

4 x 6.587MW, 50 Hz, 11 kV Warstlia Vasa 18V32LN HFO Generator Sets

Technical Details of DG Sets (4 Nos)

Engines

Manufacture	Wartsila
Model	VASA18V32LN
Nominal Output	6587 kW
Nominal Speed	750 RPM
Rotation	Clockwise
Year of manufacture	2001

Alternator

Manufacturer	ABB
Type	AMG0900XS08
Current	418.3 A
Voltage	11000 V
Output	7970 kVA
Frequency	50 Hz

Fuel

<u>Quality</u>	<u>Density @15°C</u>	<u>Viscosity</u>	<u>Calorific Value</u>
HFO (180Cst)	0.96	118 @ 50°C	41.42 MJ/kg
MDF	0.84	3 @ 40°C	43.07 MJ/kg

Lubrication Oil used:

As per the recommendations of the engine manufacturer (Currently using MOBIL M50)

Operation History of the Plant

- From 19th December 2002 – 19th December 2012 - Plant was operated and supplied Energy to the National Grid as per the terms of the Power Purchase Agreement (PPA) with the National Utility, Electricity Board (EB). Running hours of each engine are given below.
- Scheduled maintenance was carried out in every 1000, 2000, 4000 hrs as specified by engine manufacturer.
- At each 12000 hrs a major overhaul was done. Current running hours are around 70000 hrs for each DG set.
- From 19th December 2012 - Stopped and being in standby mode. Routine engine turning from turning gear and other Standard layup procedures recommended by Wartsila are being carried out.

- All the maintenance activities were carried out according to Standard Wartsila guidelines given in Manuals.

Engine Running Hours (RH), and RH at last major maintenance

	DG 01	DG 02	DG 03	DG 04
Present Running Hours	70731	70125	69979	65706
Last Major Overhaul Done	60,000 Hrs	60,000 Hrs	60,000 Hrs	60,000 Hrs
RH @ Last Major Overhaul	57520	57095	57584	57922
Last Schedule Maintenance	4,000 Hrs	1,000 Hrs	4,000 Hrs	4,000 Hrs
RH @ Last Scheduled Maintenance	69144	69069	68594	64722



Figure 1 - Plant Main Entrance



Figure 2 - Power House



Figure 3 - Plant Access Road



Figure 4 - Engine Room Generator Side View



Figure 5 - DG Set Side View



Figure 6 - Lubrication Oil Purifier



Figure 7 - Fuel Oil Purifiers



Figure 8 - Waste Water Purifier



Figure 9 - Repair Workshop



Figure 10 - Oil Storage Tank Yard



Figure 11 - Control Panels



Figure 12 - Control Room Work Stations



Figure 13 - LV Room Panels



Figure 14 - MV Room Panels