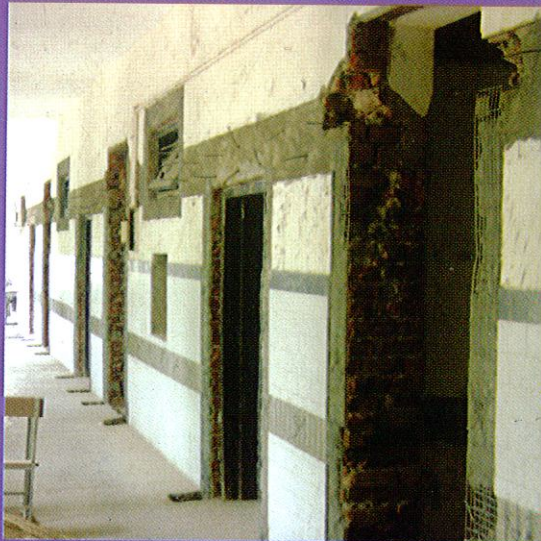
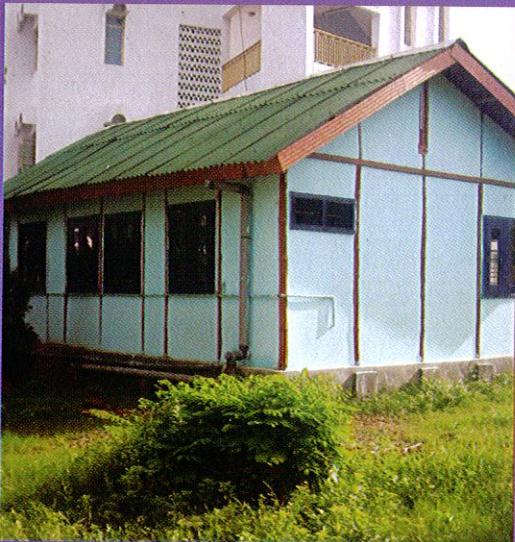
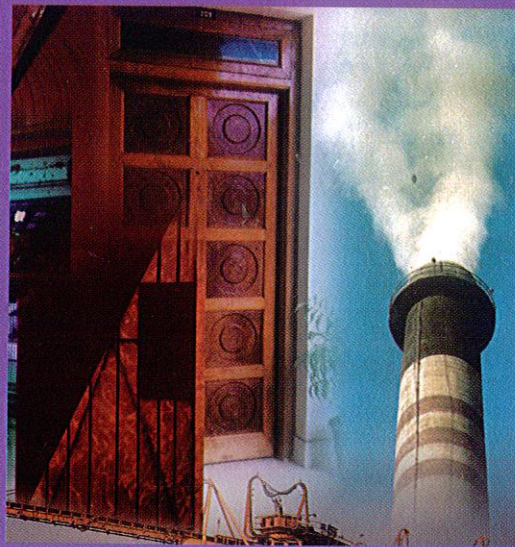
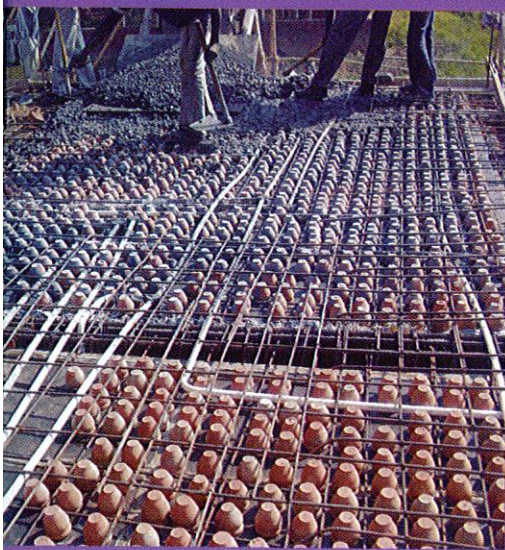




Creating Enabling Environment for Affordable Housing for All



Building Materials & Technology Promotion Council
Ministry of Housing & Urban Poverty Alleviation
Government of India

Established in the Year 1990 as

Inter-Ministerial Organisation under the Ministry of Housing & Urban Poverty Alleviation, Government of India to bridge the gap between laboratory research and field level application of cost-effective, energy-efficient & environment-friendly building materials and construction technologies.



Vision

BMTPC to be world class knowledge and demonstration hub for providing solutions to all with special focus on common man in the area of sustainable building materials, appropriate construction technologies & systems including disaster resistant construction.



Mission

To work towards a comprehensive and integrated approach for promotion & transfer of potential, cost-effective, environment-friendly, disaster resistant building materials and technologies including locally available materials from lab to land for sustainable development of housing.



Objectives

- **To** promote new and innovative building materials and construction technologies for mass scale adoption in housing projects.
- **To** promote manufacture of new waste-based building materials and components.
- **To** promote methodologies and technologies for natural disaster mitigation, vulnerability & risk reduction and retrofitting/ reconstruction of buildings.
- **To** encourage disaster resistant planning of human settlements.
- **To** standardise specifications as far as possible of innovative building materials and construction technologies in housing and building sector that have been accepted to be cost-effective, environmental-friendly and energy-efficient.
- **To** provide technical support, facilitating fiscal support and encouraging entrepreneurs to set up demonstration or production units in different urban and rural regions.
- **Marketing** for technology transfer from lab to land in the area of building materials and construction.
- **Enhancing** skills of skilled, semi-skilled and un-skilled construction workers through capacity building programmes.
- **To** provide technical support to professionals, construction agencies and entrepreneurs for use of new building materials and construction technologies.
- **To** put up demonstration housing projects using new materials and construction technologies.



