05_02_01-L3-OP CRU13N-427 SUNDYNE PUMP SWITCHING

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1. Purpose	This job instruction provides the necessary guidelines for safe and correct Sundyne pumps switching.	
2. Scope	The pumps switching of Naphtha Hydrotreating Unit, Catalytic Reforming Unit and Catalyst Continuous Regeneration Unit pumps preparation, switching pumps and stand by pumps checklist during on stand by mode.	
3. Task	*Please refer to information page*	
4. Categories	*Please refer to information page*	
5. Pre-Requisite	Not Applicable	
6. Hazards and Precautions		
	Hazard	**Precaution**
	Naphtha -Flammable liquid hydrocarbon Naphtha is an **extremely flammable liquid and vapour**. It is **toxic by ingestion, inhalation and skin absorption**. Contact can irritate the skin and eyes. Inhaling Naphtha can irritate the nose and throat	Wear proper PPE, Avoid any direct contact to eye and skin. Avoid any direct exposure.

	LPG (Liquefied Petroleum Gas) is a highly flammable and potentially explosive substance that can cause fire and explosion hazards. The main hazards are gas leakage followed by ignition. LPG can cause cold burns if in contact with the skin, or act as an asphyxiant if present in high concentrations. Hazardous exposure to LPG can happen by inhalation, skin, and eye contact.	Wear proper PPE, Avoid any direct contact to eye and skin. Avoid any direct exposure.
7. Special PPE, Tools and Equipment	*NA*	
8. Limitation	*NA*	
9. Consequences of Deviation	*NA*	

Type of Deviation	Consequences and How to Avoid

10. Procedure Checklist

Roles	Responsibilities
Shift Activity Coordinator (SAC)	▪ Coordinate activities between Field Technician and Console Technician during these activities.
Console Technician (CT)	▪ To give instructions to Field Technician for the action to be taken during these activities.

Operate The Facilities (OTF)	▪ Response to the Production Supervisor and Console Technician instruction or guidance for these activities.

CONTENTS

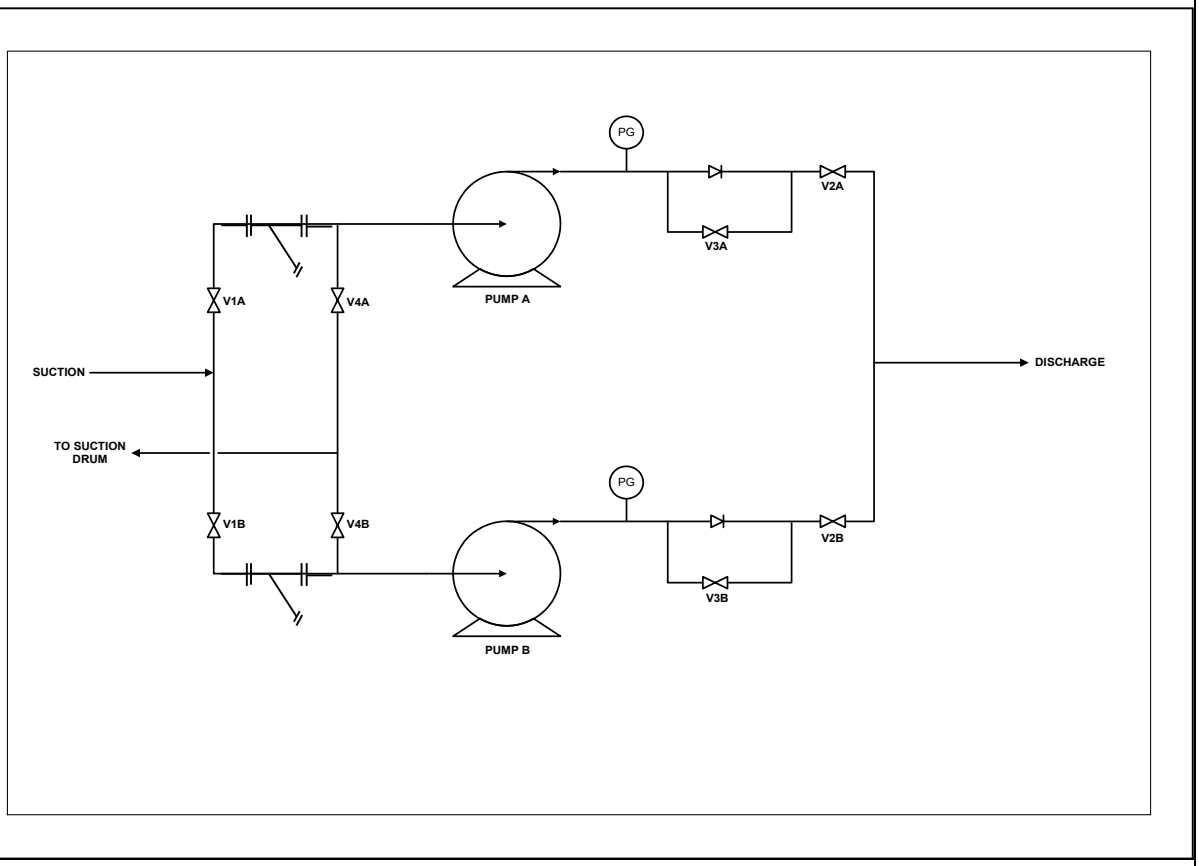
PROCEDURE
1.0 STAND BY PUMP CHECKLIST
2.0 STAND BY PUMP START
3.0 STOP RUNING PUMP
4.0 COMPLETION PUMP CHECK LIST
5.0 ATTACHMENT

