Iranian Gas Turbine 25 MW

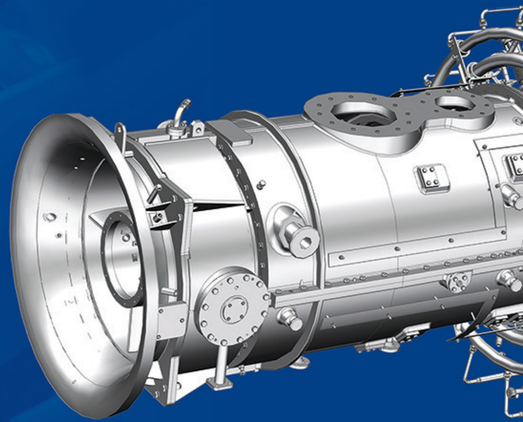
IGT25

OTC

OIL TURBO COMPRESSOR CO

OTC

OIL TURBO COMPRESSOR CO



GAS TURBINE PRODUCTION

OVERVIEW
- Mechanical drive: 25.40 MW (34,100 bhp)
- Shaft efficiency: 35.1%
- Heat rate: 10,258 KJ/kWh (7,250 Btu/hph)
- Turbine speed: 7,700 rpm (50 - 105 %)
- Compressor pressure ratio: 14:1
- Exhaust gas flow: 80.4 kg/s (177.3 lb/s)
- Exhaust tempreature: 543°C (1,009°F)
- NOx emissions (with DLE corrected to 15% O2 dry) - Gas fuel: ≤ 25 ppmV
- Liquid fuel: ≤ 42 ppmV (wet)

AXIAL COMPRESSOR
- 10-stage axial flow compressor
- 2-stage variable guide vanes
- Electron-beam welded rotor

FUEL SYSTEM
- Natural gas-Liquid fuel-Dual fuel
- Fuel-changeover capability at full and part load

EMISSIONS CONTROL
- DLE combustion system
- Water injection for NOx-reduction during liquid fuel operation

BEARINGS
- Tilting pad radial and thrust
- Vibration-and temperature monitoring

COMBUSTION
- 18 dual-fuel 2nd generation
- Dry Low Emissions (DLE) burners
- Welded annular sheet metal design

COMPRESSOR TURBINE
- 2-stage axial flow compressor turbine-both stages are air-cooled

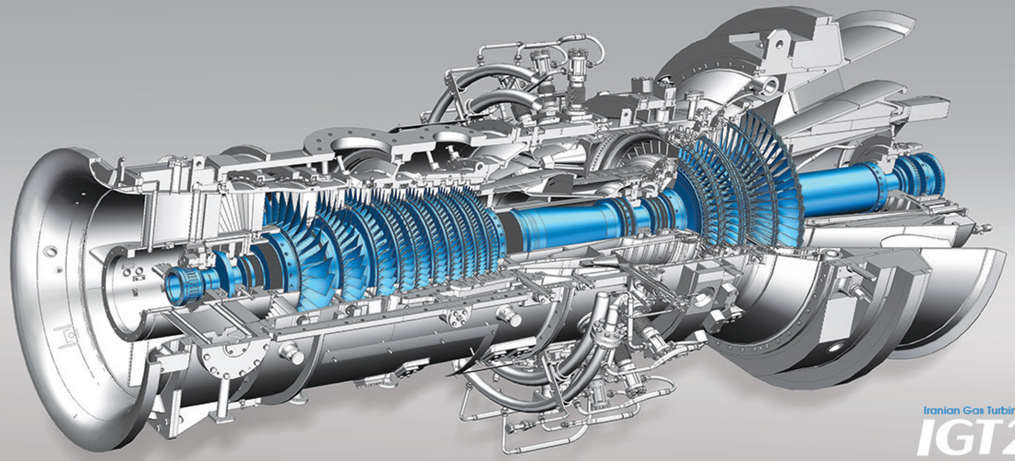
POWER TURBINE
- 2-stage free power turbine, uncooled
- interlocking shrouds
- Electron-Beam Welded Rotor

IGT25 GAS TURBINE UPGRADING

IGT25 PC (Performance concept)
- Mechanical Drive: 27 MW
- Shaft Efficiency: 36%

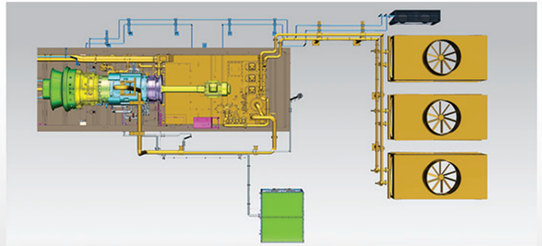
IGT25 MC (Maintenance concept)
- 1.2 life time Extension in hot parts

IGT25 FC (Flexibility concept)
- Fast start option
- Fast loading option



Iranian Gas Turbine 25 MW

IGT25



KEY FEATURES
- Robust industrial design
- Excellent operational availability and reliability
- Excellent DLE experience
- Low emissions, DEL ≤ 25 ppm NOx
- Dual-fuel capability
- Wide range of fuel capability
- Long-term efficiency, low deterioration
- Low life cycle cost
- Workshop tested

MAINTENANCE
- No need for special workshop maintenance
- 24-hours gas generator exchange or Onsite maintenance
- Modular build-up for easy maintenance on site
- Standardized concepts for maintenance planning
- Condition-based maintenance
- Extended time between overhaul
- when running on part load
- Low deterioration and service cost
- Gas turbine can be removed on rollers
- through the maintenance doors
- Horizontal split compressor casing