

CATEGORY

BUILDING SYSTEMS



PRODUCT / TECHNOLOGY



Scan QR Code for
Technology Detail

RC PLANKS AND JOISTS SYSTEM

Alternate to conventional roofing system.



Scan QR Code for
Video

CONTACT DETAILS

CSIR- Central Building Research Institute, Roorkee

Contact Person: Shri Ajay Chourasia

Address: SE Division, Roorkee- 247667

Email: ajaycbri@gmail.com

Mob: 9897209050



BRIEF

Reinforced Concrete Planks of size 1900 x 800 x 60 mm are precast structural components for roof, which are supported on joists. The manufacturing process includes oiling of moulds, placement of reinforcement, casting of concrete in moulds and curing.

Once the planks & joists are placed, an in-situ concrete layer with nominal reinforcement is laid on the top of it & smooth finish of floor/roof is provided.

SALIENT FEATURES

- Completely precast component.
- No major machinery required for casting and production of components.
- No special skilled labour required.
- Time saving.
- No requirement of shuttering.
- Best suited for rural areas where shuttering is not easily available.
- Hooks provided at all 4 ends for lifting arrangement.
- Overall 40% economical than conventional roofing system without any compromise on strength and safety.



ECONOMIC ASPECTS

- Economically viable for low-to-medium rise construction and 40% economical as compared to conventional roofing system.



SUSTAINABILITY ASPECTS

- Requires less volume of cement, sand, aggregates and steel with higher level of strength and safety; thus imparting a more sustainable roofing system.

SUITABILITY & AVAILABILITY

- Suitable for all types of climatic conditions.
- Can be manufactured using easily available building materials.
- Widely applicable in rural areas where shuttering is not easily available.
- Can be used in masonry as well as RC frame buildings.



LIMITATIONS, IF ANY

- As a set up with Moulds, machineries etc. are required for producing pre-cast components, a minimum number of houses (specific to project location) are required for making the construction economically viable.



MARKET LINKAGES

- Using specific moulds/ machineris, the components can be manufactured at any place using available building materials. The technology/ know-how is available at CBRI-Rookee.

MAJOR PROJECTS

- Widely implemented in rural regions.
- Delhi State Industrial Development Corporation (DSIIDC) Housing Projects

CERTIFICATION/INDIAN STANDARD/ ENDORSEMENT

- Tested at CSIR-CBRI for load evaluation.