Major Thrust Areas

- **Providing** affordable housing solutions for all through adoption of innovative construction technologies and systems.
- **Promoting** manufacture and adoption of new and alternative building materials of standard quality.
- **Providing** safer housing in natural hazard prone areas.
- **Coordination** with national and international agencies for developing itself into a world class knowledge center in the housing sector.
- **In-house** expertise development for project appraisals and monitoring.
- **Organising** capacity building programmes on innovative building materials and construction technologies for professionals as well as skilled and unskilled workers.
- **Project** appraisal, monitoring & inspection including quality assurance, MIS.



Technologies Developed/Promoted

Walling Blocks/Systems

Micro Concrete Roofing Tiles

Micro Concrete Roofing (MCR) Tiles are precast tiles. They are a good substitute for clay tiles or sheets as they are strong, durable and economical. They are also energy efficient, eco-friendly, low cost MCR roofing elements can be made from a carefully controlled mix of cement, sand, fine stone aggregate and water. These tiles can be cast in a tile making machine. The MCR technology provides an inexpensive and reliable roof covering and is suited both for urban and rural areas.



Precast Cement Concrete Blocks

Precast Cement Concrete Blocks can be used for masonry work and are a good alternative to clay bricks. They can be used in areas where bricks having adequate strengths are not available locally. These blocks have the advantage of being cast either solid or hollow, depending upon the requirements. They can be cast in strengths varying from 35 to 150 Kg/cm². Typical dimensions of these blocks can be 400x200x200mm. These blocks are made out of cement and aggregates; the proportions varying as per the strength requirements of the masonry work. The blocks can be cast manually or by the use of a machine.



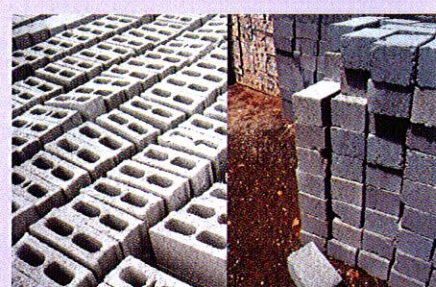
Precast Concrete Stone Masonry Blocks

Precast Concrete Stone Masonry Blocks can be used in locations where stones are available in the surrounding areas, especially in the hills. They can be made out of stones of varying sizes ranging from 50mm to 250mm, bonded together with a lean cement concrete mix. The volume of the stones occupying these blocks can be 25-30%. Typical dimensions of the blocks can be 300x200x150mm. The blocks can be cast in strengths ranging from 35 to 100 Kg/cm². They can be cast manually or with the help of a machine.



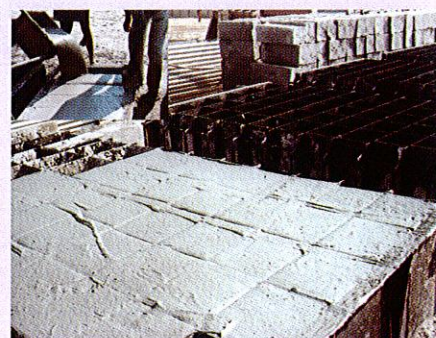
Hollow and Solid Light-weight Concrete Blocks

Hollow and Solid Lightweight Concrete Blocks are yet another alternative to clay bricks. They can be produced from wastes such as sintered flyash, light weight aggregates or bloated clay light-weight aggregates. Air entraining admixtures can also be used in the manufacture of these blocks for reduction in weight. They can be manufactured by hand or by the use of machines. Hollow load bearing blocks can have a compressive strength ranging from 50 to 70 Kg/cm², whereas solid load bearing blocks can have compressive strengths ranging from 85 to 125 Kg/cm².



Cellular Light-weight Concrete Blocks

Cellular Light-weight Concrete Blocks can be used as an alternative to the burnt clay bricks both for load bearing and non load bearing masonry works. The density of these blocks can be between 1200 Kg/m³ and 1800 Kg/m³ for load bearing walls and between 800 Kg/m³ and 1200 Kg/m³ for non load bearing walls. The materials for production include cement, silica, pozzolana, foaming agents, additives and admixtures. Blocks of varying sizes of upto 600x300x250mm can be manufactured for use in masonry works. Depending upon the desired physical properties of the finished blocks, the concrete mix design can be altered. They can be manufactured with the help of block manufacturing machines, specially made for the purpose.

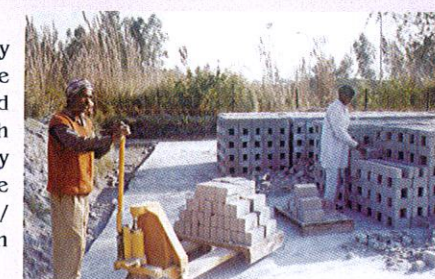


Technologies Developed/Promoted

Walling Blocks/Systems

Flyash Lime Bricks

Flyash Lime Bricks are a good substitute for the burnt clay bricks, especially in areas where flyash is available within a reasonable distance of the production area. These bricks are manufactured out of flyash, sand and lime. Additives like gypsum or sand can be used to derive early strength and colour. Standard modular sized bricks of size 190x90x90mm can easily be produced by hand moulding or with the help of machines. Flyash Lime Bricks can have compressive strengths of 50 Kg/cm², 75 Kg/cm², 100 Kg/cm² or more. Such bricks are compact and uniform and can be made with or without a frog.



Rat Trap Bond for Brick Masonry Walls

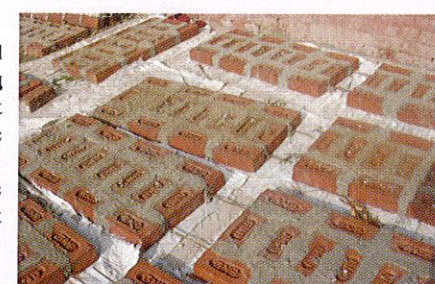
Rat Trap Bond for brick masonry is an alternative bond to the conventional English or Flemish Bond, generally adopted in construction. In this type of bond the bricks are placed on edge in 1:6 cement mortar, and a cavity is created. The adoption of this bond entails a reduction in the cost of walls upto the extent of 25% when compared with the 23 cm thick English Bond wall. No plastering of the outside face of walls is required and the wall becomes aesthetically pleasing. The air gaps created within the wall, helps make the house thermally comfortable. The number of bricks and mortar required per cubic metre of brickwork also gets reduced. It is specially advantageous in low cost housing construction.



Flooring/Roofing Systems

Brick Panel Flooring/Roofing System

Brick Panel Flooring/Roofing System is a good alternative for the conventional RCC slabs. Brick panels of upto 1.1m can be cast on ground, by placing bricks in the required pattern and filling the spaces with mortar or cement concrete. Two steel bars run through each of the panel. These panels are placed on Partially Precast RCC joists placed across the walls of the room. In-situ concrete is finally laid over the panels to get an even surface. The system has the advantage of ease of construction, speed and economy. It is more advantageous in areas where good quality bricks are available locally.



Precast RC Planks and Joist System for Floors/Roofs

Precast RC Planks and Joist System can be adopted for floors/roofs in place of in-situ RCC slabs. RC planks are cast in M20 concrete with thickness of partly 3 cm and partly 6 cm. The width is normally kept as 30 cm and the maximum length as 150 cm. The main reinforcement consists of 3 bars of the required diameter and the cross reinforcement consists of 6 mm dia bars at 20 cm centers. The joists are of 15 cm square, having 3 bars as main reinforcement at bottom and 1 bar at top, which protrudes 3 cm above the concrete of the joist. Triangular stirrups are placed at regular intervals as per design. The joists are also cast in M20 concrete. The planks are placed on partially precast RCC joists placed across the walls of the room. Negative reinforcement is then placed in the haunches and in-situ concrete is finally laid over the panels to get an even surface. Normal flooring or waterproofing treatment can then be provided. The advantages lie in speed, conservation of cement and steel and economy in construction.



Precast Reinforced Concrete L-Panels for Roofs

Precast Reinforced Concrete L-Panels for Roofs are elements in the shape of 'L' which can be used for sloping roofs. It consists of full span monolith rib and flange to act as purlin and sheet. Spans of upto 4 meters can be covered by the use of L-Panels. The width of the panel is so chosen so as to give maximum economy; a typical width may be 60 cm. Main reinforcement consists of one bar of required dia at the bottom of the rib of the panel. Reinforcement for the flange is designed to withstand the temperature and handling stresses. The L-Panels can be cast in well seasoned good quality timber, FRP or plastic moulds.



Technologies Developed/Promoted

Flooring/Roofing Systems

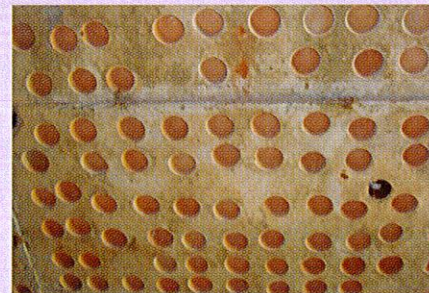
Ferrocement Roofing Channels

Ferrocement Roofing Channels are prefabricated thin walled concrete elements of semi-circular shape, having slender element shell structure. They can be used for covering large spans of upto 6m without any intermediate support. They are also suitable for earthquake prone areas. These units can be cast out of cement and sand in the ratio 1:2. The reinforcement consists of welded wire mesh, chicken mesh and steel bars. Casting can be done manually or by the use of machines made for the purpose. The advantages lie in construction speed, savings in cement and steel and economy in construction cost.



Filler Slab for Roofing

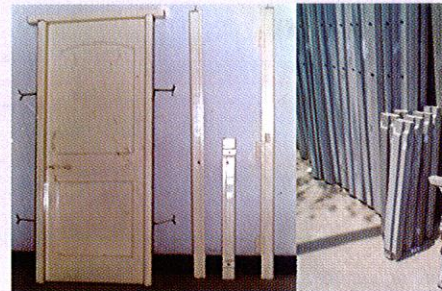
Filler slab for roofing is a cost-effective roofing system which is based on the replacement of concrete portions in a slab by alternative materials. The material used as a replacement include bricks, tiles, cellular concrete blocks etc. The system is based on the principle that, the upper portion of the concrete slab is subjected to compressive forces and the lower part of the slab experiences tensile forces. Accordingly, the bottom portions of concrete can be replaced by filler materials. The adoption of filler slabs result in reduction of dead weight of the structure as well as cost.



