



gulf turbo services
جلف تيربو للخدمات

**Member of the International Group Companies of
Turbine and Compressor Division**



Gate 67 St. 39 Industrial Area, Doha, Qatar
Tel. +974 44504831 Fax. +974 44506645

Web. www.gts-qatar.com
Email. info@gts-qatar.com

ISO CERTIFIED COMPANY
ISO 9001, ISO 14001, OHSAS 18001

I. COMPANY BACKGROUND



With the increasing demand in production and operational efficiencies of oil and gas industries in the Gulf region, the demand for technical service support on rotating equipment is extremely high.

Under a joint venture between MAN DIESEL & TURBO (former MAN TURBO) & PETROTEC, GULF TURBO SERVICES was established on July 2006 in order to serve the customers in the Gulf region.

The established facility in Qatar represents MAN DIESEL & TURBO's local capabilities such as repair, fabrication, field service, installation, commissioning, trouble shooting, warranty management support and all other related services for rotating equipment.

Specialists recruited from MAN Turbo networks worldwide form the strong Technical background for the work on rotating equipment

WORKSHOP & ADMINISTRATION BUILDINGS



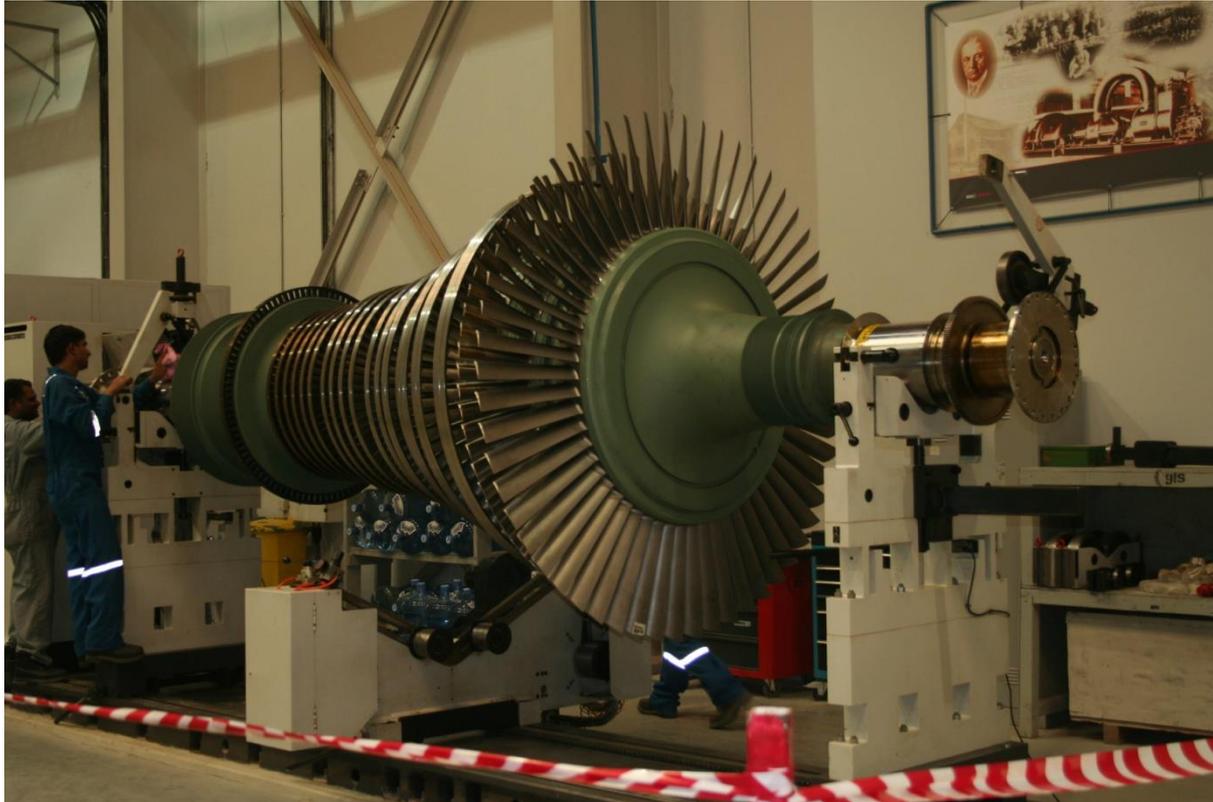
PLOT SIZE: 10,000 Sq Meters
WORKSHOP: 2 bays of
(17 x 85) = 1445 sq. Meters

