

**FUJI TECHNICAL SERVICES PVT LTD-**  
**WARTSILA W16V32 ENGINE ALONGWITH 11KV**  
**ALTERNATOR FOR SALE**

<b>Engine Make:-</b>	<b>Wartsila-Finland</b>	
<b>Engine Model:-</b>	<b>W16V32</b>	
Year of Mfg.:-	2/2006	
Capacity:-	7085 KW	
RPM:-	750	
Fuel in use:-	HFO	
Fuel Type:	HSD/HFO	
Date of last O/H :-	4/2014	
R/H of last major O/H:-	38738	
Present running hour (24/01/2017):-	39044	
R/H after major O/H:-	306	
With all standard tools		
<b><i>Description of unit</i></b>	<b><i>Make</i></b>	
Governor Actuator	Woodward	
Lubricating oil separator	Alfa laval	
HFO separator	Alfa laval	
Feeder Unit	Group power	
Booster unit	Aura marine	
C.T pump	Kirloskar	
Chimney	Fabricated, Structured supported.	Height:- 75 Meters
Turbo Charger	ABB	
Charge Air filter	AAF International	

**FUJI TECHNICAL SERVICES PVT LTD-**  
**WARTSILA W16V32 ENGINE ALONGWITH 11KV**  
**ALTERNATOR FOR SALE**

**Alternator Detail**

Sr. No		
1	Capacity	8562KVA
2	Speed	750rpm
3	Current	449Amp.
4	Voltage	11KV
5	Power Factor	0.80
6	Phase	3-phase
7	Ambin Temp.	50 deg.C
8	Exit volt	61.5 VDC
9	Exit current	8.4 Amp. DC
10	Frequency	50Hz
11	Type	AMG 1120MK08
12	Connection	Star
13	Insulation	"F" class
14	Protection of Enclosure	IP23
15	Make	ABB

## SCOPE OF SUPPLY

Sr No.	Description	UOM	Quantity	Scope of supply
A	<b>Power Generation</b>			
A1	<b>Generating Set</b>			
A1.1	<b>Diesel Engine</b>			
	Diesel Engine	Nos	1	YES
A1.2	<b>Alternator</b>			
	Alternator 11kv	Nos	1	YES
A1.3	<b>Base Frame</b>			
	Base Frame for engine and alternator (independent)	Nos	1	YES
	shifting tools for engine and alternator	set	1	NO
A1.4	<b>Elastic mounting</b>			
	Flexible mountings (rubber pads)	set	1	YES
	Shim plates, fasteners for rubber pads & foundation bolts	set	1	YES
A1.5	<b>Coupling</b>			
	Flexible coupling pads (holset)	set	1	YES
	Flywheel guard	Nos	1	YES
A1.7	<b>Flexible connections</b>			
	Flexible connections (complete set)	set	1	YES
A1.8	<b>Maint. Platform</b>			
	Maint. Platform for engine	Nos	1	YES
	Maint. Platform between pipe modules	Lot		YES
	Walkway platform checkered plates complete	Lot	1	YES
A2	<b>Mechanical systems</b>			
A2.1	<b>Fuel oil system</b>			
A2.1.1	<b>Light Fuel oil system (HSD)</b>			
	Unloading system	Nos	1	NO
	Storage tank	Nos	1	NO
	Equipment for storage tank	Lot	1	NO
	Transfer pump unit	Nos		NO
	Day tank	Nos		NO
	Pipeing inside DG House	Lot	1	YES
	Piping outside DG house	Lot	1	NO
A2.1.2	<b>Heavy fuel oil system</b>			
	Tanker fuel heating arrangment for fuel unloading	Nos		
	Unloading unit	Lot	1	NO
	Storage tank	Lot	1	NO
	Equipement for HFO storage tank	Lot	1	NO
	Transfer pump unit	Nos	1	YES BUT WITHOUT MOTOR
	Buffer tank (settling tank) with accessories	Lot	1	NO
	Electro-pneumatic valve	Nos	1	NO
	Separator Unit for hfo	set	1	YES
	Day tank with accessories	Lot	1	NO
	Feeder unit	Nos	1	YES
	Booster unit	Nos	1	YES
	Fuel oil unit	Nos	1	YES
	Return fuel oil unit	Nos	1	YES
	Piping inside DG house	Lot	1	YES
	Piping outside DG house	Lot	1	NO
A2.2	<b>Lub oil system</b>			
A2.2.1	<b>Engine lub oil system</b>			
	Lub oil Separator	Nos	1	YES
	Pipe module	Nos	1	YES
	Lub oil cooler	Nos	1	YES
	Pre lub pump	Nos	1	YES
	Lub oil Filter	Nos	1	YES
	Water preheater	Nos	1	YES
	Thermostatic Valves	Nos	1	YES
A2.2.2	<b>Plant Lub oil system</b>			
	Unloading/ Transfer pump unit (mobile unit)	Nos	1	NO
A2.3	<b>Compressed air system</b>			
A2.3.1	<b>Starting Air System</b>			
	Starting Air compressor unit	Lot	1	YES
	Starting air bottle	Nos	1	YES
	Piping inside DG huse	Lot	1	YES

