



# TCL SITE SERVICES

On-site maintenance services for  
gas and steam turbine plant

- Turbine inspection services
- Throttle valve calibration
- Performance monitoring
- Service agreements



Turbine Controls Limited

# TCL site services

## On-site maintenance services for gas and steam turbine plant

TCL have a team of highly experienced engineers who are available to travel to site at short notice anywhere in the world.

Our site engineers have experience of faultfinding and maintenance of many types of control system and gas turbines including:

- RR Avon/RB211/Olympus
- Ruston TA1750/TD4000/TB5000/Tornado/Typhoon
- LM2500/5000/6000/1600
- GE Frame 3/5/6/7/9
- Solar Mars/Centaur/Saturn

The key requirements of on-site maintenance are:

- 1) Perform the planned tasks safely
- 2) Ensure the planned tasks are completed in the allotted time
- 3) Reduce the outage time to a minimum
- 4) Ensure the equipment is returned to service with the minimum of fuss

In order to achieve these requirements TCL has a well developed maintenance procedures which include:

- 1) Identify the required maintenance tasks and produce detailed method statements
- 2) Produce detailed risk assessments for each task to identify and mitigate all hazards
- 3) Ensure all personnel are suitably trained
- 4) Ensure that all spare parts and tooling are available before the site activities commence

### Engine boroscopy

TCL can provide an internal boroscope inspection service for all types of gas turbine. Internal inspection is particularly important for a gas turbine which is subjected to high thermal stresses. A boroscope inspection will enable the owner to:

- 1) Identify parts that may fail in the future
- 2) Plan future scheduled and non-scheduled maintenance activities
- 3) Pre-order parts for future replacement
- 4) Reduce the spare parts holding

The engine boroscope service includes

- 1) Attendance on site by TCL engineers, with the latest boroscopying equipment
- 2) Detailed report highlighting all areas of concern
- 3) Video of the engine internals
- 4) Recommendations for future maintenance

### Fuel valve calibration

Calibration of the fuel valve may be possible on site, which may reduce the engine downtime as the valve will not have to be removed and dispatched to an off-site workshop.

Gas valve calibration involves exhausting fuel gas to atmosphere.

Liquid fuel valve calibration involves running the HP fuel pumps and circulating fuel through the valve to the LP inlet.

### Performance monitoring

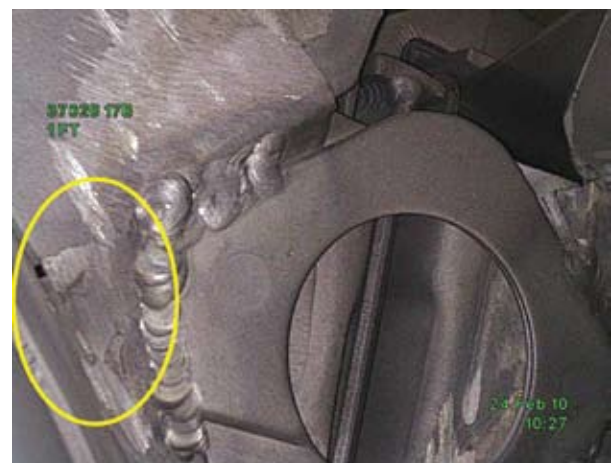
Performance monitoring can be carried out by our engineers on site. The turbine will be fitted with the necessary instrumentation to check the efficiency and output of each element of the plant, including:

- 1) Compressor efficiency
- 2) Charging turbine efficiency
- 3) Power turbine output and efficiency

### Service agreements

TCL currently have a number of support contracts with gas turbine operators which provide:

- 1) Telephone technical support
- 2) Spares holding and support
- 3) 24/7 Callout response
- 4) Planned maintenance routines
- 5) Remote monitoring of plant



Avon boroscope

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