II. FACILITIES & EQUIPMENT





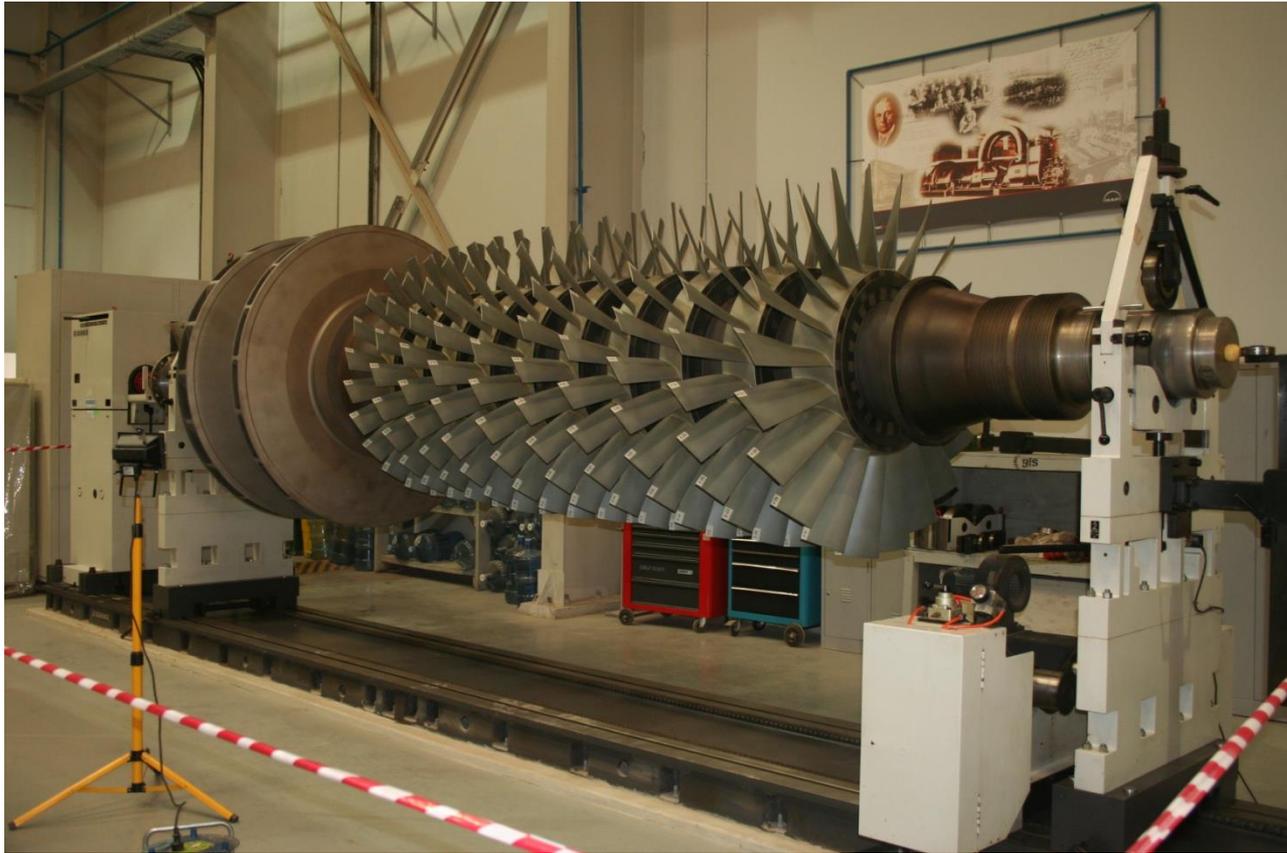
20-TON BALANCING MACHINE



Manufacture/Type: Schenck/HM 60 U/BU
Max. Distance bet. bearing supports
10,000 mm
Max. Swing: 3,000 mm
Max. Load: 20,000 kgs.
Bearing journal \varnothing : 50 – 200 mm /
200 – 400 mm

