



## WARTSILA 20V34SG GAS ENGINE GENERATOR SETS

**Two units**

**8.73 MW each**

**DETAILS:**

Year of Make : 2006  
Year of last Operation : 2015

	DESCRIPTION	UOM	Quantity	Remarks / Specs / Details
	<b>Power Generation</b>			
	<b>Generating set</b>			
	<b>Diesel engine</b>			
	Gas Engine - Wartsila 8.73MW, 750 rpm, 50 Hz, Type: W20V34SG, Input Gas Pressure – 6.0 bar.	No.	2	
	<b>Alternator</b>			
	Alternator - ABB/6.6KV	No.	2	
	Type: AMG1120MP08 DSE, Year: 2005 Output : 10913 KVA Phase : 3 Volt. : 6600 Duty: S1 Frqe. : 50 Connection: Y Speed: 750 (nr 900) RPM, Insulat.Cl. :F ( Temp.Cl F), Current : 955 AMPS, P.F : 0.8,			

	IP : 23, Ambient : +50 DEG.CEN., IC : OA1, Excit : 61V DC ,8.0 A DC, IM : 1101			
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Alternator -1,		
Alternator -2,		
<b>Base Frame</b>		
Common Base frame	No.	2
<b>Elastic mounting</b>		
Flexible mountings	Lot	2
<b>Coupling</b>		
Flexible coupling	No.	2
Flywheel guard	No.	2
<b>Fixing Equipment</b>		
Vibracon elements	Lot	2
<b>Flexible connections</b>		
Flexible connections	Lot	2
<b>Maint. platform</b>		
Maint. Platform for engine	Lot	2
Maint. Platforms between pipe modules	Lot	2
<b>Mechanical systems</b>		

<b>Fuel Gas system</b>		
Gas regulating unit	No.	2
Flow meter	No.	2
<b>Lube oil System</b>		
<b>Engine Lube oil system</b>		
Lube oil cooler	No.	2
Pre lube pump set	No.	2
Lube oil filter	Lot	2
Thermostatic valve	No.	2
Pipe module	No	2
<b>Compressed air system</b>		
<b>Starting air system</b>		
Starting air compressor unit	Lot	2
Starting air bottle	No.	2
Piping inside DG house	Lot	1
<b>Control &amp; Instrument air system</b>		
Instrument air compressor unit	No.	1
Instrument air bottle	No.	1
Piping inside DG house	Lot	1
<b>Cooling system</b>		
<b>Engine cooling system</b>		

	Expansion vessel(s)	Nos.	4	
	Engine Auxiliary module	No.	2	
	Preheating unit (electric heater - mounted on pipe module.)	No.	2	
	Thermostatic valve (mounted on pipe module.)	No.	2	
	Piping inside DG house	Lot	2	
	Piping outside DG house	Lot	2	
	<b>Plant cooling system</b>			
	Cooling water Radiator	Lot	2	Radiators with cooling fan total 30 fans installed, 15 for each GG set.
	Maintenance water tank	No.	1	4000L capacity

				common for system
	Piping inside DG house	Lot	2	
	Piping outside DG house	Lot	2	
	Ventilation unit	lot	2	
	<b>Charge air system</b>			
	Intake air filter(s)	Lot	2	
	Intake air silencer(s)	Lot	2	
	Intake air ducting (between engine & air filter(s))	Lot	2	
	Expansion bellow(s)	Nos.	4	
	<b>Exhaust gas system</b>			
	Exhaust gas silencer(s)	No.	2	
	Exhaust gas ducting (from engine to silencer & above)	Lot	2	
	Expansion bellows (double flexible - 4 Nos.)	Lot	2	
	Explosion vent	Lot	2	
	Exhaust gas steel stack	Lot	2	
	Exhaust Gas Ventilation unit	No.	2	
	<b>Waste Heat recovery system(WHRBs)</b>			
	Exhaust Gas Boiler complete with, feed water pumps, circulation pumps, economiser, condensate tank and other accessories.	no	2	
	PHE for heat recovery unit(jacket water system)	No.	2	
	<b>Steel structures</b>			
	Supports for charge air ducting	Lot	2	
	Supp. for exhaust gas duct-inside DG house	Lot	2	
	Supp. for exhaust gas duct -o/s up to stack with W.H.R.B.	Lot	2	
	Supports for pipes inside DG house	Lot	2	
	Supports for pipes outside DG house	Lot	2	
	Supporting structure for expn. tank	lot	2	
	Supporting structure, platforms and ladders for Radiators	Lot	2	
	<b>Electrical systems</b>			

	Main Switchgear (MV) 6.6 KV ,Doublebusbar panel having copper bus bar ,3000A,40kA/1 sec,ABB SF-6 breaker Model No. - HPA 12 / 1240 CF Manufacture year - 2006,Rated Voltage – 12 KV, Rated Current – 1600 A, Frequency – 50 Hz, Insulation level – 28/75 K Vp, Short circuit breaking current – 40 KA rms,Short circuit current duration – 1 Sec.,Short circuit making current – 100 KA		2	
	NGR	No.	2	
	Station Transformer 6.6/0.433kv 1000KVA	No.	1	
	LV system			
	1600A ,2 incomer ,MCC panel common for 03 GG sets auxiliaries, WHRBs,switchyard, fire pump house, and other plant loads	No	1	
	PDBs for engine area			
	WHRB boiler control panels	No	2	
	Boiler common auxiliary panel	No	1	
	Drive panel for radiator cooling system	No	2	
	cable trays, fixtures and supports	lot	1	
	DC supply system			
	24 DC battery charger and battery banks	No	1	
	110DC battery charger and battery bank	No	1	
	<b>Automation, Monitoring &amp; Supervision</b>	UOM	Qty	
	<b>Control and Supervision System (Basic)</b>			
	GG control panels(CFC)	No	2	
	Common synchronising panel(CFA)	No	1	

	Pipe Module Panel	No	2	
	Engine Local Control Panel	No	2	
	<b>Automation Control and Supervision System (Classic)</b>			
	Operator's station	Lot	1	
	- WOIS & WISE			
	- Laser Printer for reports and printing			
	- UPS System			
	<b>Cables/Accessories</b>			
	Set of Control & Instrumentation Cables	Lot	1	
	LT power supply and control cables	Lot	1	
	6.6 KV cables	Lot	1	
	<b>Tool and spares</b>			
	Set of tool for engines and turbo chargers	set	1	
	5 ton overhead crane	lot	1	