A2.3.2	<b>Control &amp; Instrument air system</b>			
	Instrument air system (pressure regulator with moisture trap)			YES WITH COMPRESSOR
	Piping inside DG house			
A2.4	<b>Cooling system</b>			
A2.4.1	<b>Engine cooling system</b>			
	Expansion vessel (S)	Lot	1	YES
	Thermostatic valve HT	Lot	1	NO( PNEUMATIC)
	Piping in side DG house	Lot	1	YES
	Piping outside DG house	Lot	1	NO
A2.4.2	<b>Plant cooling System</b>			
	Cooling tower	Lot	1	NO
	Maintenance water tank	Nos	1	YES
	Raw water tank	Lot	1	NO
	DM/Softening water plant for separators and Engine	Lot	1	NO
	Storage tank forDM water/softened water	Lot	1	NO
	Hydrophore unit	Nos	1	NO
	Chemicals for closed circuit water	Lot	1	NO
	Piping inside DG house	Lot	1	YES
	Piping Outside DG House	Lot	1	NO
A2.5	<b>Charge air system</b>			
	Intake air filter (s)	set	1	
	Intake air silencer (s)	Nos	2	
	Intake air ducting (between engine & air filter(s))	Lot	1	
	Expansion bellow (s)	Nos	2	
A2.6	<b>Exhaust gas System</b>			
	Exhaust gas silencer (s)	Nos	1	YES
	Exhaust gas ducting (from engine to silencer)	Lot	1	YES
	Expansion bellows	set	1	YES
	Exhaust Gas steel stack	Lot	1	YES
A2.8	<b>Station Support System</b>			
A2.8.1	<b>Fire Fighting System</b>			
	Fire extinguishers for class " B" and "C" fires & Sand Buckts			
	Fire alarm & detection system			
	Fire hydrant & other system			
	Fire hydrant piping	Lot	1	
	Fire water pumps water distribution system			
	Hydrants			
	Fire Hose Equipements			NO
A2.8.2	<b>Sludge System</b>			
	Oily water collecting pits	Nos	1	
	Equipment for collecting pit	Lot	1	
	Oily water transfer pump unit	Lot	1	
	Sludge storage Tank	Nos	1	
	Equipment for Sludge storage tank	Lot	1	
	Sludge unloading pump unit	Lot	1	
	Sludge piping between interconnecting units	Lot	1	NO
A2.9	<b>Steel structures</b>			
	Supports for Charge Air Ducting	Lot		
	Supp. For exhaust gas duct-inside DG House	Lot		
	Supp. For exhaust gas duct-o/s upto stack	Lot	1	
	Supports for pipes inside DG house	Lot		
	Supports for pipes outside DG house	Lot		
	Supporting structure for expn. Tank	Lot		YES
A2.x	<b>Piping</b>			
	Piping complete	Lot	1	YES
A.3	<b>Electrical Systems</b>			
	Engine Junction box	Lot	1	YES
A.3.1	<b>Main Switchgear (MV)</b>			
	Generator Cubicle (INCOMER)	Nos	1	YES
	Outgoing cubicle -A, 11kv	Nos	1	YES
	Station transformer cubicle	Nos	1	NO
	Bus PT	Nos	1	NO
	NGR Cubicle		1	YES
	MV cable	Lot	1	YES
	Cable Tray	Lot	1	YES
A.3.1	<b>Station Service System</b>			
	Station Service transformer	Lot	1	NO
	Station low voltage Switchgear	Lot	1	NO
	Engine local control panel	No	1	YES
	Aux. MCC for fuel oil pump house	Lot		YES
	Aux. MCC for cooling tower	Lot	1	YES
	Aux. MCC for DG Hall ventilation	Lot		
	Aux. MCC for lighting	Lot	1	NO
	Aux. MCC forLT Power Distribution	Lot	1	YES
	LV power & control Cables For Auxiliaries			
	Inside DG House	Lot		
	Outside DG House	Lot	1	YES
	Cable Trays for Lvpower & control cables			
	Inside DG House	Lot		

