QUETTA

Quetta Textile Mills
LIMITED

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Phones: (021) 241-4334/5/6 Fax: (021) 241-9593, 588-7600
E-mail: Sales@QuettaGroup.com Web: www.QuettaGroup.com

The Registrar,

National Electricity Power regulatory Authority

Subject: Application for a Modification is Generation License No. SGC/014/2002

I, Tauqir Tariq, director, being the duly authorized representative of Quetta Textile Mills Ltd, by virtue of Board Resolution dated: 8th January'2017 hereby apply to the National Electricity Power regulatory Authority For the grant of a Modification in Generation License to the Quetta Textile Mills Ltd., pursuant to section 10 of the Regulations of Generation, Transmission and Distribution Of Electric Power Act' 1997.

I, certify that the documents in support attached with this application are prepared and submitted in conformity with the provisions of the National Electric Power Regulatory Authority and undertake to abide by the terms and provisions of the above–said regulations. I further undertake and confirm that the information provided in the attached documents in support is true and correct to the best of my knowledge and belief.

Quetta Textile Mills Limited now intends to continue with our Generation and distribution activity at Plant No.1, Kotri for which we are applying for Modification.

Quetta Textile Mills Limited Generation at Plant No.2, Bhai Pheru, which is located within the premises of Quetta Textile Mills Limited. Hence we do not require Generation License for Plant No.2, Bhai Pheru. Hence we do not intend to retain it.

A Bank Draft PoPNB-00000370 2,92,896 dated 13-2-17 of Bank AL Falah in the sum of RS. 2,92,896 (Two hundred Ninety two thousand Eight hundred Ninety Six) being the non-refundable license application fee calculated in accordance with schedule-II to the National Electricity Power regulatory Authority (application and modification procedure) Regulation, 1999, is also attached herewith.

Date 13 Feb 17

Company Seal

Textile Mills Ltd. Quetta KOTRI.

Signature

Tauqir Tariq

QUETTA TEXTILE MILLS LIMITED

Nadir House, I. I. Chundrigar Road, Karachi -- 74000, Pakistan
Tel: +92 (21) 3241-4334-6 Fax: +92 (21) 3241-9593
Email: sales@quettagroup.com Web:www.QuettaGroup.com

RESOLUTION PASSED IN THE MEETING OF THE BOARD OF DIRECTORS OF QUETTA TEXTILE MILLS LIMITED AT ITS HEAD OFFICE, GROUND FLOOR NADIR HOUSE I.I.CHUNDRIGBAR ROAD, KARACHI JANUARY 09 2017

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Copy of the resolution passed in the meeting of Board of Directors of M/s.Quetta Textile Mills Limited at its head office, Ground floor, Nadir House I.I. Chundrigar Road, Karachi on 09th January 2017.

A meeting of the Board of Directors of M/s.Quetta Textile Mills Limited held at 11.00 A.M. The Board considered the Generation/Distribution License with N.E.P.R.A., Islamabad and passed following Resolution.

"RESOLVED THAT Mr. Tauqir Tariq, Director of the company, be authorized to sign all papers and documents required, and apply for Generation / Distribution License modifications with N.E.P.R.A., Islamabad.

CERTIFIED TRUE COPY

For Quetta Textile Mills Ltd.
Md Sohrab Khan
Secretary.

CHAIRMAN

Statement of Reasons in support of the modification regulation 10(2) (b) of the regulation

Plant No.1 (8.1-MW) at Kotri, Sindh:

The Generation license No. SGC/014/2002 has come to its expiry after 15-Years on Jan'2017.

Keeping in view the present condition of the Generators, which are in very good condition. Power Generating Engines (9x900KW) were commissioned in year 2003/2004. Throughout the years these engines have been meticulously maintained and over hauled at regular intervals, as specified by OEM (original engine manufacture). Further the maintenance and operation team is highly skilled and conforms to the highest engineering standards. The timely maintenance with original parts has further increased their useful life.

The engines and associated auxiliaries are fully capable of operating at optimum load. With much high standards of maintenance and operation, these engines are expected to operate optimally for another period of 20 years without any trouble.

Hence it is requested to please grant Generation License for Plant No.1, Kotri for another 20 Years.

Plant no.2 (21.7-MW) at Bhai Pheru:

Although the engines installed at Plant No.2, Bhai Pheru are also in good condition and can operate at optimum load for a long time.

But since the Plant No.2 (21.7 MW), Bhai Pheru, which is within the premises of Quetta Textile Mills Limited (self generation) and no public property etc. is crossed, hence we do not intend to retain generation license for Plant No.2.

For Quetta Textile Mills Ltd.

Director.

Statement of impact on the tariff

There will no impacts on the tariff, because we are not engaged in sale of electric power, the generation is only for the self-use.

Text of Proposed Modifications

Plant No.1
Plant Location: B-4, SITE, Kotri, Distt. Jamshoro, Sindh.

Generation license No. SGC/014/2002 has come to its expiry after 15-Years on Jan'2017. Keeping in view the present condition of the Generators/Engines installed in Plant No.1, which are in good condition. The engines and associated auxiliaries are fully capable of operating at optimum load for another 20-years.

Plant Configuration

Plant Size	8.1 MW
Type of Technology	Gas Engines
Number of Units	Nine
Unit Size	0.9 MW
Unit Make, Model And date of Manufacturing	Waukesha VHP5904LTD 2003/2004
Date of Commissioning	2004/2005
Fuel Type	Natural Gas
Fuel Supplier	SSGC
Supply Arrangement	Pipe Line
Installed Capacity	8.1 MW
Derated Capacity	8.1 MW

For Quetta Textile Mills Ltd.

Director.

Enclosed herewith following documents:

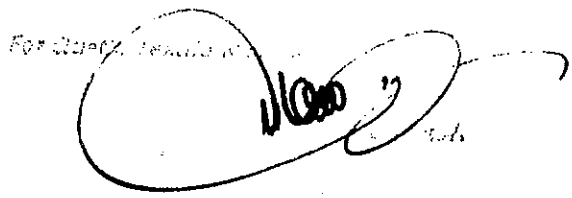
(i) Brochure of engines.

(ii) Engine description.

(iii) Generator description.

(iv) Layout of the plant.

(v) Single line drawing.



