

1. Problem Statement

OEM recommended that gas turbine was at end of life based on operational history and needed to be retired from service, compromising viability of offshore facility.

2. Aims

Perform independent assessment of compressor/ turbine condition and residual life.

3. Method

- Reviewed operation and maintenance records
- Completed detailed assessment of asset including metallography
- Reversed engineered 2 blades
- FEA modelled steady state and transient loads

4. Impact

- Verified design life at full and reduce loads
- Validated 6 years continued operation
- £5M capex avoidance
- Mitigated premature CoP