed and cured quickly at freezing temperatures to minimize operational downtime, while providing long service life for high sulphur “sour” crude oil.**

## Problem

The tank was being constructed late in the year at freezing temperatures and on a compressed timetable to enable it to be placed into service in a very short time frame, right after being coated. Most coating materials require substantial time, up to several days, to cure at such cold temperatures.

## Solution

Castagra's Ecodur 201 was applied at a 20 mil (0.020 inches) minimum thickness. The 68,000 barrel tank is rated for a maximum operating temperature of 95 degrees C (200 degrees F). The new steel was sandblasted to a near white metal finish with a 2 to 5 mil profile after which a single coat application was made. It was snowing at the time it was internally coated using Castagra's proprietary solvent-free spraying equipment.

## Application Results

The coating was cured fast enough at these cold temperatures that work crews were walking on it within two hours. Similarly, there was no time wasted during the coating inspection and touch-up process waiting for material to cure. Defects were identified and serviced in real time such that the tank was able to be turned back over to the customer ahead of schedule.

The total installed cost was less than for the competing epoxy coatings. Additionally, due to the increased flexibility of the Ecodur 201 relative to most other coatings, there is much less chance of the coating cracking at the low temperatures - as low



as minus 40. This is similar to ships at sea where the Ecodur coatings also perform well through wide and repeated temperature changes.

There was no heat used to cure the coating. Curing a coating using heat in winter conditions for a tank of this 30m diameter by 15m high (100 feet x 50 feet) is expensive and can take over a week. This was reduced to a couple hours using no applied heat. There was also virtually no odor during or after installation.

The solvent-free, “green” coating provides superior performance, costs less and installs more quickly than conventional petrochemical coatings.

“...crews were walking on it within two hours”