BASIC SPECIFICATIONS

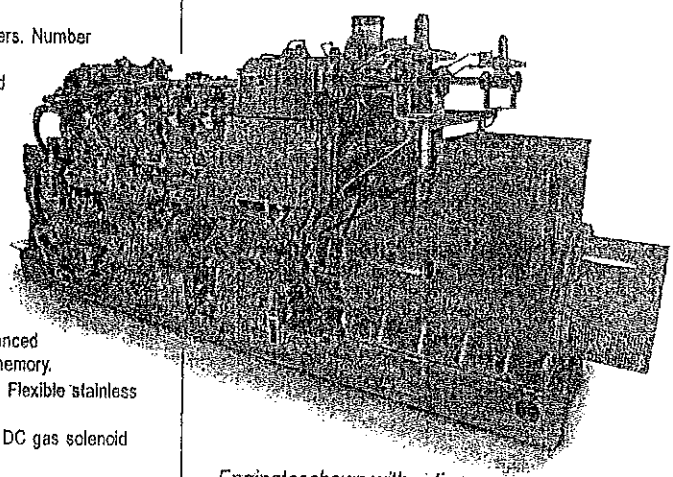
AIR CLEANERS – Dry type with rain shield and service indicators.
BARRING DEVICE – Manual.
BEARINGS – Heavy duty; replaceable, precision type.
BREATHER – Closed system.
CONNECTING RODS – Forged steel, rifle drilled.
COOLING SYSTEM – Choice of mounted radiator with pusher fan, core guard and duct adaptor, heat exchanger with surge tank, or connection for remote radiator cooling.
CONTROL SYSTEM - Waukesha Engine System Manager (ESM) integrates spark timing control, speed governing, detonation protection, start-stop control, diagnostic tools, fault logging and engine safeties. Engine Control Unit (ECU) is central brain of the control system and main customer interface. Interface with ESM is through 25 foot (7.6 m) harness to local panel, through MODBUS RTU slave connection RS-485 multidrop hardware, and through the Electronic Service Program (ESP). Customer connections are only required to the local panel, fuel valve, and for 24V DC power supply. Compatible with Woodward load sharing module. ESM meets Canadian Standards Association Class I, Division 2, Group D, hazardous location requirements.
CRANKCASE – Integral crankcase and cylinder frame.
CRANKSHAFT – Counterweighted, forged steel, hardened journals, dynamically balanced, with sealed viscous vibration damper.
CYLINDER HEADS –Twelve interchangeable. Four valves per cylinder, with water cooled exhaust valve seats. Roller valve lifters and hydraulic push rods. Flange mounted ignition coils.
CYLINDERS – 8.5" (216 mm) bore x 8.5" (216 mm) stroke. Removable wet cylinder liners. Number of cylinders - Twelve.
ENGINATOR® BASE – Engine, generator and radiator or heat exchanger are mounted and aligned on a welded steel, wide flange base, designed for solid mounting on an inertia block, with standard through–base holes for lifting.
ELECTRONIC SERVICE PROGRAM (ESP) – Microsoft® Windows-based program provided on CD-ROM for programming and interface to ESM. Includes E-Help for troubleshooting any ESM faults. Serial harness is provided for connection of a customer supplied laptop to the ECU RS-232 port.
ENGINE MONITORING DEVICES – Factory mounted and wired sensors for lube oil pressure and temperature, intake manifold temperature and pressure, and jacket water temperature, all accessible through ESM. ESM continually monitors combustion performance through individual knock sensors to provide detonation protection. Dual magnetic pick-ups are used for accurate engine speed monitoring. ESM provides advanced diagnostics of engine and all ESM sensors and logs any faults into non-volatile flash memory.
EXHAUST SYSTEM – Water cooled exhaust manifold with single vertical exhaust at rear. Flexible stainless steel exhaust connection 8" (203 mm) long with 8" (203 mm) outlet flange.
FUEL SYSTEM – Dual natural gas carburetors. Fisher gas regulators model 133L. 24 volt DC gas solenoid valve (shipped loose). 12" - 60 psi (304 mm - 4 bar) gas inlet pressure required.
GENERATOR – Open dripproof, direct connected, fan cooled, 2/3 pitch A.C. revolving field type, single bearing generator with brushless exciter, short circuit sustain (PMG type maintains 270% of rated generator current for up to 10 seconds on 105° C temperature rise generators; maintains 250% of current on 130°.C rise generators) and damper windings. TIF and Deviation Factor within NEMA MG-1.32. Voltage 480/277, 3 phase, 4 wire, Wye, 60 Hz and 400/220, 3 phase, 4 wire, Wye 50 Hz. Other voltages are available, consult factory. Insulation material NEMA Class F. Temperature rise within NEMA (105° C) for continuous power duty, within NEMA (130° C) for standby duty. All generators are rated 0.8 Power Factor, are mounted on the engine flywheel housing and have multiple steel disc flexible coupling drive.
GOVERNOR - Electric throttle actuator controlled by ESM with throttle position feedback. Governor tuning is performed using ESP. ESM includes option of a load-coming feature to improve engine response to step loads.
IGNITION SYSTEM - Ignition Power Module Diagnostics (IPM -D) controlled by ESM, with spark timing optimized for varying speed-load conditions. Dual voltage energy levels automatically controlled by ESM to maximize spark plug life and improve starting. The diagnostics feature of ESM can be used to help monitor spark plug life via predictive maintenance.
INTERCOOLER – Air to water.
JUNCTION BOXES – Separate AC, DC, and instrument/thermocouple junction boxes for engine wiring and external connections.
LUBRICATION – Full pressure positive displacement pump. Full flow oil filter (shipped loose) and flexible connections (shipped loose). Microspin® bypass filter mounted and piped. 50 or 60 Hz, 230 volt AC, single phase electric motor driven intermittent prelube pump with motor starter (other voltages can be specified).
OIL COOLER – Shell and tube type. (Mounted).
OIL PAN – Cast alloy iron base type with removable doors.
PAINT – Oilfield Orange.
PISTONS – Aluminum with floating pin. Oil cooled.
STARTING EQUIPMENT – Two 24VDC electric starting motors, crank termination switch. (Shipped loose.)
TURBOCHARGERS – Two with water-cooled bearing housing, wastegate controlled.
VOLTAGE REGULATOR – SCR static automatic type providing 1% regulation from no load to full load. Single phase sensing. Includes voltage adjustment rheostat and automatic subsynchronous speed protection.
WATER CIRCULATING SYSTEM
Auxiliary Circuit – For oil cooler and intercooler. Pump is belt driven from crankshaft pulley. Includes thermostatic valve.
Engine Jacket – Belt driven water pump, 175 – 180° F (79 – 82° C) thermostatic temperature regulation with full flow bypass. Single ANSI flange connections for inlet and outlet on water connect units.

