

CATEGORY

PROVEN TECHNOLOGY CATEGORY : GHTC-INDIA



PRODUCT / TECHNOLOGY



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Technology Detail

STAY-IN-PLACE PVC FORMWORK SYSTEM

Alternative to conventional bricks/blocks masonry wall



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Video

CONTACT DETAILS

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BRIEF

Novel wall System consists of rigid poly-vinyl chloride (PVC) based polymer components that serve as a permanent stay-in-place durable finished form-work for concrete walls. The extruded components slide and interlock together to create continuous formwork with the two faces of the wall connected together by continuous web members forming hollow rectangular components. The web members are punched with oval-shaped cores to allow easy flow of the poured concrete between the components.

The hollow Novel Wall components are erected and filled with concrete, in situ, to provide a monolithic concrete wall with enhanced curing capacity due to water entrapment, as the polymer encasement does not allow the concrete to dry prematurely with only the top surface of the wall being exposed to potential drying. The polymer encasement provides crack control vertically and horizontally for the concrete, and provides vertical tension reinforcement thus increasing the structural strength of the wall.



The resulting system is unique and provides substantial advantages in terms of structural strength, durability enhancement, weather resistance, seismic resistance, design flexibility, and ease of construction. Steel dowels are necessary to anchor the wall to the concrete foundation.

Novel offers Pre-finished concrete wall solution, serving the residential, commercial, industrial and agricultural sectors. Unique Concrete Forming Technology in which Components interconnect together to create a finished concrete wall.



SALIENT FEATURES

- Avoids many trades such as mason, painter etc. therefore faster project execution by 20% time saving & 25% labour saving during superstructure construction.
- Plaster-Paint free reduces maintenance cost
- Design Flexibility, Pre-cut components for easy on site-assembly
- Durable, weather proof, clean & hygienic.
- Safe from termite's attack, peel, chip, stains, moulds, fungi, bacteria, insects, rodents.
- Coastal region application due to Waterproof joints
- 200mm Sections with insulation highly suitable for Himalayas extreme cold
- Fast and easy construction.
- No curing is required.
- Formwork is 100% Recyclable hence no generation of waste.
- Unskilled labours can be used for erection at site.
- Better fire resistance & thermal efficiency.

ECONOMIC ASPECTS

- Faster execution by 20% time saving in construction & 25% labour saving during superstructure construction.
- Plaster-Paint free reduces maintenance cost.





SUSTAINABILITY ASPECT

- Contributes to LEED credits and government rebates
- 55-75% recycled content pre-consumer and post- industrial Shear Walls are manufactured using 'R3' extrusion technology as an environmentally friendly product.
- The polymer components contain over 55% recycled content and are recyclable, energy efficient, mould and mildew resistant and non-toxic.
- Energy efficient building envelopes.
- Low life-cycle costs - Product is recyclable.
- There is zero waste while manufacturing Novel Walls as all the manufacturing waste is recycled.

SUITABILITY AND AVAILABILITY

- The polymer components do not decay or deteriorate over a lifespan.
- 200mm Sections with insulation highly suitable for Himalayas extreme cold.
- Novel has over 100,000 Sq. Ft of Manufacturing Facilities in India
- Suitable to all Climatic conditions.
- Availability across the country.

LIMITATIONS, IF ANY

- Erection of panels shall be under supervision of trained staff.
- Stay in Place PVC Forms Walls need pre-planned & installed MEP/Services for concealed network.
- Door-Window openings & MEP all needs to be pre-planned before execution.





MARKET LINKAGES

- Pan India Availability.
- Novel has over 100,000 Sq. Ft of Manufacturing Facilities in India.

MAJOR PROJECTS

- Factory, Silvassa
- Residential Structures at Silvassa
- NBCC, Port Blair
- Industrial Building, Toronto
- Penukonda, Andhra Pradesh
- Light House Project (LHP) at Lucknow (under construction)

CERTIFICATION/INDIAN STANDARDS/ENDORSEMENT

- Certified by BMTPC under PACS

