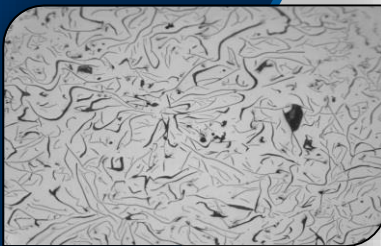
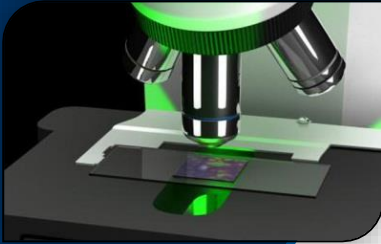


Remaining Life Assessment



AMCO has established expertise in the life assessment of components from petrochemical and power plants operating in the creep regime.

The assessment of remaining life of high temperature components generally requires creep analysis, which is very sensitive to temperature. In most cases limited data on operating temperatures is available, however, in steam plant the thickness of the protective internal oxide layer provides a good indicator of thermal history. Using ultrasonic techniques, from the outside of tubing, we are able to measure wall thickness and the oxide thickness nondestructively and from this infer tube metal temperature. Using various correlations for specific alloys the average operating temperature and remnant life can be predicted. In addition, the temperature distribution across a boiler can be gauged and advice offered on the effective modifications to improve the temperature distribution. Detailed microstructural analysis of carbide transitions, spheroidization or cavitation are used to characterise the materials and impact of service on the remaining life.

AMCO can provide a full Component Life Assessment service

Which can include the following –

- On-site inspection using advanced NDE
- Metallographic evaluation
- Review of design drawings
- Remaining Life Assessment calculations
- Development of inspection procedures
- Weld repair
- Component replacements where appropriate

Remaining Life Assessment can be used to assess:

- Boiler components
- Steam-turbine components
- Combustion turbine components
- Hydraulic turbine components
- Pressure vessels
- Welded structural components
- Storage tanks
- Pipes and pipelines