Waukesha® ENGINATOR® WI'S

VHP5904LTD

VHP™ Series Four® Gas Enginator® Generating System Featuring ESM® Technology

825 - 1175 kW



Enginator shown with options.

Model VHP5904LTD
Turbocharged and Intercooled, Lean Combustion Gas Fueled Enginator

SPECIFICATIONS

Waukesha Engine L5794LT Four Cycle Overhead Valve	Jacket Water Capacity 107 gal (405 L)
Cylinders V 12	Starting System 24V Electric
Piston Displacement 5788 cu. in. (95 L)	Fuel LHV 900 Btu/ft³ (33.6 J/cm³)
Bore & Stroke 8.5" x 8.5" (216 x 216 mm)	Lube Oil Capacity 90 gal (340 L)
Compression Ratio 10.2:1	

ISO 9001 CERTIFIED

PERFORMANCE DATA: VHP5904LTD GAS ENGINATOR® GENERATING SYSTEM

HEAT EXCHANGER COOLING Intercooler Water: 85°F (29°C)	CONTINUOUS POWER 1200 rpm 60 Hz	 1000 rpm 50 Hz
kW RATING	1075 kW*	900 kW
Fuel Consumption x 1000 Btu/h (kW)	11473 (3363)	9529 (2792)
Jacket Water x 1000 Btu/h (kW)	2696 (789)	2296 (673)
Lube Oil x 1000 Btu/h (kW)	521 (153)	424 (124)
Intercooler x 1000 Btu/h (kW)	675 (198)	475 (139)
Heat Radiated x 1000 Btu/h (kW)	451 (132)	432 (127)
Exhaust Energy x 1000 Btu/h (kW)	3486 (1022)	2851 (836)
Exhaust Flow lb/h (kg/h)	14921 (6768)	12300 (5620)
Exhaust Temperature °F (°C)	895 (480)	878 (470)
Induction Air Flow scfm (m³/min)	9323 (5004)	7759 (4155)

WATER CONNECTION COOLING Intercooler Water: 130°F (54°C)	CONTINUOUS POWER 1200 rpm 60 Hz	 1000 rpm 50 Hz
kW RATING	1025 kW	900 kW
Fuel Consumption x 1000 Btu/h (kW)	10788 (3163)	9408 (2756)
Jacket Water x 1000 Btu/h (kW)	2648 (776)	2357 (691)
Lube Oil x 1000 Btu/h (kW)	479 (140)	396 (116)
Intercooler x 1000 Btu/h (kW)	491 (144)	382 (112)
Heat Radiated x 1000 Btu/h (kW)	449 (131)	430 (126)
Exhaust Energy x 1000 Btu/h (kW)	3239 (949)	2789 (818)
Exhaust Flow lb/h (kg/h)	14029 (6364)	12232 (5548)
Exhaust Temperature °F (°C)	886 (476)	875 (469)
Induction Air Flow scfm (m³/min)	3124 (4705)	2724 (4102)

RADIATOR COOLING - MOUNTED Intercooler Water: 130°F (54°C)	CONTINUOUS POWER 1200 rpm 60 Hz	 1000 rpm 50 Hz
kW RATING	990 kW	860 kW
Fuel Consumption x 1000 Btu/h (kW)	10788 (3163)	9408 (2756)
Jacket Water x 1000 Btu/h (kW)	2648 (776)	2357 (691)
Lube Oil x 1000 Btu/h (kW)	479 (140)	396 (116)
Intercooler x 1000 Btu/h (kW)	491 (144)	382 (112)
Heat Radiated x 1000 Btu/h (kW)	445 (131)	430 (126)
Exhaust Energy x 1000 Btu/h (kW)	3230 (949)	2789 (818)
Exhaust Flow lb/h (kg/h)	14029 (6364)	12232 (5548)
Exhaust Temperature °F (°C)	886 (476)	875 (469)
Induction Air Flow scfm (m³/min)	3124 (4705)	2724 (4102)
Radiator Air Flow scfm (m³/min)	100000 (2832)	85000 (2407)

Typical heat balance data is shown. Consult factory for guaranteed data.

