

CATEGORY

PROVEN TECHNOLOGY CATEGORY : GHTC-INDIA



PRODUCT / TECHNOLOGY



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Technology Detail

PRE-FABRICATED CEMENT SANDWICH PANELS

Alternate to conventional brick/block masonry wall



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Video

CONTACT DETAILS

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BRIEF

These are factory produced lightweight solid core sandwich panels made of 5mm non asbestos fibre cement boards on both sides as facing sheets and the core material of expanded polystyrene beads, admixture, cement, sand, fly ash and other binding materials in mortar form. The ready to install panels are user friendly alternate to conventional walls. The dimension of panel is 3000mmX610mm-60mm/ 75mm/ 90mm. It is primarily non-load bearing walling panels, which is used in the construction of houses/buildings etc. The product has been developed by the Agency in the year 2011 at Surat, Gujarat.





SALIENT FEATURES

- The system is dry walling system, brings speed in construction, water conservation (no use of water for curing of walling components at site).
- The sandwich panels have light weight material as core material, which brings resource efficiency, better thermal insulation, acoustics & energy efficiency
- Being light in weight results in lower dead load of building & foundation size
- Higher stories can be constructed using structural frames
- Being factory produced, ensure consistent quality
- Durable for about 45 years.

ECONOMIC ASPECTS

Being factory-produced component, the cost competitiveness depends on economy of scale.

SUSTAINABILITY ASPECTS

The panels use fly ash, an industrial waste, have low density with less amount of materials consumed, lower foundation size in buildings, along with high thermal efficiency, make this product sustainable.





SUITABILITY AND AVAILABILITY

- Due to Good Insulation property it is suitable for all zones. Structures can be designed as per local climate and geographical requirements.
- Available at all places. The plant can be installed near the project site if the quantum of product requirement is high.

LIMITATIONS, IF ANY

- The joints of panels with each other need to be perfectly locked by materials (cement, glue, dowel bars, polymer modified mortar etc.) & mechanism (levelling of panels etc.) prescribed by Panel manufacturer
- Cutting/chiselling of panels for openings such as doors, windows, service conduits etc. requires little training & through tools/machines prescribed by Panel manufacturer
- The panels if used as floors/ roofs, shall require screeding concrete of minimum 35 mm thickness with nominal reinforcement/ GI wire mesh for monolithic action to avoid leakage through panel joints
- Multi stories houses/buildings require structural framing system with Steel section/RCC Column, beams etc.





MARKET LINKAGES

- Products are available at factory and can be transport across the Country.

MAJOR PROJECTS

- Navarachana University, Vadodara
- BhagwanMahavir University, Surat
- PithawalaCollege, Automobile -Nexa Godhra, Royal Enfield- Surat, Bardoli – on going
- HBK Contracting Labor camp, Qatar, 500 quarters with G+4 configuration.

CERTIFICATION/INDIAN STANDARD/ ENDORSEMENT

- PAC by BMTPC.
- Panel is covered under CPWD DSR 2021.

