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CSIR - STRUCTURAL ENGINEERING RESEARCH CENTRE
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
(Council of Scientific & Industrial Research)
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TEST COMPLETION CERTIFICATE

4th November, 2026

Project Number: CNP 6799
Title: Shake table testing of seismic support system
Client: M/s. PLOUTOS INTEGRATED SOLUTION PRIVATE LIMITED

The seismic qualification tests were carried out on the **Shake table testing of seismic support system** at CSIR–Structural Engineering Research Centre (CSIR-SERC), Chennai, using the 30-tonne, 4 m × 4 m tri-axial shake table. The following tests were performed:

1. Resonance Search Tests: Sweep sine tests were conducted independently in three orthogonal directions (X, Y and Z) over a frequency range of 1–50 Hz with a constant peak base acceleration of 0.1g to identify the resonant frequencies of the test specimen.

2. Seismic Qualification Tests: Seismic tests were conducted in accordance with IS 1893 (2016) by simultaneously applying earthquake excitations in all three orthogonal directions (X, Y and Z). The tests covered seismic excitation levels corresponding to Seismic Zones II to V of IS 1893 and beyond, up to a peak ground acceleration (PGA) of 0.45g, to evaluate the performance of the seismic support system under progressively increasing earthquake intensities.

Results and Qualification: The seismic support system successfully withstood the applied seismic excitations, including the highest test level of 0.45g PGA. Post-test visual inspection revealed no breakage of structural components, loosening of connections or fasteners, detachment of parts or visible permanent (plastic) deformation. The structural integrity of the seismic support system was maintained throughout the testing.

Based on the tests performed and the observed performance, the seismic support system has successfully qualified for seismic excitation levels corresponding to Zones II to V under the specified test conditions. The qualification is only applicable to the tested configuration and the seismic excitation levels considered in the study. Detailed test results are provided in the test report.

Mohit 04/11/2026

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