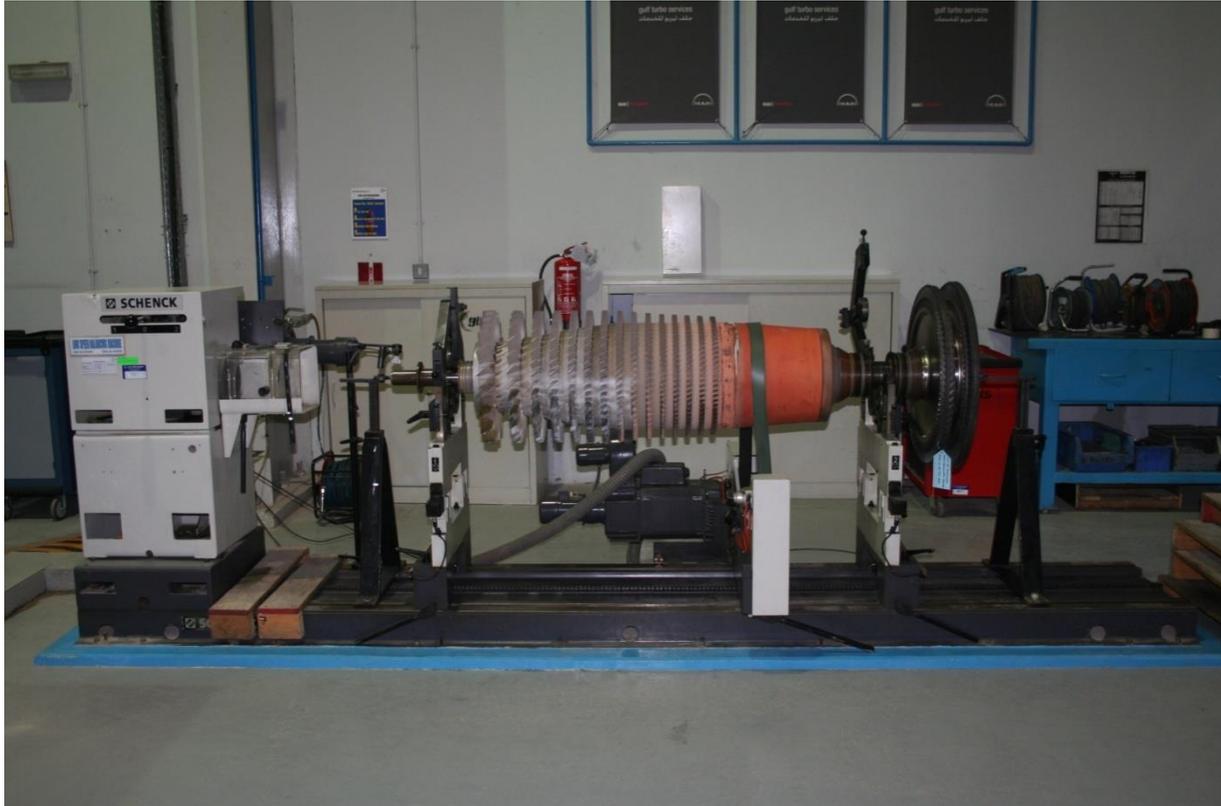
Balancing of a Steam Turbine Rotor on the 20-ton LSB

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Balancing of a Main Air Compressor Rotor on the 20-ton LSB



Low Speed Balancing M/C

Manufacture/Type: Schenck/HM 40 U/BU
Max. Distance bet. bearing supports 4.000 mm
Max. Swing: 1600 mm
Max. Load: 3000 kg
Bearing journal \varnothing : 15 – 120 mm

Balancing Speed
Universal Drive: 60 – 1120 RPM
Belt Drive: 30 – 3640 RPM
Residual unbalance: 0,5 gmm/kg

Balancing of a Gas Turbine Rotor on the 3-ton LSB



Boring Mill
Manufacture/Type: Schiess 130 T 25
Spindle \varnothing : 130 mm
Table Size: 2.000 x 2.000 mm
X – axis: 3.200 mm
Y – axis: 2.000 mm
Max. Table Load: 25.000 kg