Continuous Power Rating: The highest electrical power output of the Enginator available for an unlimited number of hours per year, less maintenance. It is permissible to operate the 60 Hz Enginator with up to 10% overload for two hours in each 24 hour period.

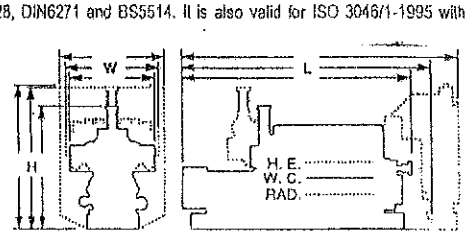
Standby Power Rating: This rating applies to those systems used as a secondary source of electrical power. This rating is the electrical power output of the Enginator (no overload) 24 hours a day, for the duration of the primary power source outage.

Rating Standard: The Waukesha Enginator power rating descriptions are in accordance to ISO 8528, DIN6271 and BS5514. It is also valid for ISO 3046/1-1995 with an engine mechanical efficiency of 90% and Tcra (clause 10.0) is limited to ± 10° F (5° C).

*No overload.

Cooling

Equipment	L in (mm)	W in (mm)	H in (mm)	Avg. Wt. lb (kg)
Heat Exchanger	242 (6146)	82 (2093)	110 (2799)	39000 (17687)
Water Connection	213 (5410)	82 (2093)	110 (2770)	38000 (17233)
Radiator	263 (6680)	122 (3100)	152 (3861)	46000 (20862)



DRESSER
Waukesha

WAUKESHA POWER SYSTEMS
WAUKESHA ENGINE
DRESSER, INC.
1000 West St. Paul Avenue
Waukesha, WI 53188-4999
Phone: (262) 547-3311 Fax: (262) 549-2795
waukeshaengine.dresser.com

WAUKESHA ENGINE
DRESSER INDUSTRIAL PRODUCTS, B.V.
Farmsumerweg 43, Postbus 330
9900 AH Appingedam, The Netherlands
Phone: (31) 596-652222 Fax: (31) 596-628111

Consult your local Waukesha Distributor for system application assistance. The manufacturer reserves the right to change or modify without notice, the design or equipment specifications as herein set forth without incurring any obligation either with respect to equipment previously sold or in the process of construction except where otherwise specifically guaranteed by the manufacturer.

Bulletin 7020 0803

for Quetta Textile Mills Ltd.

Director

ENGINE DESCRIPTION

Total Displacement	:	5788 Cu. In.
Bore	:	8.5 inches
Stroke	:	8.5 inches
Cylinder Configuration	:	Vee-12
Aspiration	:	Turbocharged & Intercooled, Lean Burn
Compression Ratio	:	10.2:1
B.M.E.P.	:	173 PSI

CRANKSHAFT: A multi-plane forging of high alloy steel with precision ground main bearings and crankpins journals, dynamically balanced. Generous overlap of main bearings and crankpin journals for increased crankshaft stiffness.

CRANKCASE: Integral crankcase and cylinder frame with 60° angle, Deep section, and main bearing caps crosstie bolted to crankcase. Fitted with three (3) BICERA EXPLOSION RELIEF VALVES.

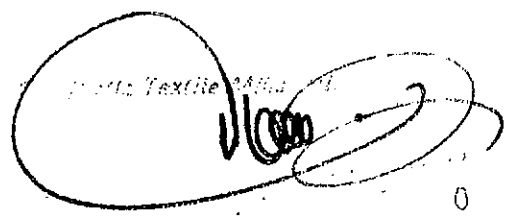
MAIN BEARING: Seven (7) large diameter main bearings of the heavy duty, replaceable precision type.

CYLINDER LINERS: Replaceable wet cylinder liners of centrifugally cast iron alloy.

CONNECTING RODS: Connecting rods shall be of forged alloy steel, angle split for removal through cylinder liner, with serrated split line for precise cap alignment, and rifle drilled for full pressure piston pin lubrication and piston under-crown cooling.

PISTONS: Heavy sections, contour ground, oil cooled, aluminum alloy pistons with Ni-resist top ring groove inserts and floating piston pin.

CYLINDER HEADS: Twelve interchangeable, valve-in-head types. Four valves per cylinder, with water-cooled exhaust valve seats. Roller valve



lifters and hydraulic push rods. Flange mounted ignition coils.

