

**Title:** Vibration Testing of AIP Components (10 tests)

**Duration:** 10 months

**Objectives:**

- Evaluate the vibration characteristics and qualification requirements of AIP valves, instruments and equipment (151 components grouped into 10 test setups) using the 30-ton, 4 m x 4 m tri-axial shake table.
- Determine the resonant frequencies and dynamic response characteristics of the test specimens.
- Assess the vibration endurance and operational reliability of AIP components under simulated vibration conditions.

**Progress Highlights:**

- Completed vibration qualification testing of 5 out of 10 AIP component test setups using the 30-ton, 4 m x 4 m tri-axial shake table.
- Conducted sweep sine tests in X, Y and Z directions to identify the resonant frequencies of the test specimens.
- Performed vibration endurance tests over the specified frequency and acceleration ranges.
- Evaluated the dynamic behaviour and vibration performance of AIP valves, instruments and equipment under simulated vibration environments.

**Future Programme:**

- Complete vibration qualification testing of the remaining 5 AIP component test setups using the 30-ton, 4 m x 4 m tri-axial shake table.

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