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Method developed to protect 'insurance spares'

A U.K. company has developed a method for protecting extra pipe, flanges, and repair clamps that pipeline operators keep in the event of an emergency.

Should they need these "insurance spares" to quickly repair or replace a component that has been damaged or has experienced corrosion or mechanical failure, operators keep the parts in a condition fit for purpose. However, according to Corrosion Solutions, Ltd. (CSL) (Aberdeen, U.K.), the spares often are not properly preserved.

"These spares are usually kept in outdoor storage facilities for many years, and even decades, without proper preservation maintenance," says CSL Managing Director Allan Durham. "Attempts at preservation maintenance include coating with domestic emulsion paints

and primers, but these obviously do not last." Durham's company has developed and managed a preservation maintenance program for insurance spares that entails blowing a powder vapor phase corrosion inhibitor (VpCI) manufactured by Cortec Corp. (St. Paul, Minnesota) through pipe and then capping and sealing them. "This gives protection to the entire internals of the pipe via a chemically adsorbed film, which provides a molecular film," explains Durham, noting that flanges and clamps are protected by a thin film of inhibited grease in a VpCI polyethylene film. "This form of protection will protect bare steel and will prolong the life of any coating that may have been applied." External surfaces are protected using a VpCI wax coating, says Durham, who adds that



A spare flange receives protection from a thin film of inhibited grease in a VpCI polyethylene film. Photo courtesy of CSL.

some precleaning may be required prior to preservation depending on the spares' condition.

According to Durham, CSL has applied the preservation process successfully for the past 5 years in conjunction with asset management contractors J P Kenny, Ltd. (Aberdeen, U.K.) and Lloyd's Register (Aberdeen, U.K.). The program has involved twice-a-year inspections of protected spares. "These spares show no sign of deterioration since the program started," says Durham. "In the first year, the cost was recovered when a subsea pipeline was mechanically damaged and the preserved pipe was able to be shipped out on the next boat without delay."

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