Machining of a centrifugal pump casing on the horizontal bore



OPTIMUM – MASCHINEN GERMANY
DREHMASCHINE
D320 X 920

SU 50A – MADE IN CZECHOSLOVAKIA
TOS KURIM
ZAVOO LIPNIK

OPTIMUM – MASCHINEN GERMANY
D460 X 2000
DREH MASCHINE

POREBA – MADE IN POLAND
PL 42-480 POREBO
TYP TZ8-250B/6M
NR 1170-02

CELMA – MADE IN POLAND
TYP SE 520M8/4
Nr FF 191907

Machining and fabrication works on lathe machines

30 TON LATHE MACHINE



30 Ton Lathe Machine

POREBA / TZG-250B/6M / 107.400,00

Maschinen-Art : Plandrehbank

Brand : POREBA

Type : TZG-250B/6M

III. WORKSHOP CAPABILITIES

WORKSHOP CAPABILITIES

SYNERGIES BETWEEN TURBO & DIESEL ACTIVITIES



Workshop facilities equipped with state of the art machineries and tool machines, organized to provide full restoration of diverse brands (MAN & 3rd party products) of rotating equipment & diesel engines such as:

Rotating Equipment: (normal GTS activities)

- Steam Turbines
- Gas Turbines
- Pumps
- Compressors
- Expanders
- Blowers
- Gearboxes
- Valves
- Fans
- Rotors
- Turbo chargers
- Skid accessories and control systems

Diesel Engines: (The current GTS setup is also capable to handle works for diesel equipment)

- 4 stroke cylinder head
- 2/4 stroke cylinder head
- Fuel injectors
- Fuel pumps
- Connecting rod
- Wave cut 2 stroke cylinder liner
- Reconditioning of 2 & 4 strokes cylinder heads
- Exh. Valve spindle
- Exh. Valve seat
- Piston rod
- Exh. Valve housing
- Piston crowns

Parts machining, fabrication & reconditioning

REFURBISHMENT OF A MAN TURBO AXIAL COMPRESSOR



Axial compressor rotor repair
Reconditioning of the blades
Renewing of the labyrinth stripes
Blasting, Cleaning and Sermetel Coating

REFURBISHMENT OF A GE EXPANDER



Dismantling
LS & HS inspection & balancing
Axial & radial bearing inspection and change
Re-assembly



Dismantling
LS & HS inspection & balancing
Axial & radial bearing inspection and change
Assembly

REPAIR OF AN EBARA SEAWATER PUMP



Dismantling, parts cleaning
Shaft sleeve repair/fabrication
Blasting
Balancing
Reassembly

REBLADING OF A GAS GENERATOR



Reblading of a Gas Generator:

Removal of old blades
Install new blades
Balancing to G 1

Stator refurbishment

Packaging for delivery

REFURBISHMENT OF AN AGITATOR



- Complete overhaul of Agitator
- Fabrication of parts such as bush, end caps, seal shaft, keys, etc.
- Strengthening of damaged parts such as top & bottom impellers, intermediate shaft
- Gearbox final assembly
- Seal testing
- Delivery and reassembly
- Final installation on site

