

Special Service and Features



Director General, CSIR and Secretary DSIR inaugurates Climate Resilient Building and Sustainable Precast SECROBuilT house at CSIR-SERC Chennai

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Dr.(Mrs.) N. Kalaiselvi, Director General, Council of Scientific & Industrial Research (CSIR) and Secretary DSIR inaugurated the Climate Resilient Building and Sustainable Precast SECROBuilT House at CSIR-Structural Engineering Research Centre (CSIR-SERC), Chennai, on 12 April 2025.



Dr. M. Ravichandran, Secretary, Ministry of Earth Sciences, Shri Mahendra Kumar Gupta, Joint Secretary, CSIR, Dr. N. Anandavalli, Director, CSIR-SERC, Dr. K.J. Sreeram, Director, Central Leather Research Institute (CSIR-CLRI), Prof. Venu Gopal Achanta, Director, CSIR-National Physical Laboratory (CSIR-NPL), Dr. Anirban Pal, Head, Central Planning Directorate, CSIR, were also present during the inaugural ceremony.



The climate resilient building constructed at CSIR-SERC campus is a structural masonry structure of about 500 sq. ft. The building is constructed with eco-friendly interlocking masonry blocks (EIMB) and with thermally efficient lightweight blocks (TELB). For roofing, precast lightweight roof (SECROBuilT), which is developed at CSIR-SERC was adopted. Both the structural masonry technologies address the requirements of climate resilience and seismic resilience.



The EIMB technology uses blocks that are made of industrial wastes like calcium carbide sludge and fly ash constituting 90% of cementitious content and mere 10% cement used for facilitating demoulding. The structural walls constructed using EIMB improves seismic resilience due to mechanical interlocking of the novel geometric configurations and novel bond pattern. The TELB technology uses blocks with EPS core leading to lightweight and reduced thermal conductivity. The structural walls constructed using TELB improves seismic resilience due to the significantly lower seismic mass. The entire building is fitted with thermal monitoring system (TMS). The rooms constructed using EIMB the temperature comfort achieved is around 6⁰C. Thus, two different technologies, one addressing the climate resilience by conservation of natural resources and reduction of carbon footprint, and the other addressing the climate resilience by improving the thermal comfort inside the building were demonstrated in the climate resilient building.

The event concluded with the planting of trees by the dignitaries.

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