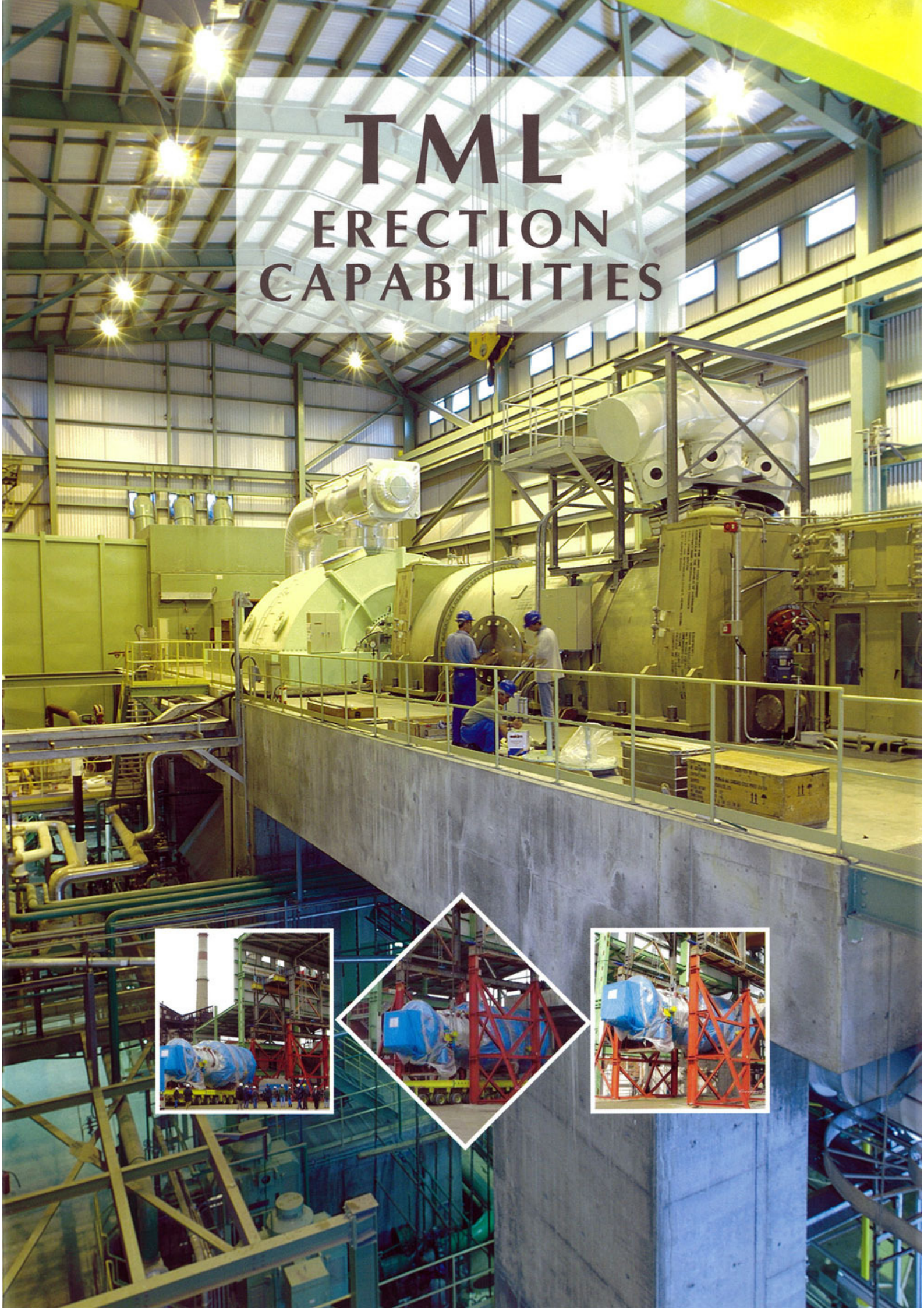


TML ERECTION CAPABILITIES





KARADAG GAS COMPRESSOR STATION

- Underground VC piping (2 to 6")
2,751 dia inch welding
- Above ground CS piping (1.5 to 16")
22,578 dia-inch welding
Including spool fabrication
- Post weld heat treatment 3,320 *dia-inch*
- 1,500 Film-Nos Radiographic Tests (NDT)
- 55 tonnes of field fabricated supports
- 740 sq. meters of field coating and wrapping
- 500 dia-inch Dye Penetrant



