

CUI Monitoring System



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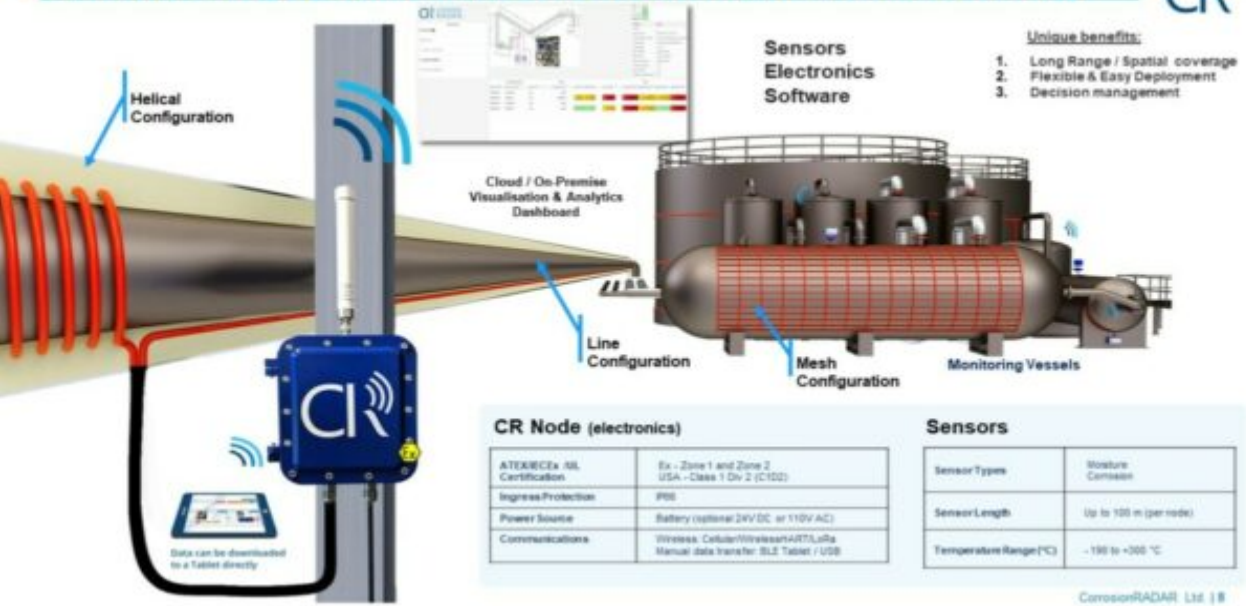
De Challenge

CUI continues to be a challenge to the integrity of process, chemical, power and other industrial plants. As this corrosion is not visible due to insulation and moisture can stay in the insulation for long periods, corrosion under insulation (CUI) is difficult to detect and locate. For cold duty insulations, the problem of CUI management is even more difficult due to inability to strip the insulation while asset is in operation (due to ice formation or reinsulation issues). A number of NDT systems have been in use for CUI inspection but there is no silver bullet and a better predictive methodology is still needed to optimise cost and safety.

De Solution

The solution described is a CUI monitoring system. With remote monitoring of predictive parameters of CUI, risks can be managed in an optimal way. This monitoring system involves use of long wire-like sensors permanently installed under the insulation and a data logger transmits data wirelessly to a web portal. The outputs are in form of Corrosion rates and their locations, in addition to moisture under insulation. Online CUI Risk is determined online on the web portal. This provides important data for asset managers to plan, schedule and target their efforts.

CUI Monitoring system with Corrosion and Moisture Sensing



De Businesscase

The CUI Monitoring systems are already being used by several plant facilities around the globe, and can reduce the inspection costs by over 40% and be a long-term solution for the safety of the critical assets. A gas processing plant in Saudi Arabia estimated savings of over 65% in CUI inspection costs (>5M\$ in a mid size gas plant). There are several installations in the benelux region serving as references of the positive impact of this system.