LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY
- LIGO -
CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Technical Note **LIGO-E980030-A - W** 2/27/98

BEAM TUBE GROUNDING DURING BAKEOUT - ASSEMBLY 'I'

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ASSEMBLY 'I'

DESCRIPTION

DC tube connection grounding complete including connectors conductors, bushings and miscellaneous equipment according to this specification and reference documents.

COORDINATION

A. Provide all labor, materials and equipment necessary for a complete assembly, to ground DC tube connections at the DC connection box as shown on drawings, described in equipment lists and as specified herein. Completed assembly installation, where required, shall be inspected and approved by a Washington State Department of Labor and Industries representative and ready for operation.

B. Provide labor, equipment and necessary miscellaneous materials to disconnect grounds. Disconnected assemblies shall be relocated and connected at a new location at the LIGO facility as specified on plan drawings and as directed by LIGO Where required the Contractor shall provide the necessary means to provide for safe and efficient transport of assemblies to the new location.

PRODUCTS

A. All equipment shall be new, UL approved with necessary modifications required for complete installation.

INSTALLATION

A. The Contractor shall properly ground indicated DC connection box locations in accordance with latest issue of the NEC. Provide all bonding jumpers and wire, grounding bushings, clamps, etc. required for complete grounding. Route conductors to provide shortest and most direct path to grounding electrode system..

B. The ground conductors shall be green and sized for a 2,500 A service. The grounding conductor shall be terminated outside the beam tube enclosure at two 5/8" x 10' ground rods spaced a minimum of 10' apart.

C. At the corner/mid and end stations of the LIGO facility there is an existing grounding loop installed around the perimeter of the building. The Contractor may locate this loop and tie into this ground system to establish ground. The Contractor shall not bond to the instrument grounding system or to the building grounding system in the station.

TESTING AND CLEANUP

A. Upon completion of this portion of the work the Contractor shall thoroughly clean all equipment and premises of any tools, crates, boxes, wire, etc., related to the electrical work. The Contractor shall perform all tests required to assure a complete safe operating system, including but not limited to all tests required by other sections of this specification.

END OF SECTION