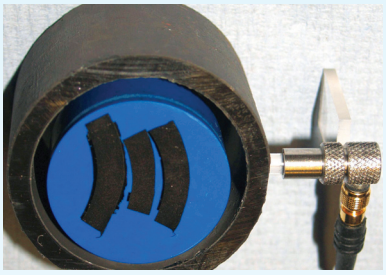

Oxide thickness measurement

Management of the creep life of high temperature components in older fossil fuel power stations is critical for continued safe operation of plant.

The Problem
Difficulties in establishing historic boiler temperature profiles will impede assessments of tube creep life, and increase the risk of costly on-load tube leaks.

The Challenge
To develop a reliable technique that enables boiler temperature profiles to be established, thus providing significant data for metallurgical appraisal of remaining tube life.

Our Solution
A specialised Ultrasonic inspection procedure, utilising the relationship between internally grown oxide in boiler tubes and operating temperatures and hours, to develop an across boiler profile for creep life appraisal.

Product
- high frequency ultrasound capable of measuring oxide thickness down to 100microns
- interface with digital ultrasonic equipment
- system verified on catalogue of tube samples
- internal oxide thickness and remaining tube wall thickness recorded and operating hours established
- temperature profiles assessed and remnant creep life of tubes determined.

Benefits
- major cost savings by avoiding onload tube failures and subsequent unplanned outages
- major time/cost savings from targeted tube replacement programs during planned outages
- extended plant life through predictive maintenance
- improved insurance profile.

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