

LIGO PAC6 MEETING

SEISMIC ISOLATION INSTALLATION

LIGO HANFORD
OBSERVATORY

COREY GRAY

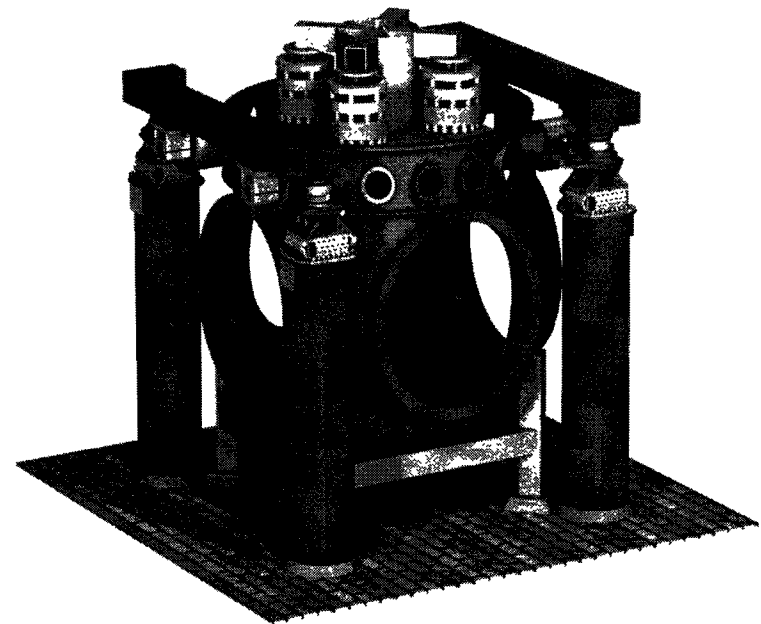
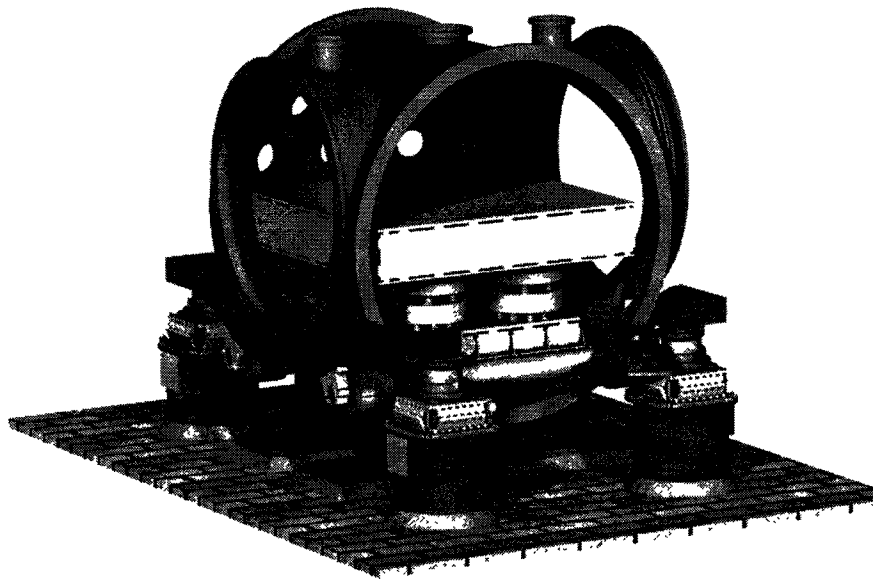
5/20/99



