

Managing Corrosion Under Insulation (CUI) is one of the key challenges faced by the oil and gas processing industry. CUI is estimated to incur 40-60% of the process plant maintenance costs in the UK. The principal issue is that external coatings and insulation prevent advanced and conventional inspection techniques from detecting the presence of corrosive product build-up on the external pipework surface.

This paper introduces a Magnetometry based inspection method called Focussed Stress Concentration Tomography (FSCT) which is rapid and non-intrusive and has been shown to successfully detect the presence of corrosion without removing the coating or insulation. The results of testing and trials on pipework in both operational and decommissioned plants will be presented along with a description of the probe, methodology and real time notification to the operator where corrosion is detected. The paper will also go on to describe enhancements which are intended to further improve the technique.