Doors & Windows

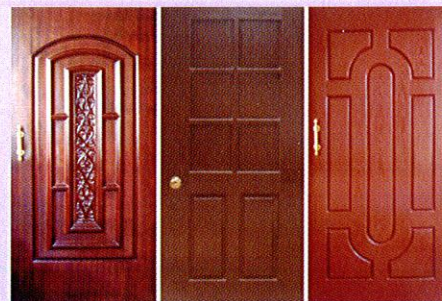
Precast RC Door and Window Frames

Precast RC Door and Window Frames are a good alternative to the traditional timber frames. They are more suitable for wet areas as they are resistant to termite and fungus. They are higher resistant to fire as compared to the wooden frames. The size of the frames can be 60x100mm or 70x75mm for single door shutters and 60x120mm for double door shutters. The frames can be cast in cement concrete with a minimum steel reinforcement of 6mm dia bars or about 1.5% of the cross section of the member, whichever is more. The vertical and horizontal members of the frame can be cast as one piece or in separate pieces. Arrangements for fixtures and fittings have to be made in the frames while casting the members.



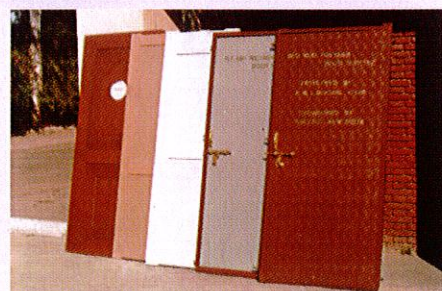
Glass Fiber Reinforced Polymer Door and Window Frames

Glass Fiber Reinforced Polymer Door and Window Frames can be used in place of the conventional wooden frames. They offer the advantages of being sturdy, longer lasting and bright finish. These frames can be made in machines, the technology for which has been transferred to many entrepreneurs in the country. Glass fiber, phenol formaldehyde resin, secondary species of timber are used in the manufacture of the frames.



Red Mud Polymer Door Shutters

Flyash/Red Mud Polymer Door Shutters are a good substitute for the conventional timber shutters. These shutters are manufactured out of red mud/flyash, sisal fiber, phenol formaldehyde resin. By its use flyash and red mud are utilized, both of which are industrial wastes. Shutters having different pattern and designs can be custom made to suit the requirements of the customer.



Technologies Developed/Promoted

Doors & Windows

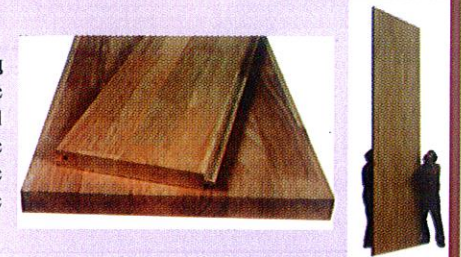
Ferrocement Door Shutters

Ferrocement Door Shutters can be conveniently used in place of a wooden door shutters. They are economical and especially suitable for wet areas as they are not prone to termites and fungus. Ferrocement is a composite material consisting of rich cement sand mortar normally in 1:3 or 1:2 proportions, having mild steel bars and one or more layers of chicken/wire/expanded mesh. They can be made as paneled or flush as per the requirements. The fixing of the shutters can be done on hinges or on pivots. The shutter can be painted to get the desired colour.



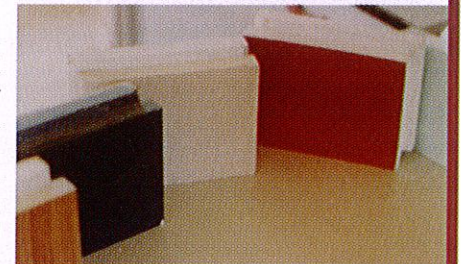
Rubber/Poplar Wood Flush Door Shutters

Rubber/Poplar Wood Flush Door Shutters are made out of quick growing plant-wood of rubber wood, poplar wood and other soft woods. These woods in combination with thermoplastic and thermosetting resins and adhesives can be used for the production of the door shutters. These shutters are manufactured in machines made for the purpose. They are especially economical and useful in areas where such woods are available locally.



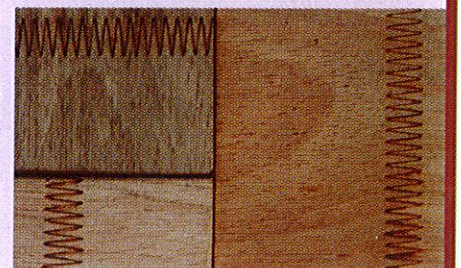
Fibrous Gypsum Plaster Board

Fibrous Gypsum Plaster Boards are made out of gypsum plaster and sisal, coconut, jute or other fiber such as glass etc. These boards can be used as covering material for walls, ceilings and partitions in normally dry environments in a building. They are light weight when compared with other boards of similar nature and have high fire resistant properties. Natural fibre boards can be square or rectangular in shape having lengths of upto 1800mm, widths upto 1200mm and a thickness of 12mm. Glass fibre boards can have lengths upto 3000mm with thickness ranging from 4mm to 12mm.



