

LIGO HANFORD VACUUM SYSTEM

Hanford Checklist - Spool Removal

TO BE PERFORMED ONLY BY PERSONNEL QUALIFIED IN THIS OPERATION .

This checklist provides instructions for the removal of a spool outside of a clean room. However, clean room practices and attire apply.

CAUTION: A typical spool weighs approximately 3000 pounds and will require a chain hoist (or come-along) to help balance the load.

Prerequisites

- A Site Work Permit must be obtained before this procedure can be performed, and requires the use of at least 2 individuals.
• Valves must be locked out. All valves that interface the vented volume of the spool in question with the vacuum volume(s) (which will remain under vacuum during this procedure) must be locked out. Use Lockout/Tagout Checklist, LIGO-M980092-00-M.
• Clean room garb (hat, smock, booties, mask and gloves) must be worn during this procedure. See the Contamination Control Plan (M990034) for clean room practices and contamination control guidance.

Spool Removal

- 1. Check that the volume is vented.
2. Isolate the annulus ion pumps .
3. Check that protective covers are on the optical ports.
4. Ensure that a clean location is available for the laydown.
5. Wipe down the external portions of the flanges.
6. Remove all but eight flange bolts (4 on each flange)
7. Begin purge gas flow
8. Connect the crane and chain hoist and take the load. (CAUTION-THIS STEP REQUIRES A SKILLED CRANE OPERATOR )
9. Remove bolts from one end and retract bellows about 1 inch.
10. Install covers on the two exposed flanges.
11. Remove the bolts from the other flange and cover the open ends.
12. Crane the spool to the laydown area.
13. Remove the covers once the operating cleanroom is in place.

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Approved (Vacuum System Manager)

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Handwritten signatures of John Worden and another individual.