

SYNTHO-GLASS®XT

8" OD TRANSMISSION LINE, COLUMBIA PIPELINE REPAIR AND REINFORCEMENT



Problem

A 8" OD carbon steel pipeline operating at 280 psi (19 bar), with a test pressure of 740 psi (51 bar), was located in Columbia was experiencing 70% wall loss over a 8'2" (2.5m) section of pipe. The petroleum company required an immediate solution that could be effectively and easily installed in the humid environment to prevent an unexpected shutdown or catastrophic rupture in the pipeline.

Conditions

The pipeline was located in a moderately inaccessible area with extreme humidity and an ambient temperature of 89°F (32°C).

Solution

In order to promote adhesion, the pipe was cleaned by removing rust, paint, and foreign matter in accordance with Sa2.5 or NACE 2. Syntho-Poxy™HC, an 8,000 psi (552 bar) high compression strength filler, was used to fill external pitting before 30 mils of Syntho-SubSea™LV epoxy was applied over the entire circumference to provide corrosion protection over the bare steel, effectively locking out any atmospheric conditions from the surrounding rainforest. The Syntho-Poxy HC and Syntho-SubSea LV work in unison to transfer the hoop load of the 280 psi (19 bar) carbon steel pipe into the 54,000 psi (3,724 bar) high tensile strength of the Syntho-Glass®XT composite wrap, fully restoring the structural integrity of the pipeline.

Result

The Syntho-Glass XT composite repair system eliminated the need to replace the defective section of pipe, fully restored the pipe's hoop and axial strength enabling full pipeline operations and was completed cost effectively within only hours.



©Neptune Research Inc. (NRI) NRI® and Syntho-Glass®XT are registered trademarks of NRI. Syntho-Poxy™HC, Syntho-SubSea™LV, and Viper-Skin™ are trademarks of NRI. Please contact your local NRI distributor or office for the most current product specifications. User shall determine suitability of product for use and assumes all risk. The seller will not accept liability for more than product replacement.
Project Date 0512 VS CS 0913

NRI
QUALITY. RELIABILITY. INTEGRITY.