Finger Jointing & Shaping Technology

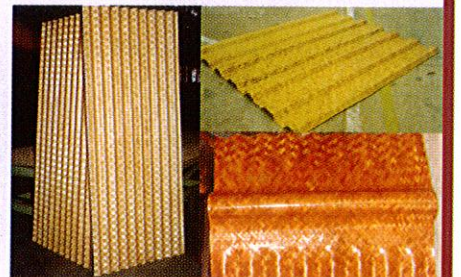
Plantation timbers such as eucalyptus, poplar and rubber wood generally have the limitation of short lengths and small cross sections. Finger jointing of such timbers helps in overcoming such problems. Finger jointing and shaping technology helps in having a number of sloping fingers in the wood, which get interlocked when glued together. The durability of the timbers can be enhanced through treatment with appropriate eco-friendly preservative chemicals. These joints can be made out of machines made for the purpose.



Bamboo Based Technologies

Bamboo Mat Corrugated Roofing Sheets

Bamboo Mat Corrugated Roofing Sheets are a good substitute for asbestos cement or galvanised iron roofing sheets. They are specially useful in areas where bamboo is available locally, although they can also be transported over long distances. They can be manufactured by the use of bamboo, polymeric resin, chlorinated hydrocarbons, cashew nut shell liquid and protection coating against water. The sheets are manufactured in machines which are available in the market.



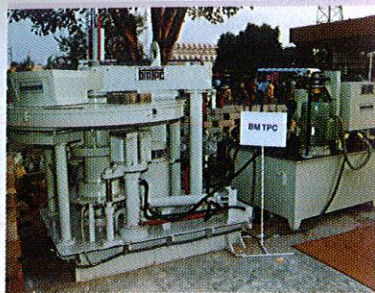
Two Storey Bamboo Housing System

Two storeyed economical houses can be constructed in areas where bamboo is locally available. Bamboo based components such as bamboo columns, bamboo grid walls, bamboo mat corrugated sheets for roofing, bamboo composite beams with steel and bamboo and bamboo composite slab can be used in the construction of a house. These houses are fast to construct and utilize local building materials.



Machines Developed/Promoted

Bricks & Block Making Machines



Alternate Station Hydraulic Brick Press for production of clay/clay flyash/flyash sand lime/clay cement bricks.



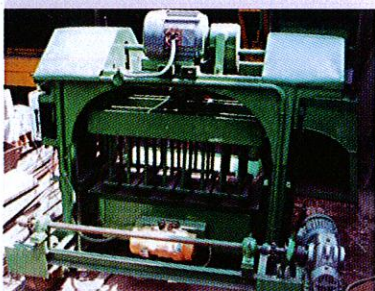
Solid/Hollow Concrete Block Machine (Standing Type) for production of solid and hollow concrete blocks, concrete bricks for walling where space constraints are there.



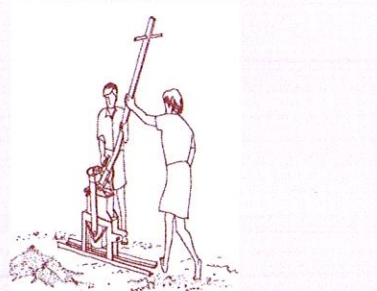
Compressed Earth Block Machine (Hydraform) for production of interlocking type compressed earth blocks and flyash-lime-gypsum blocks.



Solid/Hollow Concrete Block Machine (Handheld Type) for production of solid/hollow concrete blocks which are used as an alternative to bricks.



Solid/Hollow Concrete Block Machine (egg laying type) for production of all types of concrete blocks including solid and hollow blocks of different shapes and sizes.



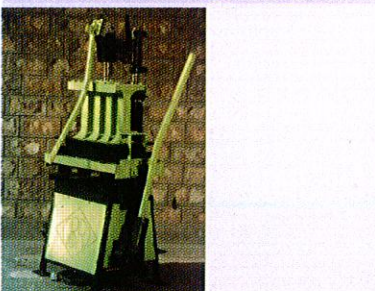
Compressed Earth Block Machine (Mardini) for production of stabilised mud blocks, fine concrete blocks and steam cured blocks for walls.



Bi-Directional Vibro Press for production of concrete bricks/solid or hollow blocks, flyash concrete bricks/solid or hollow blocks and paving tiles.



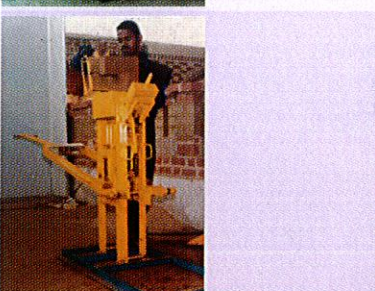
Concrete Block Machine (Sakar) for production of all types of concrete blocks including solid and hollow blocks of different shapes and sizes.



C-Brick Machine for production of bricks/blocks/tiles from sand-lime, flyash-sand-lime, flyash-sand-cement and cement-sand-aggregates.



Ferrocement Wall Panel Machine for production of ferrocement panels which are used as an alternative to brick infill walls.



Compressed Earth Block Machine (Balram) for production of compressed soil blocks for walls to make strong and durable buildings.



Precast RCC Plank Machine (egg laying type) for production of precast RCC roofing planks which are used as an alternative to RCC slabs.

