

MAJOR INSPECTION/OVERHAUL FOR GAS TURBINE PLANT IN BANGLADESH

GE FRAME 6B GAS TURBINE WORK RESULTS IN MAJOR IMPROVEMENT IN CAPACITY

Goltens won a tough public tender for the major inspection/overhaul of a gas turbine in Bangladesh. The combined cycle turbine plant, powered by a GE Frame 6B gas turbine and owned by the Bangladeshi government, delivers electricity to the national grid.

Goltens completed a pre-inspection of the 35.7MW gas turbine, as part of the tendering process, to assess and collect HDPI records, DCS data, availability of spare parts and special tools and identify any other potential issues.

SCOPE OF REPAIR

Goltens dispatched a team of Mechanical, Electrical & Instrument and Turbine Control experts to Bangladesh to carry out the scope of work assisted by local mechanics, riggers and fitters. Scope included:

- Preparation of special tools and replacement spare parts
- Inspection/ Overhaul:
 - Gas turbine disassembly and rotor removal
 - Initial position and clearance measurements
 - Accessory, coupling, and inner turbine parts inspection and cleaning
 - Blade inspection and replacement
 - Mark VI Distribution Control System inspection
 - Alignment, Testing and Commissioning
- Other Scope included:
 - Inspection of main gearbox
 - Cleaning and Inspection of Lube oil cooler
 - Inspect and cleaning Oil pumps
 - Cleaning fan motor set

THE RESULT

After reassembly, the Frame 6 Gas Turbine was successfully commissioned at 100% load test and rated for continuous operation at approximately 85% load. This was a major improvement in power generation capacity for the turbine which had been limited to a maximum of 70% load before the major overhaul.

PROJECT FACTS: FRAME 6 GAS TURBINE

Customer:	Bangladesh Power Development Board (BPDB)
Location:	Sylhet, Bangladesh
Plant:	Fenchugonj Combined Cycle
Turbine Brand:	General Electric
Turbine Type:	PG 6581 B, GE Frame 6B, DLN 1
Output Power:	35.700 kW



Figure 1: Fenchugonj Combined Cycle Plant



Figure 2: Removal of Turbine casing



Figure 3: Turbine casing removed



Figure 4-5: Dismantling turbine and accessories



Figure 6: Positioning Turbine for clearance readings

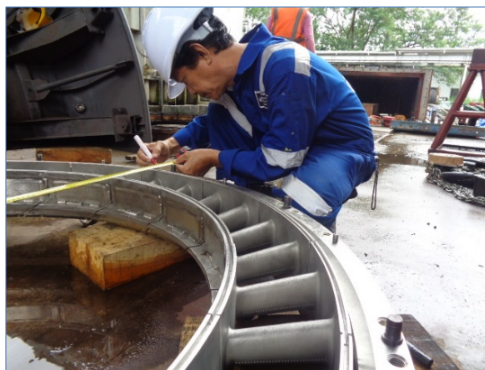


Figure 7: Recording clearance data



Figure 8: Inspection of turbine components



Figure 9: Inspection of turbine components



Figure 10: Cleaning of turbine components

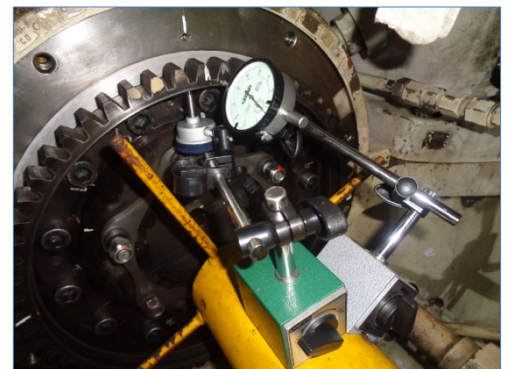


Figure 11: Turbine Shaft alignment check



Figure 12: Mark VI Distribution Control System Inspection