SCANNED

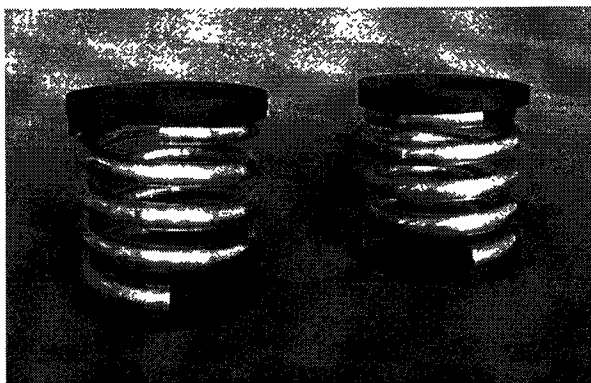
LIGO-G990046-00-M

SEISMIC ISOLATION INSTALLATION



HAM & BSC
VACUUM CHAMBERS

SEISMIC ISOLATION INSTALLATION



DAMPED COIL SPRINGS &
BSC SEISMIC ISOLATION
STACK

Seismic Isolation Installation

- SEI Installation Overview of Schedule

- ››HAM/BSC 1st Article Tests

- simultaneously at LHO (HAM) and at Hytec (BSC)

- April-August '98

- ››**LHO 2k detector:**

- HAMs----90-95% complete (all four chambers have complete Isolation stacks installed)

- BSCs----All but one chamber in the corner station are complete; chamber at each mid station remains

- Sept.'98-August '99

- ››**LLO 4k detector**

- currently in the middle of installation for HAMs

- First BSC slated for late May/early June

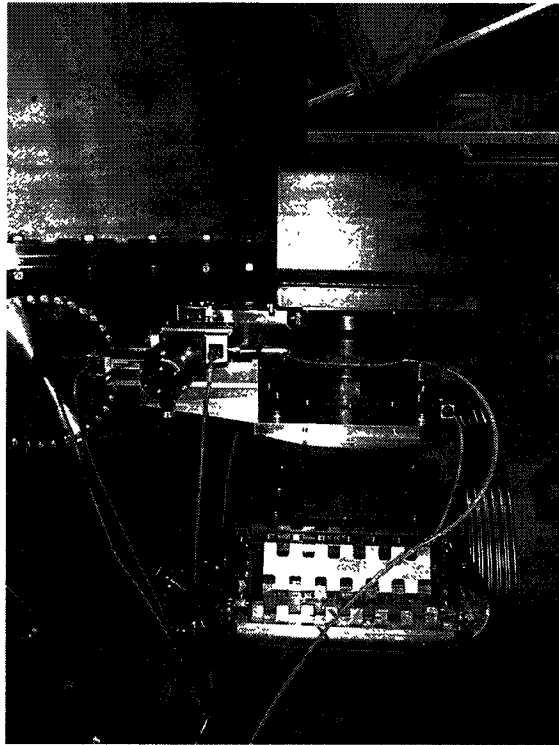
- Feb.-Nov. '99

- ››**LHO 4k detector**

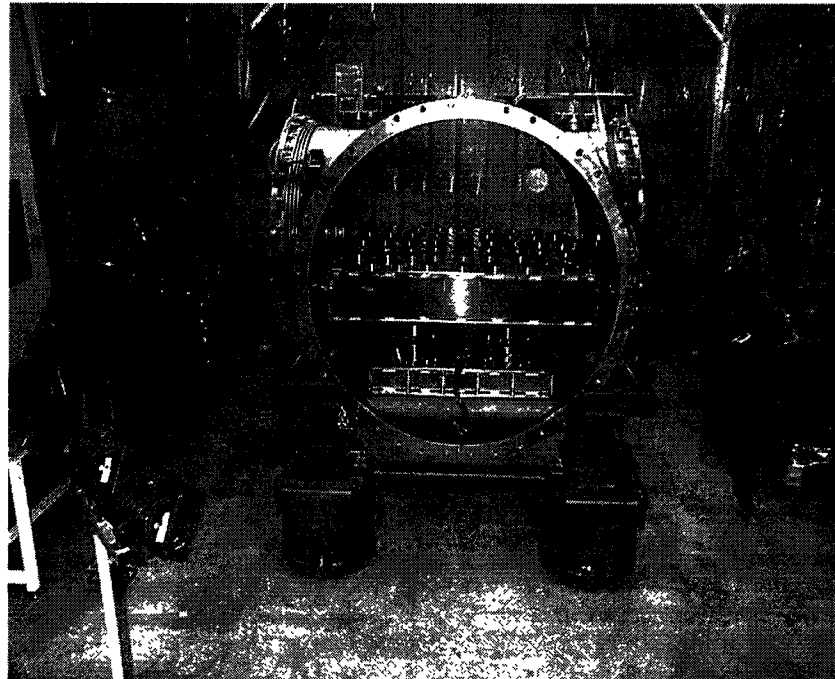
- June-Dec. '99



SEISMIC ISOLATION INSTALLATION



BSC Actuation Stack



HAM 1st Article Test

SEISMIC ISOLATION INSTALLATION

- Progress/status

