



# Life Assessment and Extension

## Why AMCO Integrity ?

AMCO Integrity has established expertise in the Life Assessment of components from Petrochemical, Chemical, Processing, Refinery, Fertilizer, Oil & Gas, and power plants operating in the creep regime.

We can assess the remaining life of plant components under operating conditions, offering real increases in safe operating life or increase in inspection intervals where appropriate. Advanced warning of creep, creep/corrosion and creep fatigue failures can avoid expensive unplanned outages while avoiding undue maintenance or premature replication surveys. Improved repair welds, including cold weld repairs, can reduce the delay in returning a plant to service and may be suitable for long term service, thus avoiding replacement at the next scheduled outage.

The determination of maintenance costs relating to equipment life extension requires an assessment of remaining life in critical components. Maintenance recommendations can then be made to extend equipment life for a desired period. Analysis will include recommendations for future preventative maintenance scheduling, operating condition improvements, repairs and replacement.

## What is Remaining Life Assessment (RLA)?

Remaining life assessment (RLA) is method and procedure used to predict the remaining life of equipment, structures or facility that have been in service for an extended period of time, usually close to or beyond the design life. The RLA offers a possible tool to estimate the useful remaining lifetime and avoid premature failure or scrapping of the part.

## What is Life Extension?

Life Extension analysis is further step or effort to extend the calculated remaining life of the equipment or facility until their economic life is met. The extension procedure could involve various actions of maintenance, repair, replacement, or down rate decision making.



# Life Assessment and Extension

Remaining Life Assessment technology 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

AMCO Integrity 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
- Finite Element modelling and stress analysis
- Remaining Life Assessment calculations
- Development of inspection procedures
- Life Extension recommendations
- Weld repair (including advanced techniques for cold weld repair)
- Component replacements where appropriate



## Related Services

- Fitness For Service (FFS)
- Risk Based Inspection (RBI)
- Defect Assessment
- Condition Assessment
- Failure Analysis
- Probabilistic Life Assessment
- Critical Analysis