SEVERNAYA POWER PLANT

(Total of 3,930 Tonnes)

- 2,500 tonnes of 1800 mm Concrete encased cooling water piping
(11,600 inch DB)
- 230 tonnes of HRSG Piping
(8,178 inch DB)
- 1,200 tonnes of Turbine Piping
(42,027 inch DB)



PIPING



SEVERNAYA POWER PLANT

- Turbine / Generator Building 1200 tonnes
- HRSG Building 480 tonnes
- Water Intake Pump Station 75 tonnes
- Pipe Bridges 250 tonnes
- Platforms 80 Tonnes
- Pipe Support & Sleepers 40 tonnes

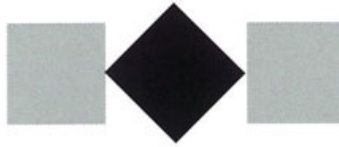


KARADAG GAS COMPRESSOR STATION

- Compressor Building 170 tonnes
- Nitrogen Building 24 tonnes
- Fire Fighting Pump Station 21 tonnes
- Pipe Racks 39 tonnes
- Raised Floor Admin. Bldg 50 tonnes
- Cable & Ins. Supports 33 tonnes
- Platforms 35 tonnes



STRUCTURAL



KARADAG GAS COMPRESSOR STATION

(COMPLETE CIVIL / MECHANICAL / ELECTRICAL / CONTROL & INSTRUMENTATION ERECTION)

• Gas Turbine & Compressors	186 tonnes	• Fire Water Tank - 200 m ³ - Fabrication & Installation	20 tonnes
• Diesel Engines Generator	10 tonnes	• Flare Stack - Fabrication & Installation	15 tonnes
• Vertical Pumps & Drivers	10 tonnes	• Platforms & Ladders	35 tonnes
• Horizontal Pumps & Drivers	9 tonnes	• Instrument Air Dryer	4 tonnes
• Air Fin Coolers	181 tonnes	• Filter	19 tonnes
• Tower & Reactor Drum Vessels	110 tonnes		



MECHANICAL



SEVERNAYA 400 MW SINGLE SHAFT COMBINED CYCLE POWER PLANT (COMPLETE CIVIL / MECHANICAL / ELECTRICAL / CONTROL & INSTRUMENTATION ERECTION)

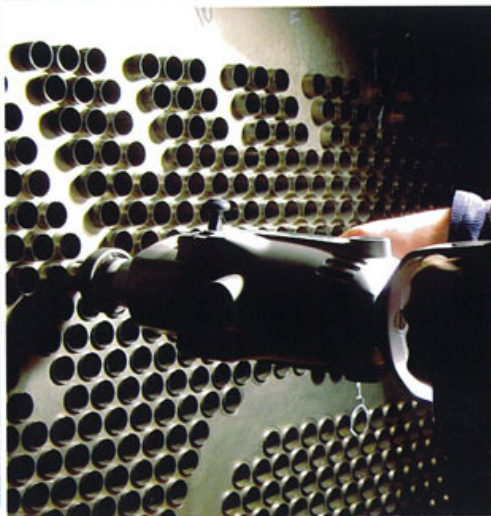
HEAT RECOVERY STEAM GENERATOR (HRSG) 2,848 TONNES TRIPLE PRESSURE REHEAT TYPE/NATURAL CIRCULATION

