

- TRI-II SOP -

SOP#: 73

SOP TITLE: OHC REACTOR LEAK-CHECK LIST

OPERATOR: \_\_\_\_\_

DATE: \_\_\_\_\_

written by: Art Reinhardt  
date: 6/21/90

reviewed by: CONTROL ROOM  
date: 01/01/92

approved by: Art Reinhardt  
date: 02/18/92

CHECK ACTION STEPS AS THEY ARE COMPLETED

Following is a list of the "standard" items to leak-check after an OHC Reactor outage where the catalyst was dumped. The leak inspector should be observant of the entire system for leaks or other irregularities that might hamper start-up. Work that was done during the outage that needs to be leak-checked should be noted at the end of the list.

- \_\_\_\_\_ 1. JOB SAFETY INSTRUCTIONS REVIEWED.
- \_\_\_\_\_ 2. ENSURE THAT YOU ARE WEARING PROPER SAFETY EQUIPMENT.
- \_\_\_\_\_ 3. Decide if the system is to be leak-checked with nitrogen or a mixture of nitrogen and HCl. If only nitrogen is to be used, all flanged joints to be checked will have to be taped.
- \_\_\_\_\_ 4. Make sure that the Oxygen Feed System is isolated up to, and including, the FCV.
- \_\_\_\_\_ 5. Make sure that the Ethylene Feed System is isolated up to, and including, the Inlet Block Valve to the Jet Compressor.

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- \_\_\_\_\_ 6. Depending on whether HCl is to be used:
  - A. If HCl is to be used, line the system up to the FCV.
  - B. If HCl will not be used, make sure the system is isolated up to, and including, the FCV.
- \_\_\_\_\_ 7. Make sure that the Reactor MLS, the Large Pressure Control Valve and the Small Pressure Control Valve are closed and blocked in.
- \_\_\_\_\_ 8. If only nitrogen is to be used, bring the system pressure up to 35 psig (verify pressure outside) with nitrogen and check all lines listed below for leaks.
- \_\_\_\_\_ 9. If HCl will be used, bring the system up to approximately 20 psig with nitrogen, block the nitrogen system in, and then, bring the system up to 35 psig with HCl (verify pressure outside) and check all lines listed below for leaks.

ITEMS TO INSPECT:

- \_\_\_\_\_ 10. Mixed Feed Piping
- \_\_\_\_\_ 11. Fluidization Air Valve
- \_\_\_\_\_ 12. Oxygen Feeding Piping (including SRV, Rupture Disk, manway)
- \_\_\_\_\_ 13. HCl Preheater, and inlet and outlet piping
- \_\_\_\_\_ 14. Reactor Head Flange
- \_\_\_\_\_ 15. Both Reactor Head Dump Nozzles, Valves, and Blinds

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\_\_\_ 16. All Reactor Thermowell Nozzles:

4 @ 2 ft

2 @ 8 ft

2 @ 14 ft

2 @ 20 ft

2 @ 26 ft

2 @ 27 ft

2 @ 28 ft

2 in dome

\_\_\_ 17. Catalyst Addition Ram Valve

\_\_\_ 18. Rupture Disks

Southeast

Southwest

\_\_\_ 19. Cyclone Flanges

\_\_\_ 20. Primary Condenser Mixing Tee Flanges and connecting piping

\_\_\_ 21. Primary Condenser Head and Piping

\_\_\_ 22. Secondary Condenser Head and Piping

\_\_\_ 23. Secondary Condenser Connecting Piping

\_\_\_ 24. All instrument connections

\_\_\_ 25. Other (items recently worked on, etc.)

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