	Outside DG House	Lot	1	YES
A3.3	<b>DC system (for 3*18v32)</b>			
	Batteries			
	Battery Charger			
	DC distribution board			
	Cables	Lot	1	YES
A3.4	<b>Earthing &amp; lightning protection system</b>			
	Earthing inside DG House	Lot		NO
	Earthing outside DG House	Lot		NO
	Lighting protection including chimney	Lot	1	YES
A3.5	<b>Outdoor Switchyard</b>			
	Step-up /step-down transformer			NO
	Sub station Switchgear			NO
	Outdoor Switchyard			NO
	Cables		1	NO
A3.6	Emergency DG set (Black Start)			
	Required power maximum----KW	Lot	1	NO
A3.7	<b>Insulation</b>			
	Insulation of all tanks (Buffer & Day tank )	Lot	1	NA
	Heat tracing and Insulation of all hfo piping	Lot	1	NA
	Insulation of exhaust pipes	Lot	1	YES
A.4	<b>Automation , Monitoring &amp; Supervision</b>			
A4.4	<b>Control and Supervision System (Basic)</b>			
	DG Control panels	Lot	1	YES
	Synchronizing panel	No	1	NO
A4.9.1	<b>Cables/Accessories</b>			
	Set of control and instrumentation cables	Lot	1	YES
A.6	<b>Emission control system</b>			
A.7	<b>Tool</b>			
	Maintenance tool	Set		
	Maintenance tool for turbocharger	Set		
	Maintenance tool lube-oil separator	Set		
	Maintenance tool for Hfo separator	Set	1	YES
A.8	<b>Spares</b>			
	Commissioning spares	Lot	1	NO
	Running in filter cartridge & accessories	Lot	1	NO
	Housing for running in filter	Lot	1	YES
A.9	<b>Boiler &amp; its auxiliaries</b>			
	Boiler & its associated Auxiliaries complete	Lot		NA
B.0	<b>Power plant Building &amp; Utility</b>			
B.1	<b>Power House</b>			
B.1.1	<b>Power Plant - civil construction</b>			
	Input details for EQUIPMENTS			
	DG Building			
	Tank farm -tank fdns, dyke wall etc			
	Exhaust gas stack foundation			
	Radiator foundation			
	Pipe Pedestals			
	Transformer Foundation			
	Fuel oil pump House			
	Roads around power plant buildings			
	Gates/Fencing	Lot	1	NOT APPLICABLE
	Security office			

B1.2	<b>Sewage and Drainage</b>			
B1.3	<b>Ventilation &amp; Air Conditioning</b>			
	DG Hall ventilation (pressurised)	Lot	1	NO
	Ventillation filters	Lot	1	NO
	Exhaust fans mounted on Roof top and wall mounted	Lot	1	NO
B1.3.4	<b>Air conditioning system</b>			
	Window air conditioners	Lot	1	NO
B1.4	<b>Building Electricals</b>			
B1.4.1	<b>Lighting System</b>			
	Lighting DG Hall			NO
	Lighting HT switchgear & control room			NO
	Lighting storage area & outside DG house			NO
	Lightning protection			NO
	Earth Mat			NO
	Lighting cables	Lot	1	NO
B1.6	<b>Lifting System</b>			
	DG House overhead crane-EOT	Lot	1	NO
	Girders for overhead crane movement	Lot	1	NO
C.	<b>Services</b>			
C.1	<b>Engineering</b>			
	Preliminary Engineering			
	Basic Engineering			
	Detailed Engineering	Set	1	NOT APPLICABLE
C.2	<b>Supervision</b>			
	Supervision of removal	Lot		
	Supervision of installation	Lot		
	Supervision of testing & commissioning	Lot	1	NOT APPLICABLE
C.3	<b>Erection &amp; Installation</b>			
	Erection-client supply eqpt.			
	Flushing Oil & other consumables			
	First fill of lubricants, fuel oil & grease	Lot	1	NOT APPLICABLE
C.4	<b>Testing and Commissioning</b>			
	Tests on completion at site	Lot	1	NOT APPLICABLE
C.6	<b>Documents</b>			
	Preliminary Engineering			
	Basic Engineering			
	Detailed Engineering	Set	1	NOT APPLICABLE
C.7	<b>Other</b>			
	Fuel quality & composition tests		1	
	Water Quality analysis		1	
	Ambient air Quality analysis		1	
	Soil Investigation		1	
	Statutory clearance- Explosives	Lot	1	
	Statutory clearance- Electrical		1	
	Statutory clearance- Pollution		1	
	Statutory clearance- Factory Inspector		1	
	Statutory clearance- All other clearances		1	
	Loading & Unloading		1	NOT APPLICABLE
	Transportation of equipments		1	
	Packing		1	
	Port Clearance	Lot		
	Transit insurance		1	
	Lodging, Boarding & local Conveyance for Wartsila Engineers		1	
	Painting		1	
	Erection & commissioning insurance		1	NOT APPLICABLE
	Refurbishment work on electrical & mechanical	Lot	1	
	DG Overhauling spares + T/C	Lot	1	
	All Auxiliary Spares/overhauling if required	Lot	1	NOT APPLICABLE


















A photograph of a white metal cabinet in an industrial environment. The cabinet is labeled "ENGINE CONTROL PANEL-3" in black, bold, sans-serif capital letters. It features a square ventilation grille near the top and a small red indicator light below the text. The background shows a complex structure of blue metal beams and yellow safety railings, with a bright light source in the upper right corner.

**ENGINE CONTROL PANEL-3**

**DANGER**

11000 VOLTS

११००० वोल्ट

रक्तस्रा

**NGR NO-3**

SWITCHBOARD

ABB

**DANGER**  
11000 VOLTS  
खतरा



• KCU/FNC FOR USE 01 •







**PV-71-28**  
Working Pres. 42.18 kg/cm<sup>2</sup>  
Test ed. 11-10-16  
Exam. 210-16-17

**PV 77**  
WATU 6  
10ME 17-10-16  
20E 16-10-17













100 Liter HFO  
HFO  
SEPARATOR





