• Steel Structure	480 tonnes
• Pressure Parts (4 Modules)	1,666 tonnes
• Drums & Tanks	136 tonnes
• Casing - Ducting - Chimney	211 tonnes
• Piping	230 tonnes
• Mechanical Equipment	50 tonnes
• Heat Insulation	75 tonnes
• Hydrotest of Boiler	
• Boiler Chemical Cleaning & Operation	
• Commissioning	

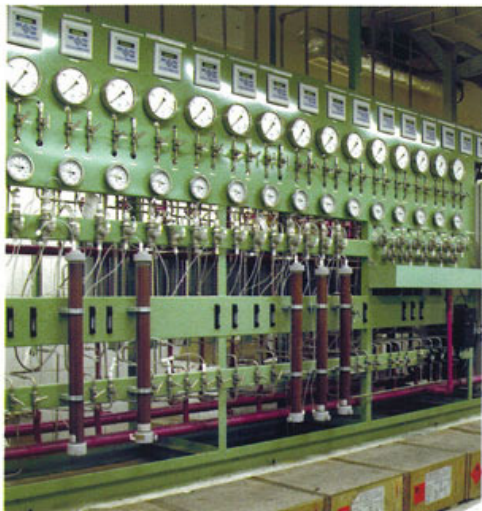
TURBINE - GENERATOR & AUXILIARIES 3,125 TONNES

264,4 MW GAS TURBINE + 139,7 MW STEAM TURBINE

• Gas Turbine - Enclosures & Aux	710 tonnes
• HP & LP Steam Turbine	310 tonnes
• Condenser	250 tonnes
• Generator	300 tonnes
• Main & Starter Transformers	340 tonnes
• Gas Compressors	110 tonnes
• Feed & Circulation Pumps	115 tonnes
• Start-Up Boiler Plant	175 tonnes
• Auxiliaries	815 tonnes



MECHANICAL



SEVERNAYA POWER PLANT

TOTAL OF 380,600 METERS OF CABLING:

- 6.3 KV Power Cable - 5,200 meters
- 0.6/1 KV Power Cable - 92,800 meters
- Instrument & Control Cables - 212,600 meters
 - Lighting Cables - 40,000 meters
- Grounding & Lightning Cables - 30,000 meters
- Field Instruments - Instrument Stanchions-Piping - 600 Nos.
 - Switchgears - 6,3 kVMV - MCC - LV - 150 tonnes
- Battery Systems - 110 V DC - 220 V DC - UPS Systems - 50 tonnes
 - Control Systems - Relay Control - PC Control - 30 tonnes
 - Communication Systems - Data Control - [CCR (DCS & Aux)]

KARADAG GAS COMPRESSOR STATION

- Overhead Transmission Line 2x10 KV-3 Km
 - Power Cabling 0.4 KV - 20 Km
 - Instrument & Control Cabling - 40 Km
 - Lighting Cables - 7 Km
 - Ground & Lightning Cables - 7 Km
- Field Instruments / Local Instruments (*Incl. Calibration*)
 - Switchgears (LV - MCC - 10 kV) - 30 tonnes
- Battery Systems - UPS -36 V-24 V DC - 10 tonnes
- Control Room - Relay/PC Control Equipment 10 tonnes
 - Communication / CCTV Systems
- Lightning Protection & Ground Systems - 6 tonnes
 - Testing - Precommissioning Works



ELECTRICAL

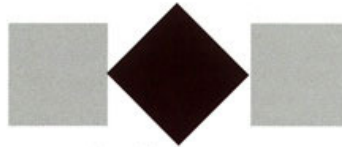


SEVERNAYA POWER PLANT

- 10,000 m³ Condensate Storage
(28 m Dia, 17 m H - 256 tonnes)
- 5,000 m³ Fuel Oil
(24 m Dia, 12 m H - 158 tonnes)
- 2,000 m³ Service / Fire Water
(15 m Dia, 12 m H - 67 tonnes)
- 23 m³ Dia Potable Water
(3.5 m Dia, 4 m H - 4.5 tonnes)
- 200 m³ Clean & Dirty Oil
(7 m Dia, 8 m H - 20 tonnes)



TANKS



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