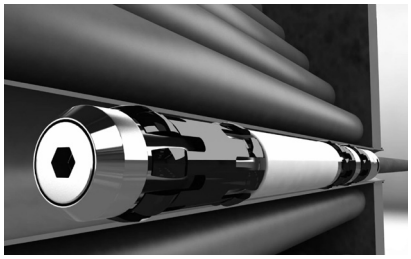
Brookes Bell

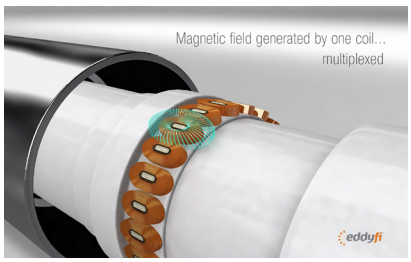
Advanced Non-Destructive Testing Services

Electromagnetic Technologies for Tubing Inspections

FACT SHEET

Tube inspection





Brookes Bell's team of tube inspection specialists are skilled in performing multiple techniques to the highest standards, enabling us to handle diverse projects of all sizes and provide quick solutions for any material, whatever the complexity of the job.

Applications

- Shell-and-tube heat exchangers
- AC chillers
- Steam generators
- Boilers
- Coolers/Heaters
- Condensers/Evaporators

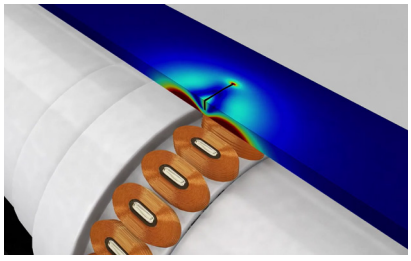
We offer several different advanced inspection techniques depending on the tube materials and geometries involved.

Common HX defects identified by NDT

- Inner and outer-diameter pitting and corrosion
- Longitudinal cracks
- Circumferential cracks (especially at the tube sheet)
- Erosion
- Fretting
- Metal loss

At a glance: Selecting the best technique for the type of material and tube

Material/Tech		ECT	ECA	IRIS	RFT	NFT	NFA	MFL
Non-ferromagnetic	Tube	●	●	●				
	Finned tube	●	●	●				
Low Ferromagnetic	Tube			●	●	●	●	●
	Finned tube			●	●	●	●	●
Ferromagnetic	Tube			●	●	●	●	●
	Integral finned tube			○	●	●	●	●
	Aluminum finned tube			●		●	●	●



Detection Capabilities According to Defect Type

DefectI/Tech	ECT	ECA	IRIS	RFT	NFT	NFA	MFL
ID pitting	●	●	●	○	○	●	●
OD pitting	●	●	●	○			●
Axial cracking	○	●		○	○	○	
Circumferential cracking	○	●				○	○
ID corrosion	●	●	●	●	●	●	●
OD corrosion	●	●	●	●		●	○
At tubesheet	○	●	●	○			○

● Excellent ○ Acceptable but limited

Call us on 0151 236 0083
Email ndt.enquires@brookesbell.com
www.brookesbell.com