OIL PAN: Shall be of the base type with access openings for inspection, maintenance and removal of connecting rods and main bearings.

LUBRICATION SYSTEM: Full pressure, gear type pump. Full flow lube oil filter with replaceable depth-type elements and flexible connections shipped loose. MICROSPIN bypass filter and flexible connections, shipped loose. Lube oil strainer, mounted. Electric motor driven prelube pump requires final piping.

OIL COOLER: Shell and tube type oil cooler shall be unit mounted. Engine pre-start lubrication shall be by 24V DC electric motor drive pump.

INTAKE AIR SYSTEM: Dual dry panel, replaceable type air filters with pre-cleaner and service indicator.

FUEL SYSTEM: Engine fuel shall be natural gas. Engine shall have two carburetors (one for each bank) and two suitable gas regulators.

IGNITION SYSTEM: Waukesha Custom Engine Control Ignition Module with flange mounted coils. Ignition system meets Canadian Standards Association Class I, Group D, Division 2, and hazardous location requirements. Includes fuses for protection against reverse polarity. 24V DC power required.

DETONATION SENSING MODULE (DSM):

The Waukesha Custom Engine Control (CEC) Detonation Sensing Module (DSM) Protects Engine from detonation when fuel and environment create a condition in engine cylinder which definitely results in knocking. DSM retards timing and maintains engine on maximum efficiency levels under such conditions. It maintains fuel economy, minimize emissions and allow maximum power output under adverse operating conditions.

For Quetta Textile Mills Ltd.

Director

GOVERNOR SYSTEM: Woodward type 2301D Digital governor for multiunit isochronous operation and load sharing. Includes EG3P actuator, Magnetic Speed Sensor and Electronic Control unit for remote cubicle mounting.

EXHAUST SYSTEM: Water cooled exhaust manifold with single vertical flange at the end of engine, complete with flexible stainless steel connector for coupling to the exhaust piping. Residential class exhaust silencer will be supplied loose for remote installation by client.

COOLING SYSTEM: The engine cooling circuit shall be designed to maintain a top tank temperature of 180°F. For circulating system of engine jacket, belt driven water circulating pump will be used. Cluster type thermostatic temperature regulating valve full flow bypass type thermostat shall be used to maintain required coolant temperature. For circulating system of auxiliary circuit belt driven water circulating pump for intercooler and lube oil cooler will be used, which shall circulate the coolant via customer supplied plate type water to water heat exchangers.

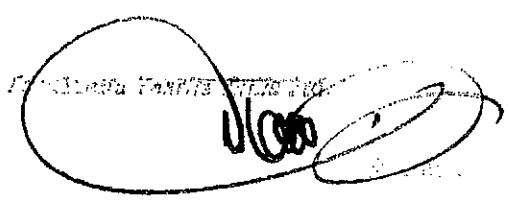
The heat exchangers are to be designed to dissipate the heat for jacket, oil cooler and intercooler.

INTERCOOLER: Air to water type intercooler will be used.

STARTING SYSTEM: Engine shall be fitted with two 24V DC starting motors and the enginator unit shall have dry charged lead acid batteries. It shall be client's responsibility to provide electrolyte and arrange initial charging of batteries.

TURBOCHARGER: The enginator shall be equipped with dry type turbocharger with waste gate control; enginator exhaust gas shall be source of power for the operation of turbocharger.

BARRING: An attachment shall be provided to facilitate manual barring of engine.



GENERATOR DESCRIPTION

GENERAL: The generator shall be 3 phase, 4 wire, WYE connected, producing 415 V at 50 Hz. and 0.8 PF lagging, self excited, self regulated, and brushless, rated to produce 900 KWe of prime power. Generator field excitation will have a permanent magnet generators source of supply, this will cater for 250% of the rated current for duration of 10 seconds for heavy motor start, unbalance currents.

COUPLING: Generator, which shall be single bearing type and shall be connected to engine flywheel using a multiple steel disc flexible coupling drive.

ROTOR: Dynamically balanced, efficient blowers move air through the generator and around the rotor for cooling.

INSULATION: To NEMA Class F.

TEMPERATURE RISE: To NEMA Class F (105°C over 40°C ambient)

TIF: Within NEMA MG-1.22

DEVIATION FACTOR: Within NEMA MG-1.22

PARALLEL OPERATION: Cross current compensation, synchroscope, synchro check and reverse power relay shall be included.

