

# **Seismic analysis of Integrated Vacuum Vessel of LIGO-India Vacuum Integrated System Test Assembly (LI-VISTA)**

## **Abstract**

LI-VISTA facility being developed at IPR Gandhinagar which consist of Vacuum vessel of 10 m x 2 Nos. Bellows, dished end, Large Size (1250 mm) Gate Valve & Vacuum Equipment & 80K Cryopump etc. A seismic analysis has to perform to identify the various possible cause of damage and fail safe analysis of integrated assembly. Seismic analysis involve the calculation as per standard code (IS or equivalent) & FE based analysis using ANSYS.

The Project work Involve followings:

1. Study the Existing Integrated Vacuum vessel
2. Calculation as per seismic codes
3. FE modelling & simulation of Vacuum vessel

This project also include modelling in solid work/Design Modular or Space claim, FE Analysis using ANSYS, Report drafting.

## **Academic Project Requirements:**

**1) Required No. of student(s) for academic project: 1**

**2) Name of course with branch/discipline: B.E./B.Tech. Mechanical Engineering**

**3) Academic Project duration:**

**(a) Total academic project duration: 12 Weeks**

**(b) Student's presence at IPR for academic project work: 4 Full working Days per week**

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