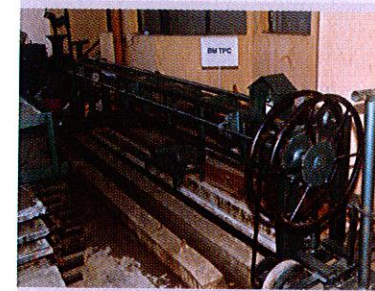
Machines Developed/Promoted



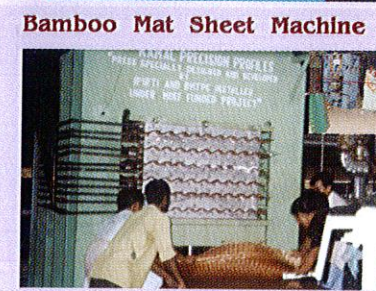
Precast RCC Plank Machine for production of precast RCC roofing planks which are used as an alternative to RCC slabs.



Machine for production of precast L-panels which are used as an alternative to RCC slabs.

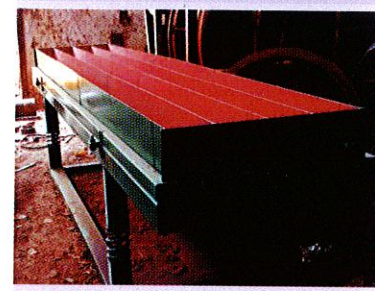


RCC Joist Casting Machine (egg laying type) for production of precast RCC joists which are used as an alternative to timber and steel joists.



Bamboo Mat Sheet Machine

Hot Press for production of Bamboo Mat Corrugated Roofing Sheets as an alternative to GI and RCC sheets.



Precast RCC Joist Machine for production of precast RCC joists which are used as an alternative to timber and steel joists.

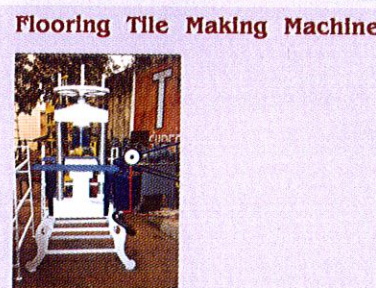


Machine for Door/Window Frames

Precast concrete Door/Window Frame Machine for production of concrete door/window frames as a substitute to timber.

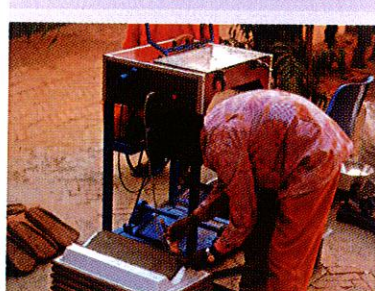


Ferrocement Roofing Channel Machine for production of ferrocement roofing channels upto 6.1m span for roof and inter-mediate floors construction.



Flooring Tile Making Machine

Terrazo/Chequered Tile Machine for production of terrazo and chequered tiles for flooring and walling.



Micro Concrete Roofing Tile Machine for production of micro concrete roofing tiles for any type of roof construction.



Other Machines

TNG Rural Housing Kit for production of building components for a complete house using local materials.

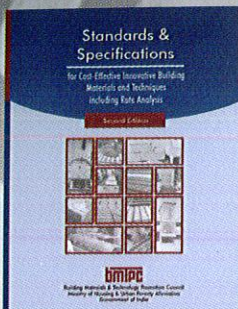


Ferrocement C-Beam Machine for production of C-section beams (rafter) of all sizes up to a span of 3600 mm.



Combination Machine for production of ferrocement C-section, lintels and shelves which replaces similar elements made of steel and timber.

Standardisation & Product Evaluation



Provides technical inputs to various Sectional Committees of Bureau of Indian Standards (BIS), for formulation of Indian Standards on subjects related to civil engineering. Working with BIS, the Council has facilitated formulation of Indian Standards on more than 20 proven technologies. Formulated Working Specifications on following cost-effective innovative building materials and techniques:

BUILDING MATERIALS

BM01	Specifications for Sand Lime / Calcium Silicate Bricks	IS 4139-1989
BM02	Specifications for Flyash Lime Bricks	IS 12894-2002
BM03	Specifications for Clay Flyash Bricks	IS 13757-1993
BM04	Specifications for Clay Flooring Tiles	IS 1478-1992
BM05	Specifications for Burnt Clay Flat Terracing Tiles	IS 2690-1993
BM06	Specifications for Reinforced Gypsum Plaster Boards	IS 8273-2000
BM07	Specifications for Bamboo Mat Corrugated Roofing Sheets	IS 15476-2004
BM08	Specifications for Micro Concrete Roofing Tiles	-

CONSTRUCTION TECHNIQUES

CT01	Specifications for Precast Channel Unit for Floors / Roofs	IS 14021-1994
CT02	Specifications for Precast R.C.C. Planks and Joists for Floors/Roofs	IS 13990-1994
CT03	Specifications for Thin R.C. Ribbed Slab for Floors and Roofs	-
CT04	Specifications for Precast Concrete Waffle Units for Floors / Roofs	IS 10505-1983
CT05	Specifications for Prefabricated Reinforced Concrete L-Panels for Roofs	IS 14242-1995
CT06	Specifications for Precast Doubly Curved Shell Units for Floors/Roofs	IS 6332-1984
CT07	Specifications for Precast Reinforced / Prestressed Concrete Ribbed or Cored Slab Units for Floors / Roofs	IS 10297-1992
CT08	Specifications for Reinforced Brick and Reinforced Brick Concrete Slabs for Floors / Roofs	IS 10440-1983
CT09	Specifications for Prefabricated Brick Panel for Floors / Roofs	IS 14142-1994
CT10	Specifications for Ferrocement Roofing Channels	-

