
	GILES CHEMICAL ~ PREMIER MAGNESIA		
	Company Procedure		
	Title: Dumping and Washing a Crystallizer	Number: P12-PR-200-033	
	Owner: Patrick Owen	Revision: 03	
	Effective Date: 05/13/13	Page: 1 of 2	

1.0 Purpose

This procedure covers proper execution of dumping and washing a crystallizer. When dumping, it is important to take enough time to wash the crystallizer thoroughly or it will not run long before dumping is required again.

2.0 Scope

This procedure applies to all manufacturing workers.

3.0 Responsibility

Lead Operator

4.0 Safety Considerations

Safety shoes and safety glasses are required when working in, on, or around the crystallizers.

Safety is a condition of employment. Employees are not authorized to work in an unsafe manner and are prohibited from harming the environment of the facility or community.

5.0 Materials/Equipment

N/A

6.0 Procedure



This procedure covers dumping and washing a crystallizer. When dumping, it is important to take enough time to wash the crystallizer thoroughly or it will not run long before dumping is required again.

A. Dumping a Crystallizer

1. Shut down the crystallizer (see procedure - Crystallizer Extended Shut Down)
2. Connect a steam hose to the bottom valves.
3. Open the bottom valves and open steam valves.
4. Steam until the temperature reaches 60 degrees C.
5. Stop the density loop pump and wash out the density loop.
6. Close steam valve and bottom valve – blow out steam hose.
7. Connect a hose from the bottom valve to the Liquid Load Pump.
8. Connect the outlet of the Liquid Load Pump to the Mother Liquor Tank.

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9. Open the bottom valve and start the Liquid Load Pump.
10. Once the level gets below 100 inches, stop the elbow pump.
11. Empty the crystallizer completely.
12. Connect the hose to the elbow drain and pump that into the ML tank.
13. Once the elbow is empty, uncouple the hose and stop the Liquid Load Pump.
14. Leave bottom valve and elbow drain open to ensure crystallizer is empty.

B. Washing the Crystallizer

1. Close the bottom valve.
2. Connect a 2" water hose the Crystallizer Discharge.
3. After the level reaches 140 inches, turn on the elbow pump.
4. Fill the crystallizer to 185 inches and shut off the water.
5. Start the density loop.
6. Steam until the temperature reaches 60 degrees C.
7. After the crystallizer is at least 60 degrees C and is circulating, let it circulate for at least 4 hours.
8. Look into the top of the crystallizer and ensure that all the chunks are dissolved.
9. Stop the density loop and Stop the elbow pump.
10. Drain the crystallizer to the drain through the bottom valve and the elbow drain.
11. After the crystallizer is empty, shine a light in all the sight glasses at the bottom to make sure everything is drained.
12. Wash the last little bit of residue out the drain valve with the level probe washout.
13. As needed see "Filling and Starting a Crystallizer".

7.0 Reference Documents

N/A

8.0 Change Information

Document review- updated format using new template and numbering system.

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