REFURBISHMENT OF A GEARBOX AND BOW THRUSTER

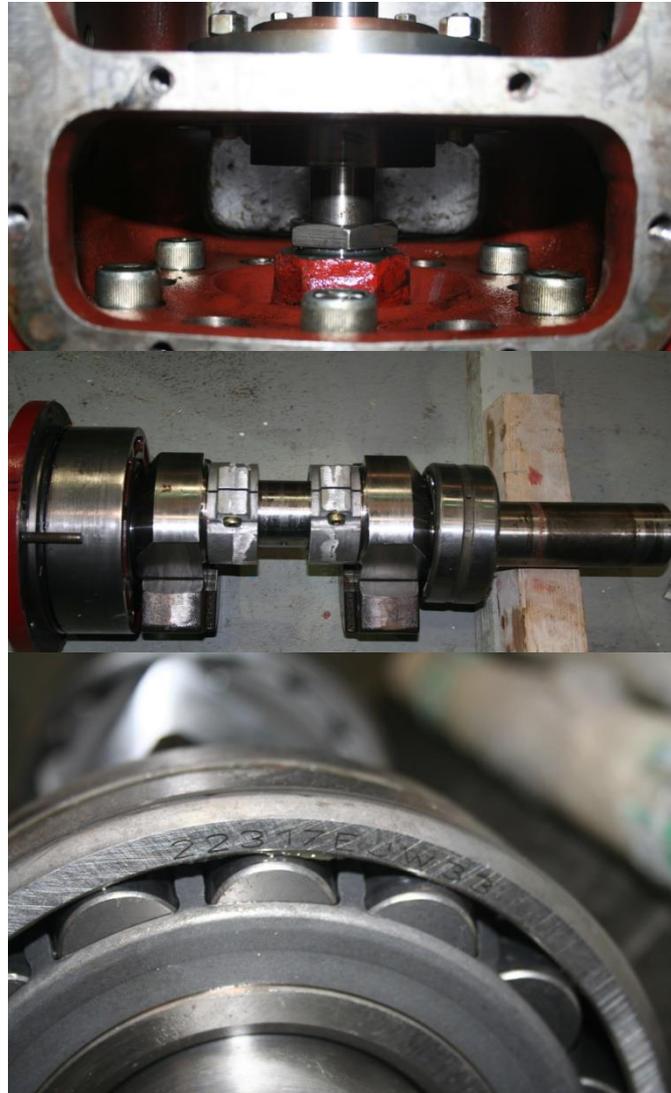


REFURBISHMENT OF A TURBO CHARGER



- Ice blasting
- Nozzle ring bead blasting
- Cleaning and preparation
- Balancing
- Packaging for delivery
- Blasting

