

Title: ACCEPTANCE TEST PROCEDURE FOR PORTABLE SOFT-WALL CLEANROOMS

ACCEPTANCE TEST PROCEDURE FOR
 PORTABLE SOFT-WALL CLEANROOMS
 FOR

LIGO VACUUM EQUIPMENT

Hanford, Washington
 and
 Livingston, Louisiana

DEC 27 1996

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Information contained in this specification and its attachments is proprietary in nature and shall be kept confidential. It shall be used only as required to respond to the specification requirements, and shall not be disclosed to any other party.

REV LTR.	BY-DATE	APPD. DATE	DESCRIPTION OF CHANGE
1	D.M.W 12-18-96	REB 12/20/96	REV PER DEC 391
0	TMS 5-3-96	REB 5/4/96	INITIAL RELEASE PER DEC # 0165 FOR FOR

PROCESS SYSTEMS INTERNATIONAL, INC.				SPECIFICATION	
INITIAL APPROVALS	PREPARED	DATE	APPROVED	DATE	Number
	TMS	5-3-96	REB	5/4/96	A V049-2-110
					LIGO-E960167-01-V
					Rev. 1

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ACCEPTANCE TEST PROCEDURE FOR PORTABLE CLEANROOMS

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1.0 PURPOSE

The purpose of this Acceptance Test Procedure (ATP) is to define the overall plan for acceptance testing of this component in order to demonstrate that it meets the requirements of the LIGO Vacuum Equipment Specification, LIGO-E940002-02-V, Revision 2, dated August 31, 1995.

2.0 GENERAL

- 2.1 The procedure applies to all of the stations. Differences between the stations will be due to *different vacuum equipment, size of the isolatable sections, surfaces, volumes and quantities of instrumentation and equipment.*
- 2.2 Tests will be performed by PSI personnel, and will be witnessed by an agent (with sign-off authority) designated by LIGO.

3.0 REFERENCE DOCUMENTS

The following documents shall be used in conjunction with this one for performing the ATP:

PSI Specification V049-2-010,

FED-STD 209E, 1992

4.0 RESPONSIBILITY

It shall be the responsibility of the project engineer assigned to this component or subsystem to ensure that all of the procedures required by this ATP are performed and that the LIGO witness signs the data sheet/test certification (attached to this procedure) verifying that the procedures have been performed. The data sheet shall also be signed by the project engineer, or other PSI person designated by the project manager. Any test listed in the data sheet which is not applicable to this component or subsystem shall be noted by writing "NA" in the appropriate space. Any deviations from the test procedures or parameters shall be noted on the data sheet.

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5.0 TEST

5.1 One of each size portable cleanroom shall be fully assembled at the manufacturer's shop. It shall be inspected for dimensional specifications and the presence and proper operation of the windows to seal to the beam tube or nozzles, and to the BSC dome. Rigidity of both the frame and of the removable ceiling unit shall be verified. The operation of the sealing system used to mate two cleanrooms together shall be checked. The cleanroom will be operated and certified to produce a Class 100 (at 0.5 micrometers) environment at rest for nonunidirectional flow after balancing, sealing and cleaning.

5.2 Final acceptance of each cleanroom will occur at the point of first use: in the PSI shop or at the sites. Each cleanroom will be operated and certified to produce a Class 100 (at 0.5 micrometers) environment at rest using a discrete particle counter (DPC) in accordance with Section 5 of FED-STD 209E, 1992. Sample locations and number shall be in accordance with Section 5.1.3.2 for nonunidirectional flow. For the BSC cleanroom it is permissible to block out the non filtered center core with clean room curtains to simulate the presence of the BSC.

5.3 The following instruments, or equal, shall be used for testing:

Particle Count: MET One, Model HPS227B Portable Airborne Particle Counter

Thermal Anemometer: Datametrics, Model ADM-870

Pressure Gauge: Dwyer, Model 2000-00
Range: 0-.25"WC

6.0 DOCUMENTATION

A system assembly and operating manual shall be provided.

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LIGO VACUUM EQUIPMENT ACCEPTANCE TEST DATA/TEST VERIFICATION

Equip. Tag _____ S/N _____

Type of Test	ATP Para.	ATP Req'ment/ Actual Data	Comments	LIGO Witness Sign./date	PSI Sign./date
Visual Inspection					
Labelling Verification					
Bakeout	NA				
Leak rate	NA				
Factory Endurance Test	NA				
Factory Speed Test	NA				
Functional Test	5.1				
RGA Test	NA				
Particle Count	5.2	Class 100			
Pumpdown	NA				