

Title:

Condition Assessment of Ottappalam Municipality Bus Stand Shopping Complex, Ottappalam, Palakkad, Kerala and Recommendation for repair measures – **SSP-43841**

Deliverables

The healthiness of Civil RCC Structures of Ottappalam Municipality Bus Stand Shopping Complex is studied by carrying out NDT and PDT and recommendation for repair and strengthening measures of affected structures to put the structures back into use.

Significant Achievements:

The condition assessment of the Ottappalam Municipal Bus Stand Shopping Complex Building was undertaken at the request of Shri K. N. Sankaran, Kunnath Madom, Ottappalam, Palakkad District, PIN – 679101, in compliance with the directions of the Hon'ble High Court of Kerala issued through its order dated 11 July 2025 in W.P.(C) Nos. 22067/2025 and 21959/2025.

The assessment was carried out by CSIR-SERC using a combination of visual inspection, Non-Destructive Testing (NDT), and Partially Destructive Testing (PDT) techniques. The NDT programme included Rebound Hammer (RHN) and Ultrasonic Pulse Velocity (UPV) tests, while the PDT programme involved the extraction of concrete core samples for determining the in-situ compressive strength of concrete and the collection of concrete powder samples for pH and chloride content analysis. In addition, a Half-Cell Potential Test was conducted to assess the corrosion potential of the embedded reinforcement.

Based on the visual inspection, the primary RCC structural members of the building were found to be generally in good condition. However, localized damage was observed in certain non-structural components, particularly in the corridor areas. The results of the NDT and PDT investigations indicate that the concrete in the structural elements possesses good integrity and uniformity. Nevertheless, signs of deterioration were observed in some non-structural components, as well as in a few primary columns and beams, which require repair and rehabilitation measures. To ensure the continued serviceability, durability, and long-term structural safety of the building, periodic inspection and timely maintenance of the identified distressed components are recommended.

Team:

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Date: