

7.42 MW, Niigata 16V34HLX, 1999

3.3 kV, 3 phases, 50 Hz, 600 RPM

First manufactured in 1999 and overhauled in 2004 & every two months testing operation

Stopped in September 2004

Condition is very excellent

Engine:

Make : Niigata, Japan

Model : 16V34HLX

Type : Single Acting

4 Cycle

Water Cooled

Air Cooled Exhaust Turbo Charger

Capacity : 10091 PS

Revolution : 600 RPM

Cylinder : 16

Cylinder Diameter : 340 mm

Stroke : 500 mm

Net Average Effective Pressure : 20.8 kgf/cm²

Average Piston Speed : 10.0 m/s

Overload Output : 110% Load

Overspeed Resisting Pressure : 110% Revolution @ 1 minute No Load

Starter : Compressed Air

Combustion System : Direct Injection

Turbo Charge Method : Exhaust Turbo with Air Cooler

Cooling Method:

Engine (Primary Cooling Water)

Lubricating Oil Cooler (Secondary Cooling Water)

Air Cooler (Secondary Cooling Water)

Primary Water Cooler (Secondary Cooling Water)

Lubrication System : Forced Oiling

Air Intake : Outdoor Air

Installation : Direct fixed on reinforced Concrete Base

Turning Method : Electric

Fuel : HFO

Engine Rotating Direction : Clockwise

Machine Net Weight : approx. 97 tons

Performance:

Rated Output : 7.42 MW @ Generator End

Fuel Consumption Ratio : 188g/kWh @ 100% Load

Noise : 110 dB (A) @ 1m area of Engine

NOx : Less than 100 ppm (converted by O₂ density 13%)

Generator:

Make : Nishishiba

Type : Open Protected

Revolving Field

3 Phase Alternating Current

Synchronous

Rated Output : 7.16 MW

8950 kVA

Power Factor : 0.8

Revolving Speed : 600 RPM

Current : 1566 A

Voltage : 3.3 kV

Frequency : 50 Hz

Phase : 3

Pole : 12

Connect : 3 phase, 3 wire, Neutral Point Ungrounded

Energization : AC Exciter, Brushless

Cooling - Self Ventilation

Revolving Direction : Counter Clockwise (Seeing from Engine side)

Terminal : Left Side

Isolation : Stator Winding F, Rotor Winding F

Auxiliaries:

AV Exciter : 1 set

Tachometer Generator : 1 unit

Bearing Thermometer : 1 unit, Dial type with Alarm Contact

Stator Winding Thermometer : 1 unit, Dial type with Alarm Contact

Space Heater : 1 set

Generator Sole Plate : 1 set

Shipping Information :

Dimension (LWH) : 13054 x 3800 x 4110 mm

When shipping, Engine and Alternator will be separated for shipment purpose

Engine Portion : 8919 x 3800 x 4110 mm, 97 tons

Alternator Portion : 4135 x 3800 x 4110 mm, 36 tons

Periodical Facility Maintenance Report (B-Check Maintenance)

Engine Model : 16V34HLX

Unit Number : 1

Total Operation Hours : 42211

Hours since Last Maintenance Time : 1678

Maintenance Enforcement Period : Aug. 24 ~ 27, 2004

Performance prior to main Maintenance:

- Exchange of Lubricating Oil
- Disassembly of Cylinder Cover and Exchange of Inlet Valve, Address Sheet
- Disassembly and Exchange of Bonnet (top & bottom)
- Disassembly and Cleaning of Start Valve...
- Disassembly and Maintenance of Supercharger including Moving Balance Revision (by maker)
- Disassembly and Maintenance of Gaisulinger Dumper (by maker)
- Disassembly and Maintenance of Lubricating Oil Pump (by maker)
- Exchange and Maintenance of Exhaust Valve, Fuel Valve
- Exchange of Fuel Valve Protection Pipe Gasket and O-ring
- Maintenance of Cylinder Cover (Water Pressure Test....)
- Disassembly, Check & Cleaning of Fuel Injection Pump and Exchange of Plunger
- Degrading of Cylinder Liner. Measurement of Inside Diameter
- Disassembly and Measurement of Piston...
- Exchange of Crank Pin Metal. Check Crank Pin (Polishing)
- Exchange of Crank Pin Metal Stud Extraction (top & bottom)
- Disassembly of Gear case and Check Gear Ring
- Exchange of Standard Bearing Metal
- Exchange of main Bearing Metal. Check the Crankshaft Journal
- Exchange of Cam Bearing Metal
- Disassembly of Fuel Roller Guide and Exchange of Roller, Pin, Bush...
- Disassembly and Check Cam Gear Damper. Exchange of Parts...
- Disassembly and Maintenance of main Start Valve
- Disassembly and Maintenance of Start Air Distribution Valve
- Exchange of Governor
- Exchange of Air Cooler
- Disassembly and Maintenance of Air Drain Separator
- Disassembly and Cleaning of Primary Refrigerator. Exchange of Gasket
- Disassembly, Cleaning & Check of the Lubricating Oil Refrigerator
- others.....

Contents of Maintenance (B-Check Maintenance and Fuel Injection Pump Entrance)

- Exhaust Valve, Fuel Dialect Disassembly & Exchange, Disassembly Article Maintenance, Safekeeping
- Fuel Filters Resolution, Check, Cleaning, Maintenance (Remove the first Filter on the Engine Entrance)
- Lubricating Oil Filters & Sludge... - Opening, Check, Cleaning, Maintenance
- Exchange of Governor Oil
- Check of Go-around Link...
- Exchange of all Entrances except B2 Fuel Injection Pump Entrance Pipe / Exit Pipe
- Checked Exhaust Pipe Clamping Belt...
- Disassembly of B Side Cam Case Cover
- Exchange of Cam case Door Clamping Bolt Seal Washer
- Disassembly & Check of B side Camshaft Lubrication Pipe....
- Operation, Performance Check, and Adjustment