



Asset Care Counts #2

November 2010

HEAT EXCHANGER TUBING

Failure of heat exchanger tubing during service leads to unscheduled plant shutdowns with resultant production losses and increased costs.

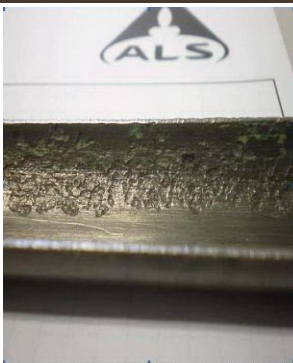
Similarly, unnecessary replacement of tubes in good condition is a time consuming and expensive process during an outage given that typical heat exchangers contain many hundreds or possibly thousands of tubes.

The ability to accurately inspect tubes at the time of heat exchanger overhaul is therefore critical if planned and reliable service life is to be achieved.

ALS Industrial Division uses a combination of Eddy Current, IRIS and Remote Field techniques to detect and size tube damage without the need to remove the tube bundles from the exchanger shell.

Testing can be undertaken on a range of tube diameters and wall thicknesses in both ferrous and non-ferrous materials.

Using the latest Olympus MS5800 tube inspection systems with analysis and mapping software, significant internal and external tube damage has been revealed which, if undetected, would have resulted in premature failures and considerable unexpected cost.



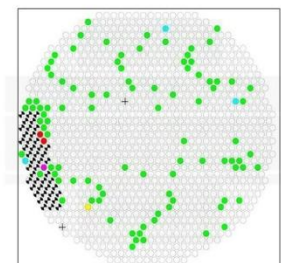
CuNi tube - internal pitting



Al Brass tube - inlet erosion



CuNi tube - ammonia attack at baffle location



Tubesheet map showing tube condition

For further information on the ALS Industrial Division computed radiography capabilities please contact:

BRISBANE
2 Ron Boyle Crescent
Carole Park QLD 4300
Phone +61 7 3718 0300
CarolePark@alsglobal.com

MELBOURNE
294 Arden Street Nth
Melbourne VIC 3051
Phone +61 3 9236 8000
NorthMelbourne@alsglobal.com

PERTH
109 Bannister Road
Canning Vale WA 6155
Phone +61 8 9232 0300
CanningVale@alsglobal.com



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www.alsglobal.com