



Title: Operation of Generator (DG Set)

SOP No.:		Revision No.:	00
Effective Date:		Supersedes No.	Nil
Review Date:		Page No.	1 of 3

1.0 OBJECTIVE

- 1.1 To describe a procedure for the operation of diesel generator.

2.0 SCOPE

- 2.1 This procedure applies to the Engineering department.

3.0 RESPONSIBILITY

- 3.1 Engineering

4.0 ACCOUNTABILITY

- 4.1 Plant Head

5.0 REFERENCE (S)

- 5.1 In-house.

6.0 PROCEDURE

- 6.1 Procedure for prestart check up.
- 6.1.1 Check for fuel level in the fuel tank.
 - 6.1.2 Check for water in cooling tower.
 - 6.1.3 Check the oil pressure indicators, temperature indicators, warning lights & other gauges daily to make sure they are operational.
- 6.2 Procedure for starting of the diesel generator.
- 6.2.1 Switch OFF the SEB ACB in main PCC Panel.
 - 6.2.2 Turn ON the D.G. ACB.
 - 6.2.3 Turn ON bus coupler of main PCC panel.
 - 6.2.4 Turn ON the D.G. Panel MCCB.
 - 6.2.5 Check the diesel tank level, if required top up the diesel.
 - 6.2.6 Check the Lub oil level, in the lub oil tank.
 - 6.2.7 Check the coolant water level, if required top up the water.
 - 6.2.8 Check the battery for charging.
 - 6.2.9 Start the D.G. priming pump by pressing the green push button in the D.G. Panel board.
 - 6.2.10 OFF the priming after 5 minutes.
 - 6.2.11 Start the D.G. Cooling water pump by pressing green color push button in the main panel before starting the D.G.
 - 6.2.12 Start the D.G. Cooling tower fan by pressing the green push button in the main panel board.
 - 6.2.13 Check the IDLE / RUN toggle switch is IDLE mode or not. If not put the toggle switch in IDLE mode.
 - 6.2.14 Turn the OFF / ON /START selector switch into START position.
 - 6.2.15 Run the D.G. set for 3 minutes in IDLE mode.
 - 6.2.16 After 3 minutes put the IDLE / RUN toggle switch into RUN mode.
 - 6.2.17 Start the D.G.exhaust fan by operating the MCB.
 - 6.2.18 Turn the DG incomer key (TRIP / LOCK) in anti clockwise direction.
 - 6.2.19 Take readings of the DG set as per Annexure -1



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SOP No.:		Revision No.:	00
Effective Date:		Supersedes No.	Nil
Review Date:		Page No.	2 of 3

6.3 Stopping Procedure

- 6.3.1 Turn OFF the D.G. ACB.
- 6.3.2 Put the IDLE / RUN toggle switch into IDLE mode.
- 6.3.3 Run the DG set for 3 minutes in IDLE mode.
- 6.3.4 After 3 minutes turn the OFF / ON /START selector switch into OFF position.
- 6.3.5 Stop the DG Cooling water pump by pressing Red colour push button in the main panel, when the water temperature reaches to the normal temperature.
- 6.3.6 Stop the D.G.cooling tower fan.
- 6.3.7 Stop the D.G. exhaust fan.
- 6.3.6 Turn OFF the bus coupler in the main PCC Panel.
- 6.3.7 Switch ON the SEB ACB in main PCC Panel.

7.0 HISTORY

7.1 Details are given below.

SOP No.	REASON FOR CHANGE	EFFECTIVE DATE

8.0 ABBREVIATIONS: The abbreviations used in the SOP are as follows:

- 8.1 SOP - Standard Operating Procedure
- 8.2 No. - Number
- 8.3 QA - Quality Assurance
- 8.4 VS - Variable Speed
- 8.5 SEB - State electricity board.
- 8.6 ACB - Air circuit breaker.



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Review Date:		Page No.	3 of 3

ANNEXURE - I

DIESEL GENERATOR

Date:			Shift:									
S.No.	Start Time	Stop Time	Voltage			Frequency	Current			Running time	Radiator water Temp Deg	
			RY	YB	BR		R	Y	B		Inlet	Outlet

Lube oil pressure	RPM	Coolant temp.	Diesel Tank Opening Balance	Diesel received From Main tank	Total diesel	Diesel Tank Closing Balance

SHIFT	RUNNING TIME	TILL DATE RUNNING HR.	DIESEL CONSUMPTION IN LITERS	INTIAL KWH READING	FINAL KWH READING	KWH GENERATED
A						
B						
C						

Prepared by _____

Remarks - _____

Checked by: - _____