

CATEGORY

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PRODUCT / TECHNOLOGY



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STRUCTURAL STAY-IN PLACE FORMWORK SYSTEM

Alternative to conventional bricks/blocks masonry wall



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Video

CONTACT DETAILS

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BRIEF

It is a patented structural stay in place formwork system known as 'Coffor' to build load bearing monolithic concrete wall structures based on shear wall concept. The formwork system comprises of two filtering grids made of rib mesh reinforced by 'C' channel vertical stiffeners. The grids are connected by rebar which act as horizontal stiffeners and connector which act as a shear link.

The grids on both faces act as sacrificial formwork in which concrete is poured in-situ. After the erection of formwork panels in alignment, corners, edges of doors and windows frame are closed with rebar positioning & concrete of required grade is poured in the panels. The concreting may be done with a pump, bucket or with a shovel loader. The inside and outside walls are finished with cement plaster of suitable grade.

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The panels are prefabricated which when arrive on the constructions site are installed and ready for concreting. The panels are prefabricated according to a structural plan (based on client's architectural plans) designed by structural engineers. Coffor India supplies four types of panels.

- Standard Double panel- to build internal and external wall
- Standard Single panel- for slab shuttering, or as shuttering for RCC wall having thickness more than 350mm
- Fibre Cement Double panel- to build walls and infrastructure projects
- Insulated double panel – to build external walls for hot climatic conditions.



SALIENT FEATURES

- Speedy construction.
- Reduced number of skilled labour required.
- Eliminate shuttering and de-shuttering.
- Earthquake resistant structures.
- Reduce transportation cost.
- No Heavy Machinery Required.
- Cost saving in Reinforcement.
- No repetition required.
- Easy insertion of electrical and plumbing, no need to cut the walls except electrical boxes.
- Improve Concrete Quality.
- Reduce maintenance Cost.

ECONOMIC ASPECTS

- Reduction of site overhead expenses.
- Absence of shuttering & minimal reinforcement requires less cash flow.
- Less man power required. Can be erected with unskilled labour.
- Reduced material wastage and construction debris hence economical.
- Reduction in Maintenance cost.
- No need of heavy machinery.
- Required minimal reinforcement, reduces amount of steel required and its wastage.
- Eliminates de-shuttering activities, as Coffor panels remain in the structure and part of the structure.





SUSTAINABILITY ASPECT

- Scrap generation is very less,
- No hazardous chemical used, no high temperature process involved.
- As Coffor panel consume less volume compare to brick during transportation it saves energy utilization in transportation in form of fuel burn and reduces carbon foot print.
- Heavy machinery, which consume energy and generates high temperature is not required.
- Wood consumption is very minimal and possible to use recycle scaffolding materials.
- Coffor insulated panels provides good thermal insulation.
- Factory made products reduces concrete wastage

SUITABILITY AND AVAILABILITY

- Suitable for all geo-climatic condition.
- Available PAN India.
- It can be used to build all types of RCC structures including load bearing walls and retaining walls.
- Storm water drain - speed of construction at the rate of 100 Rmtr /Day.
- Compound wall - speed of construction at the rate of 100 Rmtr /Day.
- All type of water retaining structures.

LIMITATIONS, IF ANY

- Door and windows position cannot be changed after pouring of concrete.
- Forms are not reusable as compared to conventional materials.





MARKET LINKAGES

- As both Coffor panel and concrete are manufactured all over the country.

MAJOR PROJECTS

- G+3 Building at Telangana (Client –BMTPC)
- G+2 Building at Bihar Sharif (Client– BMTPC)
- Demonstration Housing Project (DHP), Agartala. (BMTPC) (under construction) G+1 Structure.
- Construction of Bunker at Northeast , Military Engineering Services (MES)

CERTIFICATION/INDIAN STANDARD/ENDORSEMENT

- Certified by IIT Mumbai
- Certified by BMTPC under PACS
- Military Engineering Services (MES)
- CSTB, France

