

MANUFACTURING PROCEDURE

Department: Large Reactors Process Title: Large Reactor Operations
Procedure Section Title: Chem Wash & Rinse Mode
Issue Number: #1 Issue Date: 4/11/75
Reason For Issue: Original
Originated By: Gilbert A. Morgan

After the reactor has been rinsed following the dump cycle, it is ready to be chem-washed. The chem-wash cycle is necessary to remove any polymer build-up from the reactor condensor, walls, baffles and agitator. This build-up must be removed after every reactor charge. If allowed to remain in the reactor, they continue to grow with each successive charge. Build-ups will contribute to high gel, low quality resin and will make reactor dumping very difficult if they get large enough to start breaking off by plugging dump valves and lines.

Operators must exercise caution during the chem-wash due to the caustic in the solution. Be watchful for any line or seal leaks and report any leaks that are found. If a drop of solution should get on an operator, flush immediately with water. Caustic feels slick to the touch and will start burning the skin just a few seconds after contact. If the solution should spray over the body, immediately get under a safety shower and remove your clothing. If any should get in an eye, flush

APPROVALS:

Department Operations Supervisor:

Date 7-10-75

Department Operations Superintendent:

Date 7-10-75

Plant Superintendent:

Date 7-10-75

CAM/lpb
1/27/75

CHIEF PROCESS ENGINEER:

Date

ALLMOND 211

VAB:0001027537

eyes for at least 15 minutes but until all burning stops and report to your Supervisor.

CHEM-WASH PROCEDURE:

After giving the Lead Operator notice that the reactor is ready for chem-wash, the Reactor Operator:

1. Makes sure the reactor sewer valve is closed.
2. Checks the level in the chem-wash make-up tank.

NOTE: This will help determine if any chem-wash solution is lost during the wash.

The Lead Operator Will:

1. Place the mode selector in the CLEANING mode.
2. Open the main dump valve on the reactor.
3. Open the reactor chem-wash return valve.
4. Put the chem-wash selector switch in WASH.
5. Open inlet valve from the hold tank to the chem-wash pump.
6. Open the chem-wash pump discharge valve.
7. Open the condenser chem wash valve.
8. Start the chem wash pump.

NOTE: Have the Reactor Operator watch the chem-wash tank and inform the Lead Operator when all of the solution is circulating thru the reactor. When all the solution is in the system, the Lead Operator will close the make-up tank discharge valve.

If the operator notes any resin in the bottom of the tank, he will open the chem-wash tank valve and wash out to the sewer. This should be done once per shift.

9. After washing the condenser for ten minutes, close the condensor chem-wash valve.

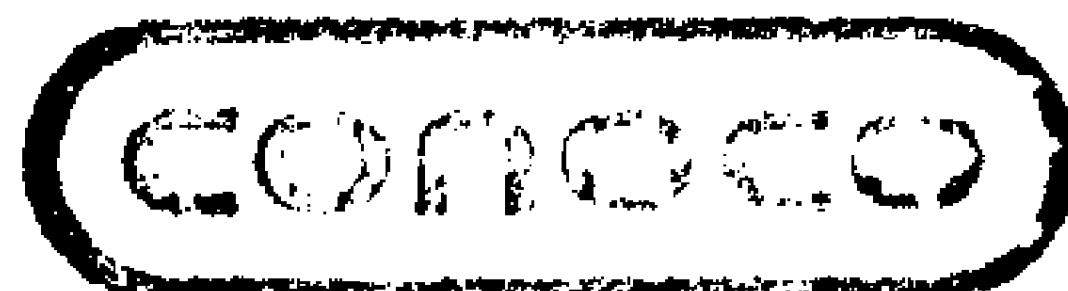
10. Open the shell (jacket) chem-wash valve and wash the walls for ten minutes.
11. After washing the reactor walls for ten minutes, open the make-up tank return valve. When the chem-wash pump loses prime (check pressure gauge) have the operator check the make-up tank to see if all the chem-wash solution has returned.

NOTE: At any time a part or full batch of solution is lost or dumped accidentally to the sewer, notify the Utilities Supervisor. This must be neutralized to avoid upsetting the chemical balance in the lagoons.

12. Shut off the chem-wash pump.
13. Close reactor chem-wash valves.
14. Open reactor condensor valve.
15. Cut on hot H₂O pumps A & B and flush thru condensor to sewer for ten minutes.
16. Close condensor valve, open jacket valve. Flush reactor to sewer for ten minutes.
17. Have the Reactor Operator close the sewer valve.

NOTE: Because of water dilution and resin accumulation, chem-wash solution must be disposed of and fresh caustic pumped in.

This is necessary about two times per week. Follow the procedure outlined under "Used Chem-Wash Solution Disposer".



CONTINENTAL OIL COMPANY
CONOCO CHEMICALS
Aberdeen, Mississippi

MANUFACTURING PROCEDURE

Department: Large Reactors Process Title: Large Reactor Operations

Procedure Section Title: Full & Partial Swirl Of Reactor

Issue Number: #1 Issue Date: 4/11/75

Reason For Issue: Original

Originated By: Gilbert A. Morgan

To assist in the production of quality resin, particularly low-gel, it has been found that by filling the reactor with water and agitating, the gel count is markedly lower.

FULL SWIRL:

In this swirl, the reactor is almost completely filled with water.

The Operator:

1. Has Reactor Operator open man-head.
2. Open main dump valve.
3. Open water charge valve.
4. Start both A & B hot water charge pumps.
5. Add 1,800 counts of water to reactor (18,000 gallons).
6. Cut off pumps and close valves.
7. Agitate for ten minutes.
- 8.. Open swirl or sewer valve and dump.

PARTIAL SWIRL:

APPROVALS:

Department Operations Supervisor:

DF Johnson / RWS Date 7-10-75

Department Operations Superintendent:

RW Ferguson Date 7-10-75

Plant Superintendent:

JW Powell / RWS Date 7-10-75

GAM/lpb
1/27/75

CHIEF PROCESS ENGINEER:

Date _____
VAB.0001027540
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This swirl procedure is the same as the full swirl except for the amount of water used. Charge 440 counts (4,400 gallons) and follow the same procedure as the full swirl.