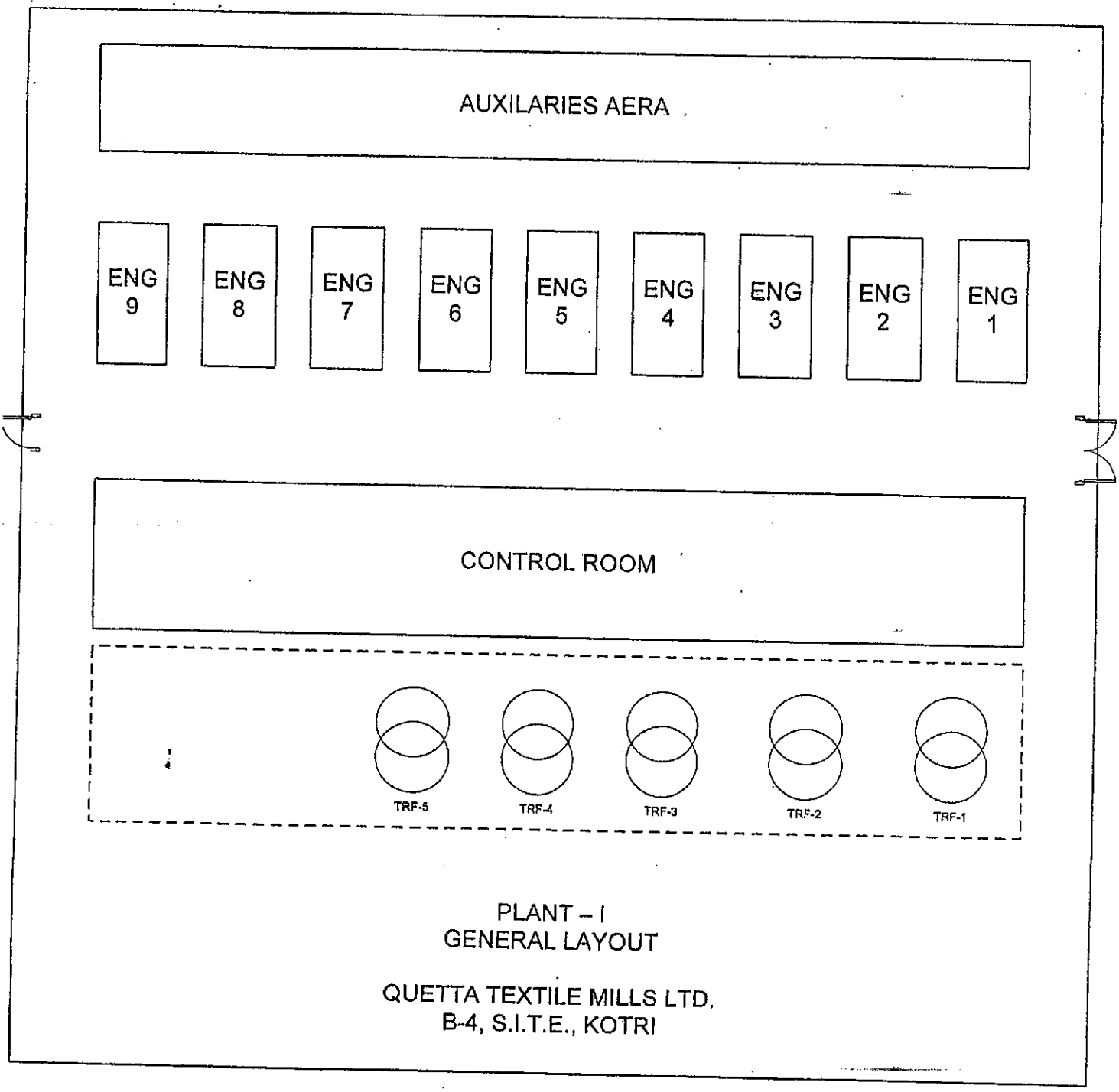
VOLTAGE REGULATION: SCR static automatic voltage regulator to be included giving 1% regulation from no load to full load, complete with voltage adjustment rheostat and auto sub-synchronous speed protection.

HOUSING: Housing of open drip-proof construction.

TERMINALS: A standard sized terminal box shall be supplied complete with standoff insulator.

For Quetta Textile Mills Ltd.