- ›› Weekly teleconferences

- ›› problems & solutions

- fasteners (galling, tight holes, etc. all due to extremely clean hardware

- Contamination

- Downtube holes

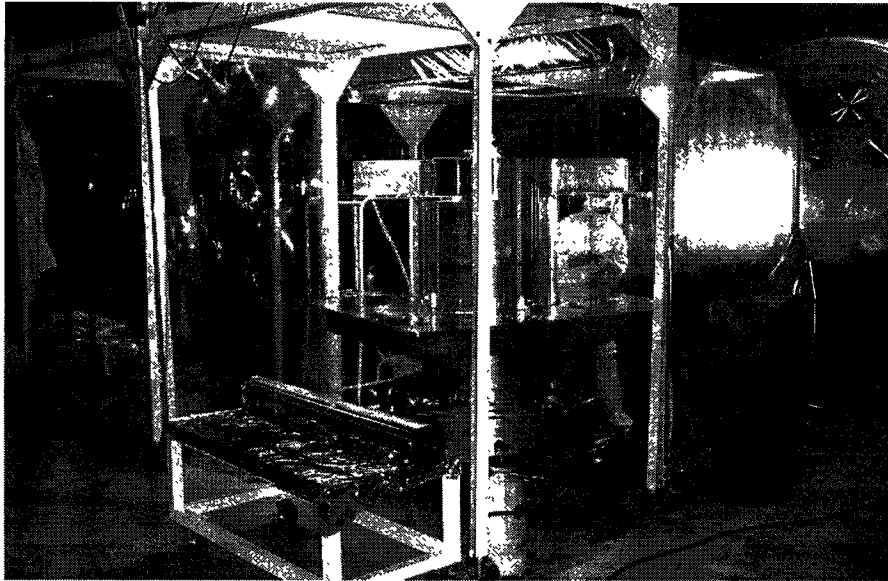
- Flourel Seats and Shims

- Fixtures

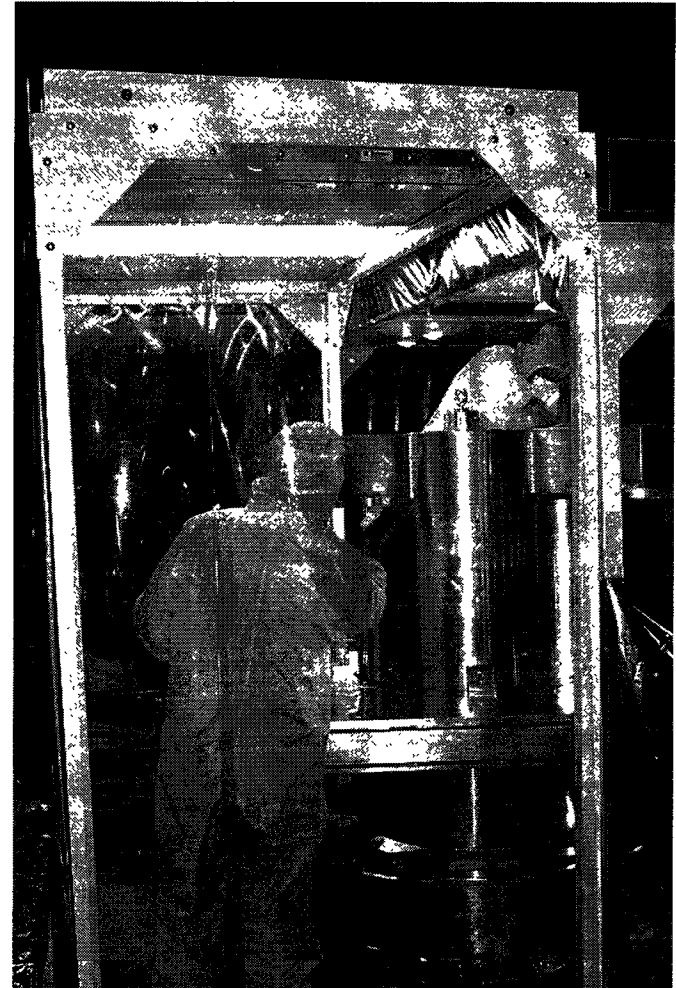
- ›› personnel

- ›› “upward trend”

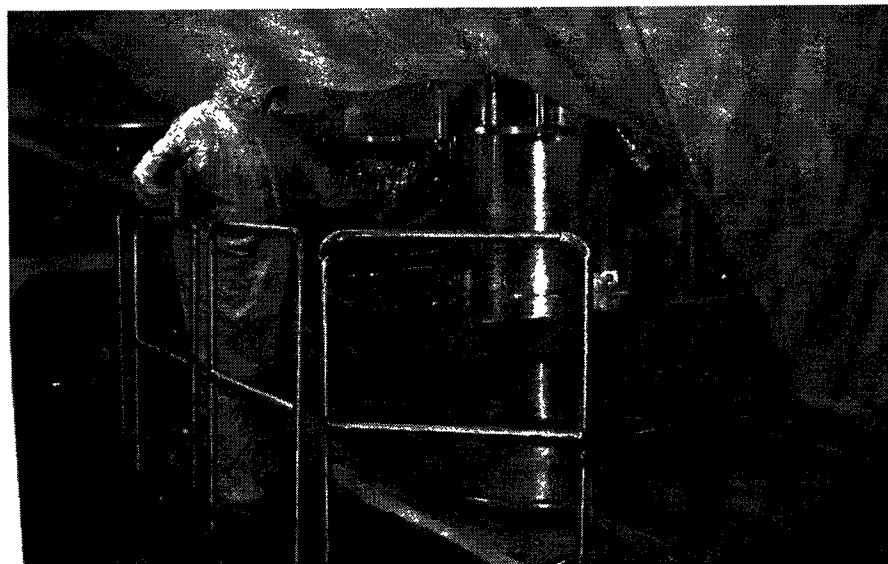
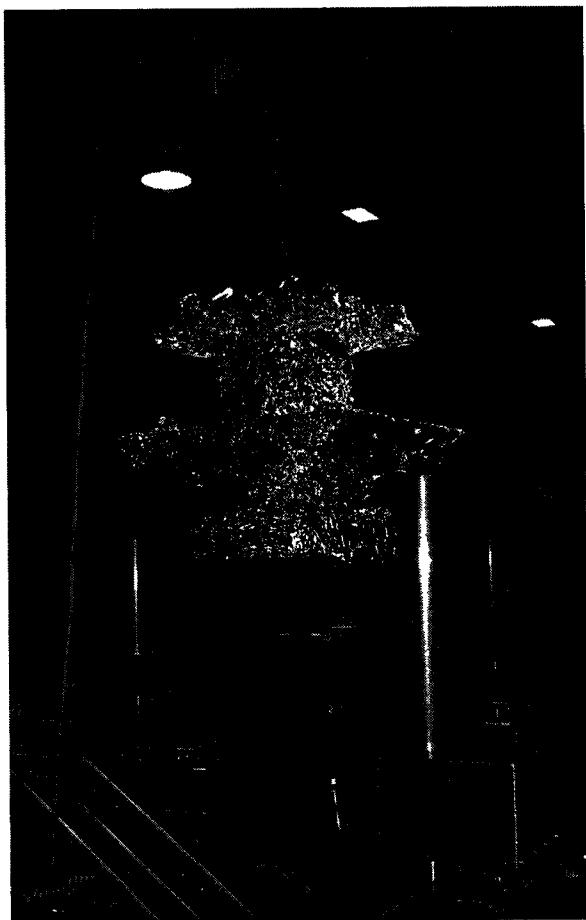
SEISMIC ISOLATION INSTALLATION