BUILDING COMPONENTS

BC01	Specifications for Precast Solid/Hollow Cement Concrete Blocks	IS 2185-2005
BC02	Specifications for Precast Concrete Stone Masonry Blocks	-
BC03	Specifications for Hollow or Solid Lightweight Concrete Masonry Units	IS 2189-1993
BC04	Specifications for Cellular Light-weight Concrete Blocks	-
BC05	Specifications for Precast Reinforced Concrete Door and Window Frames	-
BC06	Specifications for Ferrocement Door Shutters	-
BC07	Specifications for Precast Ferrocement Water Tanks	IS 13356-1992
BC08	Specifications for Precast Concrete Manhole Covers & Frames	IS 12592-1988

Most of the above specifications have been included in the Schedule of Specifications of Central Public Works Department (CPWD). Several State Government housing agencies in Orissa, Tamil Nadu, Andhra Pradesh, Rajasthan and Kerala have also inducted these new technologies in their Schedule of Specifications.

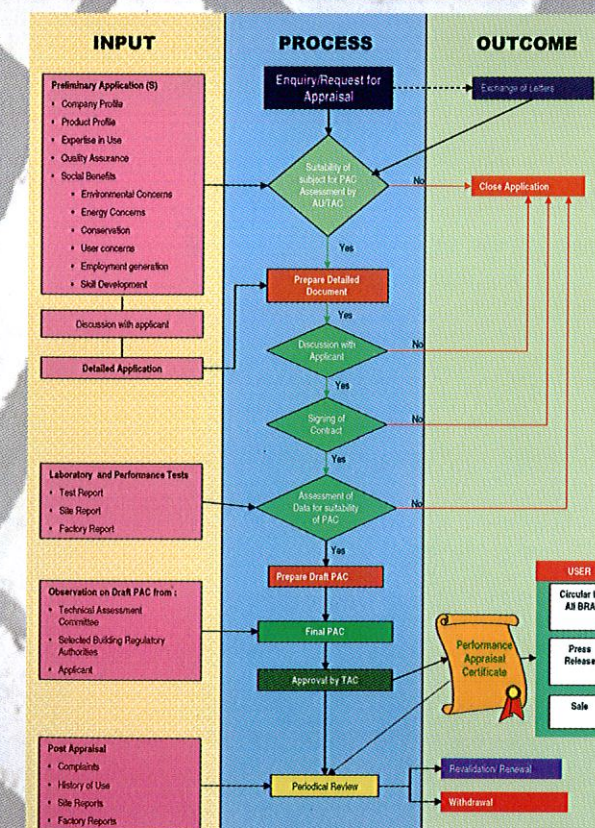
Standardisation & Product Evaluation

To promote use of new materials, construction systems, machines for production of building elements not so far covered by Indian Standards, The Government of India, Ministry of Housing & Urban Poverty Alleviation authorized BMTPC through Gazette Notification No. I-16011/5/99 H-II in the Gazette of India No. 49 dated December 4, 1999 to operate Performance Appraisal Certification Scheme (PACS). PACS is a third party operated voluntary scheme for providing Performance Appraisal Certificate (PAC) to a manufacturer/supplier/installer of a product which includes building materials, products, components, elements and system etc. after due process of assessment.

Formulated to give greater impetus to the new Products and Systems on which standards have not been formulated.

Evaluation done through Technical Assessment Committee (TAC) and the BMTPC Board of Agreement in which Scientific, Technological, Academic, Professional Organisations and industry interests are represented.

Fifteen Certificates Issued so far under PACS
others under process



Gypcrete® Building Panel / Rapidwall® Panel

Name and Address of Certificate Holder: Gypcrete Building India (P) Ltd. 134, Arhant Majestic Towers, 216, Jawaharal Nehru Road, Chennai - 600 107

Performance Appraisal Certificate No. PAC No. 5/2003 Issue No. 1 Date of Issue: 31.01.2003

BMTPC

Building Materials & Technology Promotion Council
Ministry of Urban Development & Poverty Alleviation
Government of India
Core 5A, India Habitat Centre, Lodhi Road, New Delhi - 110 003
Tel: +91-11-2301 9367, 2303 8056, 2303 8097 Fax: +91-11-2301 6145
E-mail: bmtpc@bmtpcindia.org Web Site: http://www.bmtpc.org

Moulded Raised HDF Panel Door Shutter

Name and Address of Certificate Holder: Kalyan Shree and Partners Co Private Ltd. 1145, Pannamulla High Road, Karandla, Chennai, 600 043, INDIA

Performance Appraisal Certificate No. PAC No. 2/2003 Issue No. 1 Date of Issue: 04.07.2003

BMTPC

Building Materials & Technology Promotion Council
Ministry of Urban Development & Poverty Alleviation
Government of India
Core 5A, India Habitat Centre, Lodhi Road, New Delhi - 110 003
Tel: +91-11-2301 9367, 2303 8056, 2303 8097 Fax: +91-11-2301 6145
E-mail: bmtpc@bmtpcindia.org Web Site: http://www.bmtpc.org

Sakar Block Making Machine

Name and Address of Certificate Holder: Sakar Block Making Private. 200/22A, I.B.A., Phase II, Chokkikulathi, Hyderabad - 500 071