Step	Action (and Hazard/Precaution if applicable)	Name	Signature	Date & Time
10.1	**10.1 STAND BY PUMP CHECK LIST** 10.1.1 Ensure stand by pump breaker is energized (checked with Electrician). 10.1.2 Ensure suction block valve fully open. 10.1.3 Fully open discharge block valve. 10.1.4 Ensure seal pot system line up and route to flare system i.e where applicable 10.1.5 Ensure lubrication oil at normal operating level and in good condition 10.1.6 Ensure tandem seal pot level at normal operating level i.e where applicable 10.1.7 Ensure tandem seal pot pressure at 0.0 kg/cm^2 i.e where applicable 10.1.8 Ensure cooling water system line up and good condition. 10.1.9 Ensure Spillback Control Valve in good functioning.			

	10.1.10 Prime the pump until no vapor lock in the pump system. 10.1.11 If pump is for hydrocarbon service, ensure line to flare is isolated.			
10.2	**10.2 STAND BY PUMP START** 10.2.1 Ensure suction and discharge block valve fully open. 10.2.2 Notify Console Technician to start stand by pump. 10.2.3 Using start/stop button, jog the pump for 5 sec to ensure lubrication is okay and stop back. 10.2.4 Wait for 30 seconds and restart the stand by pump. 10.2.5 Check for lube oil pressure and temperature. 10.2.6 Observe any abnormal condition such as leaking, abnormal sound, vibration, seal pot pressure and level rise etc 10.2.7 Observe discharge pressure at normal operating pressure.			
10.3	**10.3 STOP RUNNING PUMP** 10.3.1 Notify Console Technician to stop running pump. 10.3.2 Using start/stop button, push stop to stop the old running pump. 10.3.3 Observe any abnormal condition.			

10.4	**10.4 COMPLETION PUMP CHECKLIST** 10.4.1 Discharge pressure at normal operating pressure. 10.4.2 Tandem seal level at normal operating level i.e where applicable 10.4.3 Tandem seal pressure at 0.0 kg/cm2. 10.4.4 Communicate with Console Technician for normal pump flow performance. **NOTE** Normal practice, pump delivered low flow when the suction strainer clogged or incorrect operating of NPSH. 10.4.5 Check for any abnormal condition such as leak, excessive vibration, abnormal sound etc.			

ATTACHMENT 1 : SUNDYNE PUMPS SIMPLY DIAGRAM



11. Link with Other Documents

Reference	Document Name
	▪ PP (M) SB Operation Manual ▪ UOP Platforming Manual

12. Signature	This procedure checklist was completed by *(applies if checklist format utilized):* _____ (Name) (Date)
13. Attachments *NA*	

14. Revision History

Revision No.	Description of Amendments/Changes
7	**Revise due document validity**
6	**Revise for revalidation and OEMS requirement**
5	**Revise due document validity**
4	**Revise due document validity**
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DOCUMENT AUTHORIZATION

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Supporting Document Links	
No	**Supporting Document**

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