

CATEGORY

PROVEN TECHNOLOGY CATEGORY : GHTC-INDIA



PRODUCT / TECHNOLOGY



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Technology Detail

FIBER CEMENT BOARD WITH LGSF TECHNOLOGY

Alternate to conventional RCC framed /load bearing structure



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Video

CONTACT DETAILS

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everest

BRIEF

Everest Fibre Cement Boards are manufactured from homogenous mixture of ordinary Portland cement treated cellulose fibres, quartz and other select mineral fillers using digitally controlled process. It is manufactured using the Hatschek process and High Pressure Steam Curing (HPSC) technology. It provides dry wall construction for variety of applications in residential, commercial and industrial segments for both Interior and Exterior use.

Light Gauge Steel Framed Structures (LGSF) is based on factory made galvanized light gauge steel components. The components/sections are produced by cold forming method and assembled as panels at site forming structural steel framework of a building of varying sizes of wall and floor. The assembly is done using special types of screws and bolts. LGSF is typically ideal for one to four storey high buildings, especially for residential and commercial buildings & for buildings higher than G+3, it can be used with hot rolled Steel sections. The flooring / slab can be with deck sheet supported on floor joists with in-situ reinforced concrete on the top or in-situ conventional RCC slab.

The sequence of construction comprises of foundation laying, fixing of tracks, fixing of wall panels with bracings as required, fixing of floor panels, fixing of roof panels, decking sheet, fixing of electrical & plumbing services and finally fixing of insulation material & walling panels.

The agency has manufacturing plants for LGSF in Bhagwanpur, Uttarakhand & in Dahej, Gujarat, and for Cement fibre boards in Bhagwanpur, Uttarakhand & one in Nashik District, Maharashtra.



SALIENT FEATURES

- High strength to weight ratio. Due to light weight, significant reduction in design earthquake forces is achieved
- Fully integrated computerized system with Centrally Numerical Control (CNC) machine primarily employed for manufacturing of LGSF sections provide very high Precision & accuracy upto 1 mm
- The speed of construction is very high
- Structure being light, does not require heavy foundation
- Structural element can be transported any place including hilly areas to remote places easily and structure can be erected fast
- Structure can be shifted from one location to other without wastage of materials
- Steel used can be recycled multiple times
- Thermal efficiency, fire rating & acoustics of the building can be designed as per the requirement

ECONOMIC ASPECTS

- Light weight construction with reduced size of foundation & overall economical construction
- Reduces construction time significantly
- Do not require skilled manpower.



SUSTAINABILITY ASPECTS

- Primarily employs dry wall construction, thus reducing water usage
- Steel can be recycled multiple times
- High thermal efficiency can be achieved resulting in reduced cooling load
- The boards have Fly ash as recycled component upto 25%.

SUITABILITY & AVAILABILITY

- LGSF technology is suitable for all climatic conditions & for low and medium height (G+3) houses.
- Technology has been used in extreme cold temperature (in Leh where temp goes up to -20 deg) and extreme hot temperature (Jaisalmer where temperature can go up to above 50 deg. C) as well.
- Technology provider has two plants for LGSF and two plants for Cement Fibre board, and can produce the material in good quantum hence availability is not an issue.

LIMITATIONS IF ANY

- For buildings higher than G+3 & spans above 6 mt, it can be used with hot rolled Steel sections.
- The labors are required to be trained for fabrication/assembly works
- Plumbing & electrical services need to be pre-planned



MARKET LINKAGES

- Available Pan India

MAJOR PROJECTS

- OPGC, Jharsuguda, Orissa (15 Building, G+1) - 1,07,134 sqft, 2017
- NTPC, Dallipali, Orissa (1 Building G+1) - 10,300 sqft, 2017
- IIT Mandi, (25,300 sq.ft., G+2 Structure)
- ITBP/Shiv Nadar Schools, etc.

CERTIFICATION/INDIAN STANDARD/ ENDORSEMENT

- IIT Vetting for various LGSF projects.
- Tested by CBRI, Roorkee and other renowned laboratories for specific tests result like fire, acoustic etc.