Director



PLANT – I
GENERAL LAYOUT

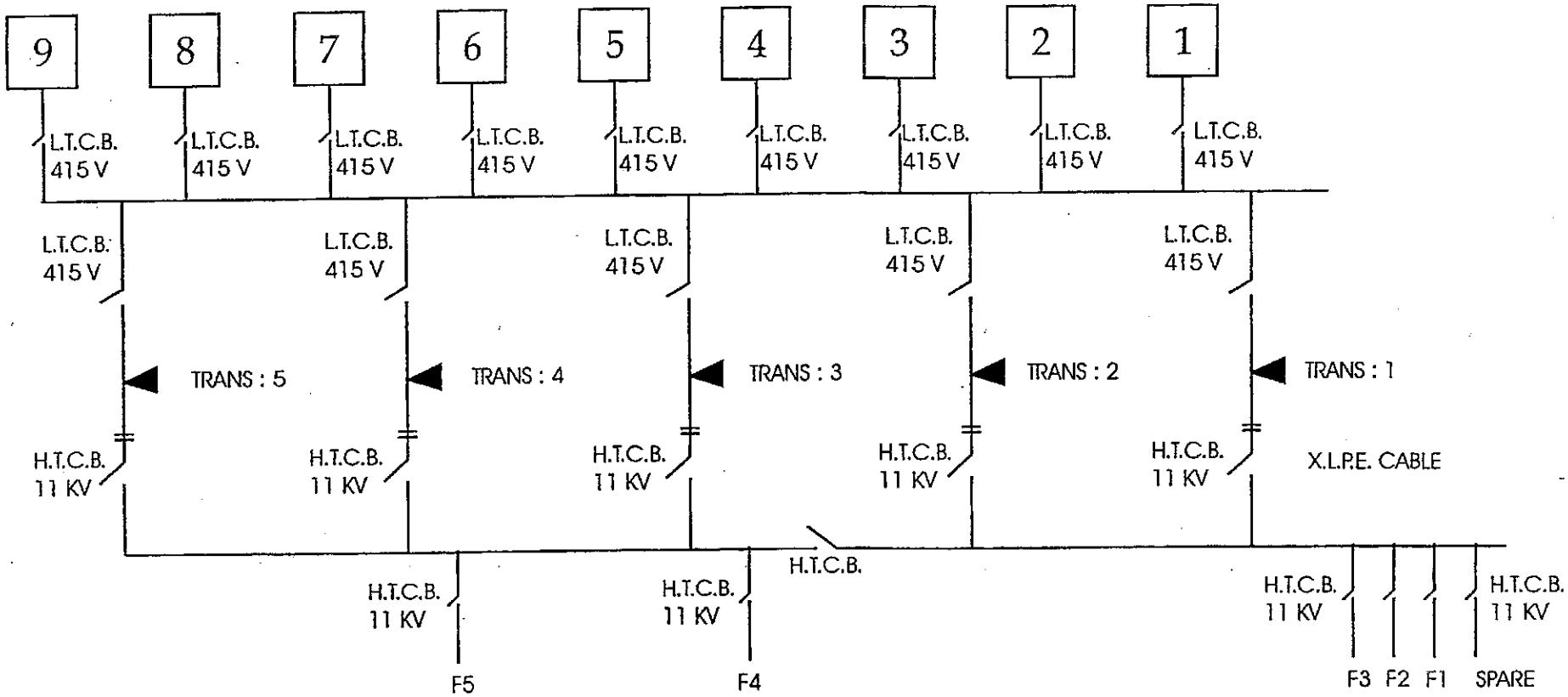
QUETTA TEXTILE MILLS LTD.
B-4, S.I.T.E., KOTRI

For Quetta Textile Mills Ltd.

SINGLE LINE DIAGRAM (PLANT - 1)

Quetta Textile Mills Ltd,

B.4, S.I.T.E., KOTRI.



Text of Proposed Modifications

Plant No.2
Plant Location: 47.5 KM Lahore-Multan Road, Bhai Pheru.

Generation license No. SGC/014/2002 has come to its expiry after 15-Years on Jan'2017. Keeping in view that the plant No.2 is within the premises / boundary of Quetta Textile Mills and is the same company (self generation), it is requested to please OMIT plant no.2 from generation License from date of expiry.

For Quetta Textile Mills Ltd.

Director.