

	GILES CHEMICAL		
	COMPANY PROCEDURE		
	Centrifuge Procedure	Page : 1 of 3	Revision : 03 Date : 07/15/09
	Author: Patrick Owen	Job Specific	

Personnel responsible:

Lead Operator

Safety equipment:

All safety glasses and appropriate safety apparel is to be worn at all times.

Follow lock out procedures when working on machinery.

Summary:

The centrifuge takes the incoming salt slurry and separates the liquid from the solids. The liquid goes back to the mother liquor tank, and the solids go into the dryers.

Procedure:

- A. Starting centrifuge:
 1. Check to verify the pump from mother liquor pot to mother liquor tank is operable.
 2. Start the air hammer (valve on Palletizer)
 3. Clean and visually inspect centrifuge for sign of wear or damage.
 4. Start oil pump then centrifuge, and listen for unusual noises that would indicate abnormal operation.
 5. Ensure that all washout lines are off.
 6. Make sure the screw is turning the direction to feed the dryers.
 7. Make sure the slide gate is closed.
 8. Open the feed valve and close the sample valve.
 9. Start discharge pump from vacuum Crystallizer(s).
 10. Make a visually check of dryness of salt exiting centrifuge.
 11. Ensure hoses are connected to correct centrifuge.
 12. Ensure switch on #1 Salt Discharge Pump motor starter is set to the same centrifuge that the discharge hose is connected to.
- B. Normal operation:
 1. Make rounds according to operator logs and listen for any unusual problems.
 2. Record feed solids and any problems every 2 hours.
 3. Clean at least twice per shift.
- C. Shutting down centrifuge:
 1. Stop feed from the Crystallizers (refer to Crystallizer procedure).
 2. Wash out line from discharge pump to centrifuge with a minimum amount of water.
 3. Clean centrifuge (see part D of this procedure).
 4. Stop centrifuge.
 5. Uncouple Mother Liquor Pot hose and stop the Mother Liquor Pump.
- D. Cleaning centrifuge:
 1. Stop feed to centrifuge and wash out feed lines.
 2. Allow all salt to leave the screw.
 3. Open drain valve on the bottom of the dryer feed screw by turning the selector switch on the hand rail in front of the centrifuge to the on position.
 4. Reverse the dryer feed screw using the drum switch located on the handrail in front of the centrifuge.
 5. Open the water valve that washes the inside of the basket for 2 min.
 6. Open the water valve that washes the back side of the basket for 2 min.
 7. Open the front door and wash out the discharge housing.
 8. Change the dryer feed screw back to forward direction.
 9. Close the drain valve under the dryer feed screw.
 10. Ensure all washout lines are closed.



**GILES CHEMICAL
COMPANY PROCEDURE**

Centrifuge Procedure

Page : 2 of 3

Revision : 03
Date : 07/15/09

Author: **Patrick Owen**

Job Specific

TRAINING DOCUMENTATION

	EMPLOYEE	TITLE	SIGNATURE	DATE
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



**GILES CHEMICAL
COMPANY PROCEDURE**

Centrifuge Procedure

Page : 3 of 3

Revision : 03
Date : 07/15/09

Author: **Patrick Owen**

Job Specific

Revision Number	Revision Date	Revision Author	Revision Description
00	11/14/05	SS	New Document
01	12/15/06	PO	Update from Operator Traiing
02	05/11/06	PO	#1 Crystallizer feeding into the big Centrifuge
03	07/15/09	JB	Updated to new format