



RTD Sensor attached to Protal 7200 coated pipe and a thin layer of Denso Paste HT coating the sensor.



The RTD Sensor is encapsulated within Densyl Mastic.



55% overlap of Denso Hotline Tape around the sensor to provide corrosion protection prior to being buried.

### Project Data

<b>Location</b>	Canada
<b>Est. Completion</b>	2017
<b>Project Type</b>	Pipeline RTD Sensor Corrosion Protection
<b>Products Used</b>	Protal™ 7200 (Protal 7250 in Canada) / Denso® Paste HT / Densyl Mastic / Denso Hotline Tape / Denso Glass Outerwrap

### Project Details

Norpoint Sandblasting & Painting Ltd in Edmonton, Alberta has been a long time Denso Approved Application Company. They required a coating system resolution for the installation of Skin-Type Resistance Temperature Detectors (RTDs) on several 36" pipeline mainline block valve assemblies. The RTDs are used to detect temperature fluctuations within higher temperature pipelines.

Most RTD elements consist of a length of fine coiled wire wrapped around a ceramic or glass core. The element is usually quite fragile, so it is often placed inside a sheathed probe to protect it. The RTD sensor is attached to the surface of the pipe and will be buried with the assembly. Corrosion and environmental protection is required to ensure the RTD operates properly during its service life. This required a specialized coating system to coat and protect these RTDs for long term performance.

The coating scope of work was that the entire block valve and pipe spool assembly was first abrasive blasted to a SSPC-SP10 Near-White Metal with a 2.5 to 5 mil profile. Denso Protal 7250 Spray Epoxy was then applied at 25-35 mils DFT over the entire below ground section of the block valve and pipe spool assembly.

The RTD sensor was then attached to the surface of the pipe. The entire area was then coated with a thin layer for Denso Paste HT. Then the RTD is encapsulated with a layer of Densyl Mastic. This would assure there were not any voids or cavities left around the RTD. Denso Hotline Tape was then applied with a 55% overlap around the entire circumference of the pipe. This would ensure the long term sealing of the area around the RTD. The entire area was then wrapped with Denso Glass Outerwrap to give mechanical protection to the entire assembly. The entire valve assemblies were then ready to be shipped to site for final installation.

The End User that required these block valve and pipe spool assemblies appreciated the fact that Denso North America was able to offer the entire solution for coating these RTDs.

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