



**STANDARD OPERATING PROCEDURE**

**Department:** Engineering

**TITLE:** Preventive Maintenance of Centrifugal Pumps

<b>SOP No.</b>		<b>Revision No.</b>	
<b>Effective Date</b>		<b>Supersedes No.</b>	
<b>Review Date</b>		<b>Page No.</b>	1 of 5

**1.0 OBJECTIVE:**

To lay down a Procedure for Preventive maintenance of Centrifugal Pumps.

**2.0 SCOPE:**

This SOP is applicable to preventive maintenance of all Centrifugal Pumps.

**3.0 RESPONSIBILITY:**

Officer / Executive – Engineering

**4.0 ACCOUNTABILITY:**

Head – Engineering

**5.0 PROCEDURE:**

**5.1 Checks before starting preventive maintenance :**

**5.1.1** Inform all the concerned departments about Preventive Maintenance Schedule of Pumps.

**5.1.2** Take the necessary tools, spares, waste cotton and lubricants to respective area.

**5.1.3** Switch “OFF” the power supply of Pumps whose preventive maintenance to be done from main panel and affix “**Under Preventive Maintenance**” slip until work completed.

**5.1.4** Take annexure of preventive maintenance of pumps and start the activities as per annexure.

**5.2 Quarterly maintenance:**

**5.2.1** Check the quality and quantity of lubricating oil. Use oil number 80W90 or its equivalent or oil recommended by the manufacturer of the pump.

**5.2.2** Check the alignment of the pump and motor.

**5.2.3** Check the coupling condition and rectify if required. Replace coupling if damaged or beyond repair.

**5.2.4** Check and rectify leakages of pump. Rectify or replace oil seals/mechanical seals if applicable.

**5.2.5** Check and rectify abnormal sound if any.



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**5.2.6** Check and rectify vibration of pump if any.

**5.2.7** Clean the suction strainers.

**5.3 Yearly maintenance:**

**5.3.1** Dismantle the pump and check the condition of its internal surfaces.

**5.3.2** Check the straightness of shaft. Replace the same if not ok.

**5.4 Checks after completing preventive maintenance:**

**5.4.1** After completion of work clean the area where activities done.

**5.4.2** Switch “ON” the Main Control Panel and check the proper working of pump.

**5.5** Record the observations in Annexure – I. “**Preventive Maintenance Check List of Centrifugal Pump**”.

**6.0 REFERENCES:**

Not Applicable

**7.0 ANNEXURES:**

<b>ANNEXURE No.</b>	<b>TITLE OF ANNEXURE</b>	<b>FORMAT No.</b>
Annexure-I	Preventive Maintenance Check List of Centrifugal Pump	

**ENCLOSURES:** SOP Training Record

**8.0 DISTRIBUTION:**

- Controlled Copy No. 1                      Head Corporate Quality Assurance
- Controlled Copy No. 2                      Head Engineering
- Master Copy                                      Quality Assurance Department

**9.0 ABBREVIATIONS:**

SOP                      Standard Operating Procedure  
ID No.                      Identification Number  
Ltd.                      Limited  
ER                      Engineering



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**10.0 REVISION HISTORY:**

**CHANGE HISTORY LOG**

<b>Revision No.</b>	<b>Details of Changes</b>	<b>Reason for Change</b>	<b>Effective Date</b>	<b>Updated By</b>
00	New SOP	Nil	Nil	Nil



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**ANNEXURE-I**

**PREVENTIVE MAINTENANCE CHECK LIST OF CENTRIFUGAL PUMP**

**Name of Equipment:**

**Frequency:** Quarterly/Yearly

**ID No.:**

**Model No.:**

**Department:**

**Location:**

**Preventive Maintenance Done On:**

**Preventive Maintenance Due On:**

S.No.	Check List	Activity Done
<b>Checks before starting preventive maintenance:</b>		
1.	Inform all the concerned departments about Preventive Maintenance Schedule of Pumps.	
2.	Take the necessary tools, spares, waste cotton and lubricants to respective area	
3.	Switch "OFF" the power supply of Pumps whose preventive maintenance to be done from main panel and affix " <b>Under Preventive Maintenance</b> " slip until work completed.	
4.	Take annexure of preventive maintenance of pumps and start the activities as per annexure.	
<b>Quarterly maintenance:</b>		
1.	Check the quality and quantity of lubricating oil. Use oil number 80W90 or its equivalent or oil recommended by the manufacturer of the pump.	
2.	Check the alignment of the pump and motor.	
3.	Check the coupling condition and rectify if required. Replace coupling if damaged or beyond repair.	
4.	Check and rectify leakages of pump. Rectify or replace oil seals/mechanical seals if applicable.	
5.	Check and rectify abnormal sound if any.	
6.	Check and rectify vibration of pump if any.	



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7.	Clean the suction strainers.	
<b>Yearly maintenance:</b>		
1.	Dismantle the pump and check the condition of its internal surfaces.	
2.	Check the straightness of shaft. Replace the same if not ok.	
<b>Checks after completing preventive maintenance:</b>		
1.	After completion of work clean the area where activities done.	
2.	Switch "ON" the Main Control Panel and check the proper working of pump.	

**Done By:**  
Engineering Officer/Executive  
Sign & Date

**Checked By:**  
Head Engineering  
Sign & Date