REFURBISHMENT OF A SIAD COMPRESSOR



SPLITTING OF A SIEMENS GAS TURBINE

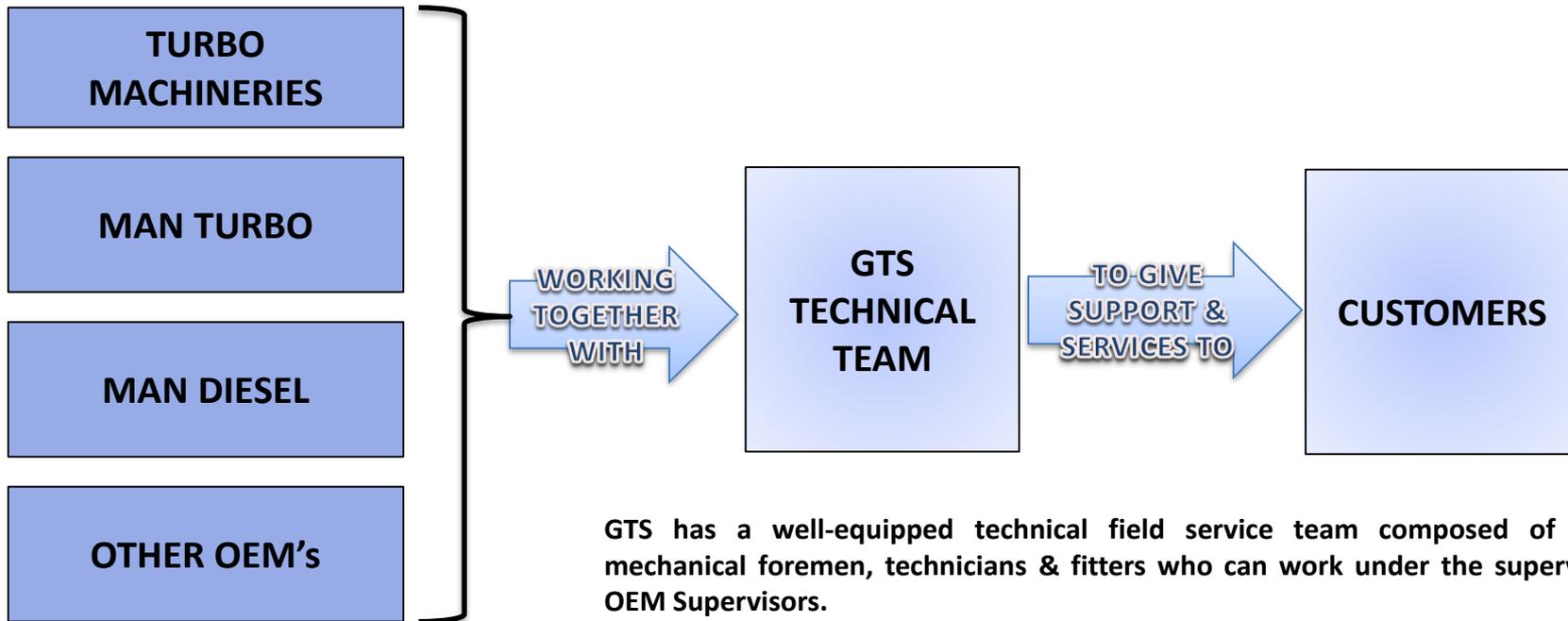


IV. FIELD SERVICE CAPABILITIES

FIELD SERVICE ACTIVITIES SYNERGIES BETWEEN TURBO & DIESEL ACTIVITIES



SUPERVISORS /
SUPERINTENDENTS



Supervisors from different OEM's (such as MAN, GE, MHI, SIAD, SIEMENS) can be called to attend on FS jobs as required & as per customer's requirement

GTS has a well-equipped technical field service team composed of skilled mechanical foremen, technicians & fitters who can work under the supervision of OEM Supervisors.

GTS had successfully executed shutdown and refurbishment works in cooperation with many OEM's during our 10 years existence in Qatar.

GTS received commendations from customers on successful completion of such jobs

- Erection, commissioning, inspection & maintenance
- Full maintenance services during plant shutdown / turnaround
- Mechanical hardware upgrades
- Re-rates and modernization
- Field Services on an on-call basis
- Repair, troubleshoot and overhaul on site
- Start-up
- Testing
- Preventive Maintenance
- Vibration Analysis and Diagnostics
- Spare parts management and warehousing contracts
- Routine maintenance
- Lubrication job
- On-call Customer Support
- Vibration measurement and on situ balancing
- Supply of OEM Supervisors and Specialists



FIELD SERVICE ACTIVITIES WORKS WITH DIFFERENT OEM'S



With Dresser Rand Steam Turbine



With LA Turbine on a GE Expander



With SIEMENS on a Gas Turbine



With Mafi Trench



With Gabioneta on a pump work



W/ MAN Diesel on a turbo charger job

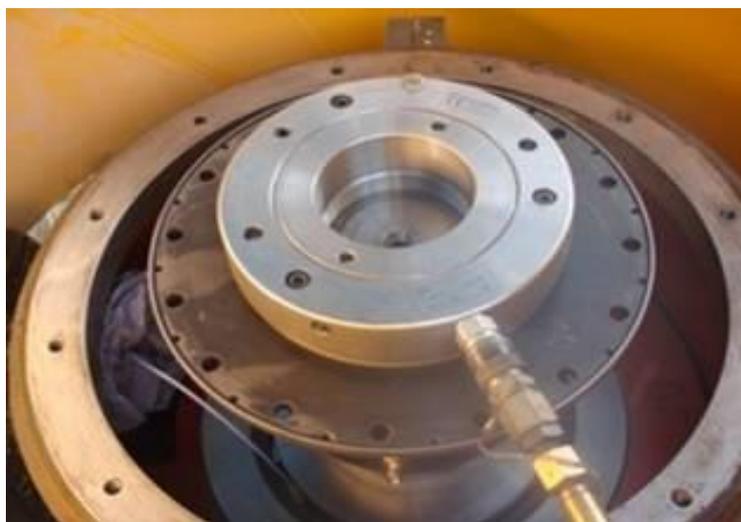
TURN AROUND SHUTDOWN MAINTENANCE WORKS MAN TURBO AXIAL COMPRESSOR



TURN AROUND SHUTDOWN MAINTENANCE WORKS MITSUBISHI COMPRESSOR (WORK SUPERVISED BY MHI ENGINEERS)



TURN AROUND SHUTDOWN MAINTENANCE WORKS MAN TURBO RADIAL COMPRESSOR



CUSTOMERS AND REFERENCES

- QATAR SHELL LTD
- ORYX GTL
- SHAMS SOLAR POWER PLANT, UAE
- QATAR PRETROLEUM
- QATAR FERTILIZER CO.
- QATAR PETROCHEMICAL CO.
- QATAR ALUMINUM
- QATARGAS
- RASGAS
- TST TURBO SERVICE & TRADING
- OCCIDENTAL PETROLEUM
- QATAR STEEL
- TECHNIP
- CTJV
- GE AL SHAHEEN
- OMIFCO
- ORPIC
- TASNEE
- NATPET
- PETRORABIGH



Great **T**eam **S**uccess