



31 Jan - 2 Feb 2008 • Mumbai, India
MMRDA Grounds, Bandra-Kurla Complex

CS 10

Housing and Infrastructure Development for Slum-Less Cities & Development Programme (IHSDP), Basic Services for Urban Poor (BSUP)

Date: 2 February 2008

Time: 09.30-11.30

Chair	Dr.H.S.Anand, Secretary Ministry of Housing & Urban Poverty Alleviation, Government of India
Co-Chair	Shri. Swadhin Kshatriya Principal Secretary, Housing, Govt. of Maharashtra.
Presenter	Shri.S.M.Vijayanand Secretary, Local Self Government, Government of Kerala
Presenter	Mr.Stephan Young Sr. Urban and Infrastructure Adviser, DFID India
Presenter	Shri. S. Sridhar CMD / Shri Lalit Kumar, GM, National Housing Bank
Presenter	Shri. Manoj Kumar Parida MD, DSIDC/ Shri. Promod Adlakha
Presenter	Shri. Jockin Arputham President, National Slum Dwellers Federation –
Presenter	Shri. R Subramanyam MD, Andhra Pradesh State Housing Corporation
Presenter	Shri. Dilip Band Municipal Commissioner, Pimpri Chinchwad Municipal Corporation
Presenter	Shri.Vimal Shah Managing Director, Akruti City Ltd., Mumbai
Presenter	Mr.Haneef Keystone Group (Rustomjee), Mumbai





Load Bearing Walls

Shri Pramod Adlakha
Director
Adlakha Associates Pvt. Ltd.

A. Perforated Modular Brick Walls

The Conventional load bearing walls are 230mm thick. The conventional bricks have non-uniform shape, size and strength. The modular bricks are of 200mm thick thus saving about 15% of brick walling. The machine made perforated modular bricks are intended for both structural and facing bricks for architectural effect. They have high compressive strength and low water absorption, lesser size variation, lesser distortion and chip page and are thus more-durable.

The bricks are manufactured with cores by extrusion and wire cut process. The cores not only provide better insulation but also aid in mechanical bond in a wall and easier laying of the units.

B. Flyash (Fal G) Bricks Masonry

Fal-G is a cementitious material which has a composition of flyash 70%, lime 15% and calcinated gypsum 15%. With this technology mechanised bricks are being manufactured using 60% sand, 28% flyash, 6% lime & 6% calcinated gypsum. The lime content can be varied to achieve higher strength of bricks.



Load bearing walls with mechanised perforated modular bricks and flyash bricks

Precast R.C. Plank Roofing & Intermediate Slab

This scheme consists of precast R.C. planks supported over partially precast RC joists of 150 mm width and 150 to 200 mm depth with stirrups projecting out on the top. To provide for Tee-beam effect with the joist, the plank is made partly 60 mm thick. A 100 mm wide tapered concrete fillet is provided for strengthening the haunch portion during handling and erection. The planks have only 3 Nos. 6mm dia bars as main reinforcement and 3mm dia mild steel wire @ 150mm c/c as transverse reinforcement. The in-situ concrete at every joint with 2 no. 6mm dia as negative reinforcement form the flange of the tee beam along with the joists and provide monolithic effect. The scheme is suitable for intermediate floors and roofs or lightly loaded buildings and upto a span of 4.2m. For larger spans main beams shall be provided at suitable spacings to support the partially precast joists.

During the construction, the joists are first erected and propped at mid span. The planks are placed over the joists side by side. After placing reinforcement across the joist, concrete is filled over the joist and the haunches of planks are finished level. After the in-situ concrete has attained strength, the props are removed. No structural deck concrete is provided over the planks.

The maximum weight of a panel is 60 kg. which can be easily handled manually. The roof is designed for composite section. The partially precast joists are designed as Tee beams. The reinforcement in joists is provided as per design depending upon the span, spacing, load and end conditions.