

# AssetCare Counts

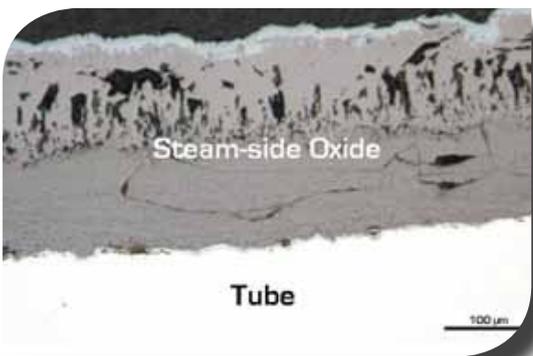
## Power Stations

### ► Remaining Life Assessment of Boiler Tubes: Oxide Thickness Testing (OTT)

#### Tube Alert OTT System



#### Typical steam-grown oxide appearance in cross section.



Ensuring boiler tube integrity is a key element in the reliable operation of a successful power generating plant. **ALS Industrial can ensure boiler tube integrity is at its best. Boiler tube failures are responsible for more unplanned outages than any other single cause.**

Ensuring boiler tube integrity is a key element in the reliable operation of power generating plant. Boiler tube failures are responsible for more unplanned outages than any other single cause. Superheater and reheater tubes that operate well into the creep range are susceptible to the effects of overheating which may cause premature failure if not detected at an early stage. One very good indicator of operating temperature is the thickness of the steam-grown bore oxide. A number of useful relationships exist that enable us to predict the operating temperature based on the thickness of the oxide layer and hours in service.

OTT is the term used to describe a methodology for measuring the bore oxide thickness using an ultrasonic transducer, and using that thickness as an input to software that can determine the effective operating temperature, and hence, remaining useful life. This is a non destructive method that very effectively surveys tube banks and assists in planning future replacement of tubes.

ALS Industrial uses a proprietary system known as TubeAlert, supplied by Aptech Engineering. It incorporates both the hardware for the ultrasonic measurement and the software to interpret the results to give a meaningful remaining life assessment. The ultrasonic transducer is integrated with computer software and hence results/graphs can be generated easily at anytime during the inspection.

#### **BRISBANE**

2 Ron Boyle Crescent  
Carole Park QLD 4300  
Phone +61 3 7180300  
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

**RIGHT SOLUTIONS RIGHT PARTNER**

**www.alsglobal.com**