

## Scope of Titan 130 (GTG)

S. No.	Equipment	Supplier	Qty No.	Remark / Description	Time of Receipt
1	Gas Turbine Generator Module	Turbomach			Mar-10
1.1	Industrial Gas Turbine		1	Titan 130, Version T-20501 Compressor Assembly Turbine & Combustor Assembly Combustion Assembly	
1.2	Reduction Gear	Make: Allen Gears	1	Two stage star compound epicyclic type	
1.3	Coupling		1	Curved-tooth coupling type, Shear tube type mechanical fuse	
1.4	AC Synchronous Generator	Make: Leroy Somer	1	10.5 KV $\pm$ 5%, 17,000 kVA, Brushless excitation system Protection IP21 Insulation Class H Temperature rise class F Self ventilated air cooled Accessories & Instrumentation	
1.5	Starting System		1	Mechanical adaptor Controller Start Motor	
1.6	Natural Gas Fuel System			Gas Filter, Fuel shutoff valve, Fuel control valve (2), Fuel manifold, Instrumentation, Internal piping, Gas flow meter.	
1.7	Lubrication System		1	Lube oil tank, Lube-oil heater, Main lube-oil pump, DC emergency lube-oil pump, Pre/post lube-oil pump, lube-oil cooler, Duplex lube-oil filter, Electrostatic vapour extractor, indicators & instrumentation, internal piping.	
1.8	GT Compressor Washing System		1	Water tank, water pump, water manifold, instrumentation & internal piping, in-line washing system.	
1.9	Base Frame		1		
1.1	Vibration dampers		6		
2	Sound Enclosure		1	85 dB(A), at 1 m, free field condition	Mar-10

Complete package in an enclosure

<b>3</b>	<b>Air Filtration System</b>	Turbomach	1	Air filter housing, Alarms & Instrumentation	Mar-10
3.1	Ventilation Air Filter System		1	Filter elements, Electric motor driven air blowers, pneumatically driven air shutters.	
3.2	Air Ducting System		1	Turbine air intake duct & silencer, Cooling air intake duct & silencer, Cooling air outlet duct & silencer.	
<b>4</b>	<b>Control System</b>				Mar-10
4.1	"TUMATRONIC S4" Turbine Control System		1	Backup failsafe PLC, PC "Real time", PC HMI, Profibus acquisition modules	
4.2	Generator Control, Synchro. & Auxilliary System		1	Generator measurement unit, voltage regulation, Generator protection, SPM Synchroniser, Vibration monitoring system, Gas leakage detection system, CosPhi card.	
4.3	Control System Interface		1	Desktop remote PC, Supervision control system interface	
4.4	Remote Monitoring & Diagnostic "RM&D Connect"		1	IIM (Insite interface module) communic. Box for data acquisition, Remote monitoring Server, Network Connectivity.	
<b>5</b>	<b>Vapour Absorption Machine (VAM) 700 TR</b>	Jiangsu Shuangliang Air-conditioning Equipment Co. Ltd., China	1	Steam Fired Type LiBr Absorption Chiller ST-744H2H	Mar-10
<b>6</b>	<b>Heat Recovery steam Generator (HRSG) 20.25 TPH</b>	M.E. Energy Private Limited, Khed, Pune	1	Operating Parameters Capacity 20.25 TPH, 44 ata, Temp 455 deg C 20.5 TPH, 43 ata, Temp 440 deg C	Mar-10
<b>7</b>	<b>Air Compressor</b>		1	chicago pneumatic as installed basis	Mar-10
<b>8</b>	<b>HT Panel / Breakers</b>		0		
<b>9</b>	<b>MCC Panel</b>		0		
<b>10</b>	<b>Boiler feed Pumps</b>		2	KSB, 24m3/hr	Mar-10
<b>11</b>	<b>Diverter Damper</b>		1	as installed basis	Mar-10
<b>12</b>	<b>Expansion bellows</b>		1	as installed basis	Mar-10
<b>13</b>	<b>Stack / Chimney / Silencer</b>		1+1	one bypass- GT and one main /HRSG	Mar-10