Inspection and Cleaning of BSC SEI Components Prior to Installation

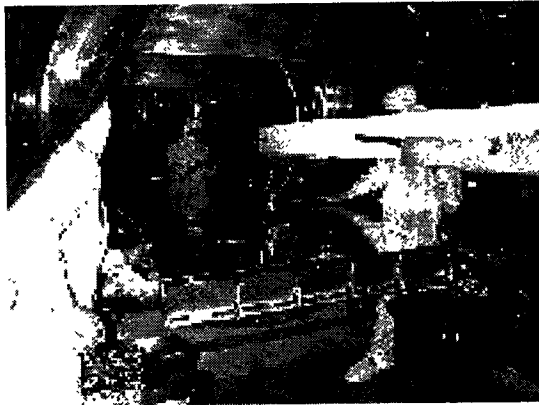


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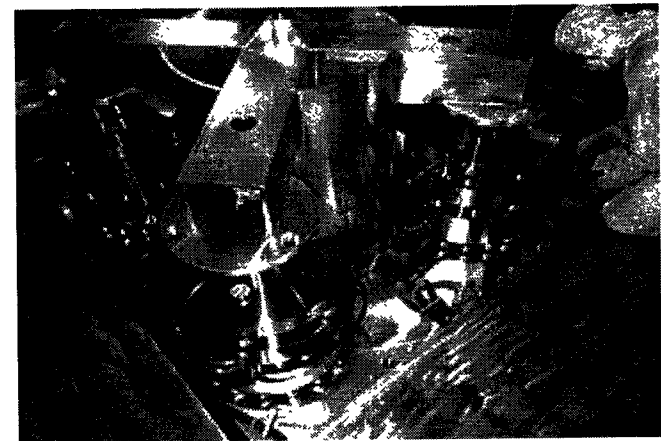
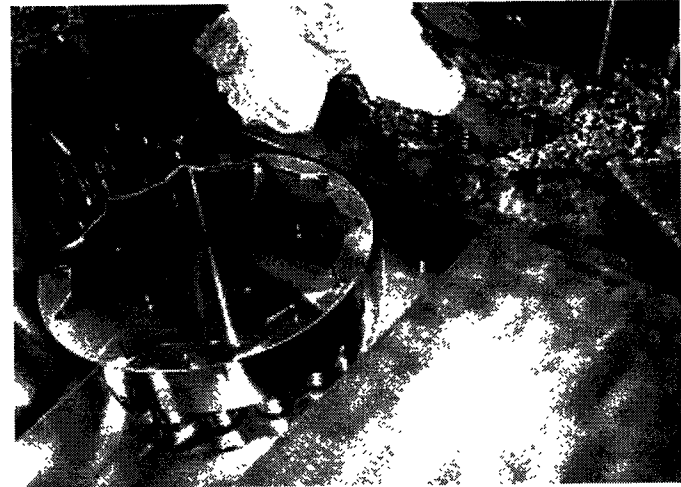


BSC DOWNTUBE INSTALLATION

SEISMIC ISOLATION INSTALLATION



HAM7 Installation



BSC4 Stack Installation

SEISMIC ISOLATION INSTALLATION

- Look Ahead

- ››2k---2 mid stations BSC chambers and final touches for the Actuation Stages

- ››4k---Overlap HAM & BSC Installations

- ››LLO---working concurrently with LHO; Seismic Liason for LLO was here to observe installation work; LHO personnel will be traveling to Livingston to offer assistance and ensure that installation crew is not working from “scratch”

- Conclusion

- ››no show stoppers

- ››importance of 1st Article Tests

- ››improve w/ each installation