

Performance assessment of NDT for corrosion under pipe supports (CUPS)

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“Corrosion under pipe supports (CUPS) is a widespread issue within the oil & gas and other industries that has caused in-service leaks and ruptures. Visual inspection can provide an indication of corrosion (product build-up, rust staining) but it is significantly hampered by the lack of access to the critical areas. Removal of a potentially corroded pipe from its support for direct examination is hazardous on live process lines. There is therefore interest in use of advanced NDT methods that can provide information on the severity of the CUPS without removal of the supports and hence the need for a shutdown. Given the large numbers of supports on typical plants, there can be a need for a combination of rapid NDT methods for initial screening to identify a smaller number for follow up by with more quantitative methods. An extensive set of blind trials of NDT methods for CUPS inspection have been conducted within the HOIS JIP, to assess their inspection performance and sizing accuracy. Different NDT methods were found to be needed depending on parameters such as the pipe diameter and wall thickness. The results from these blind trials have informed the developed of a CUPS inspection guidance document.”