

Non-Intrusive Pipe Inspection

Defect Characterisation



AESL assessment tools use magnetic flux technology to characterise both internal and external defects in metallic pipework. The assessment tool technology allows assessment of the full pipe wall thickness along the inspected main.



Photograph 1 - Pre-scanned Pipe

Photograph 1 above shows a pipe which was assessed using the AESL condition assessment tool. Visually the pipe appeared to be in good condition. Scans from the tool were downloaded to AESL-developed software, allowing sensor outputs to be plotted against pipe length.

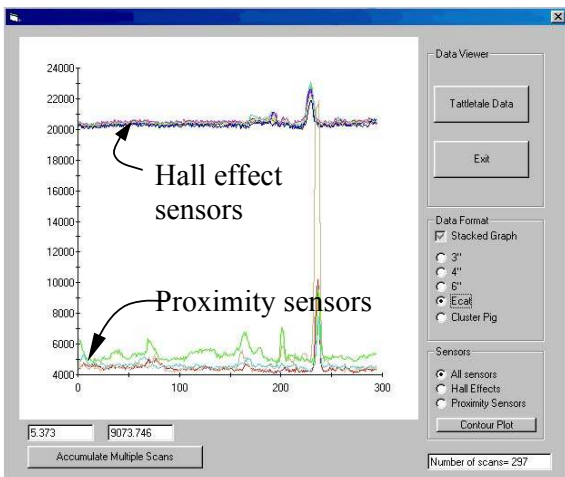


Figure 1 - Sensor Output Traces

Metal loss and defect characterisation is determined using two types of sensor. These sensors differentiate between overall metal loss and external metal loss. By analysing the two sensor outputs together it is possible to differentiate between internal and external defects

Figure 1 above shows readings from both sensors, indicating severe external metal loss.

Using a ruggedised hand-held computer on site, AES technicians are able to interrogate the output scans to accurately locate the metal loss.

Photograph 2 below shows the identified external defect in what was otherwise thought to be a clean and sound pipe as seen in Photograph 1.



Photograph 2 - Defect Identification

Please Contact: M Wayman at

Advanced Engineering Solutions Limited
South Nelson Road
South Nelson Industrial Estate
Cramlington
Northumberland
NE23 1WF
United Kingdom

Tel: +44(0) 1670 739999
Fax: +44(0) 1670 717999
e-mail: m.wayman@aesengs.co.uk