

The Advancement of Non-destructive Testing Technologies In The Oil & Gas Industry

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Nowadays, non-destructive testing (NDT) play an important role in assuring integrity and safety of the components in oil and gas industry. Since NDT does not cause any permanent changes in the material being inspected, it is valuable technique to detect, characterize, or measure the presence of damage mechanisms. The NDT technology has rapidly improved over the years by the advancement of digital and signal processing technology.

This article describes recently state-of-the-art inspection technologies for surface (surface eddy current array) and subsurface (phased array ultrasonic testing with full matrix capture) flaws detection, corrosion under insulation inspection (pulsed eddy current array) and eddy current array for non-ferromagnetic heat exchanger tube inspection. The key benefits are discussed.