



SPECIFICATION

Specification for Pipe Cleaning

APPROVALS	DATE	REV	DCN NO.	BY	CHECK	DCC	DATE
AUTHOR:	3/2/11	V1	For Installation				
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1.0 PURPOSE

This specification covers the minimum requirements for the on-site cleaning of piping for the LIGO vacuum system.

2.0 GENERAL

For the Advanced LIGO modification Vacuum piping should be bought in a clean state (white pickled) and pre-spoiled at a remote facility. Piping shall receive a final cleaning at the Seller’s facility prior to shipping to the LIGO site. Piping shall be protected during shipment with double wrapping. The first wrap will be removed in the LIGO building Air-lock prior to moving into the Research Buildings.

The Vacuum piping spools ends shall not be unsealed until the end is protected by a Class 5 cleanroom.

Utility piping shall be cleaned by a procedure submitted by the Seller and approved by the buyer.

Shop Cleaning- Each new pipe section shall be cleaned at the Seller’s Facility prior to shipping as follows:

- 1) Flush with hot water (110 to 120 °F) and detergent (Oakite Impro-Clean 1300) for 5 minutes
- 2) Flush with City water for 5 minutes
- 3) Flush with D.I. water for 2 minutes
- 4) Dry piping with Clean N2

3.0 RESPONSIBILITIES

Cleaning shall be performed by Seller’s personnel familiar with this procedure and the cleaning systems and equipment.



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4.0 PROCEDURE

Before installing a piping spool, the exterior shall be wiped with a clean, lint-free cloth.

Piping shall be installed in sections, with the open end protected by a Class 100 cleanroom.

After completion of installation of a run of piping, it shall be blown out with clean, dry nitrogen gas or Class 5 air.