Performance Appraisal Certificate No. PAC No. 3/2003 Issue No. 1 Date of Issue: 04.07.2003

BMTPC

Building Materials & Technology Promotion Council
Ministry of Urban Development & Poverty Alleviation
Government of India
Core 5A, India Habitat Centre, Lodhi Road, New Delhi - 110 003
Tel: +91-11-2301 9367, 2303 8056, 2303 8097 Fax: +91-11-2301 6145
E-mail: bmtpc@bmtpcindia.org Web Site: http://www.bmtpc.org

Sakar Pan Mixer

Name and Address of Certificate Holder: Kalyan Shree and Partners Co Private Ltd. 1145, Pannamulla High Road, Karandla, Chennai, 600 043, INDIA

Performance Appraisal Certificate No. PAC No. 4/2003 Issue No. 1 Date of Issue: 04.07.2003

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Ministry of Urban Development & Poverty Alleviation
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HDF Board Expanded Eco-Friendly Solid Core Door Shutter

Name and Address of Certificate Holder: Kalyan Shree and Partners Co Private Ltd. 1145, Pannamulla High Road, Karandla, Chennai, 600 043, INDIA

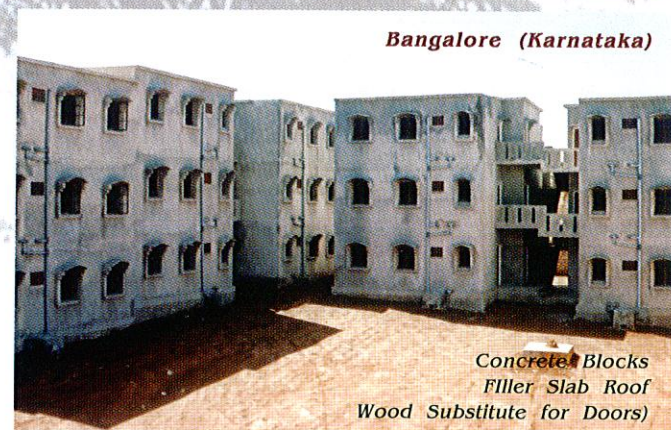
Performance Appraisal Certificate No. PAC No. 5/2003 Issue No. 1 Date of Issue: 04.07.2003

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Field Level Interventions through Construction of Demonstration Houses

For field level application of cost effective technologies, the Council has constructed demonstration houses in several places like Dehradun (Uttarakhand), Bilaspur (Chhattisgarh), Trichy (Tamil Nadu), Nagpur (Maharashtra), Kudalu & Bangalore (Karnataka). In order to further propagate the cost effective, energy efficient, environment friendly technologies, the Council is constructing demonstration structures such as houses, informal markets, school buildings, community buildings etc. in Uttar Pradesh, Harayana, Chhattisgarh, Madhya Pradesh, Jharkhand and Andhra Pradesh.

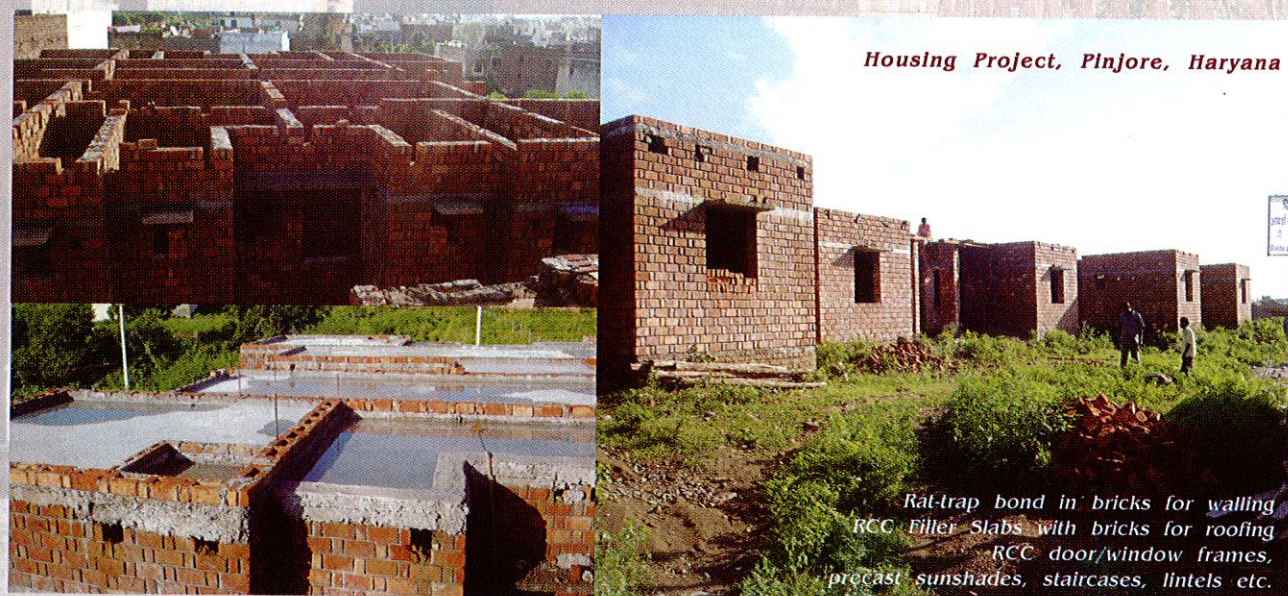
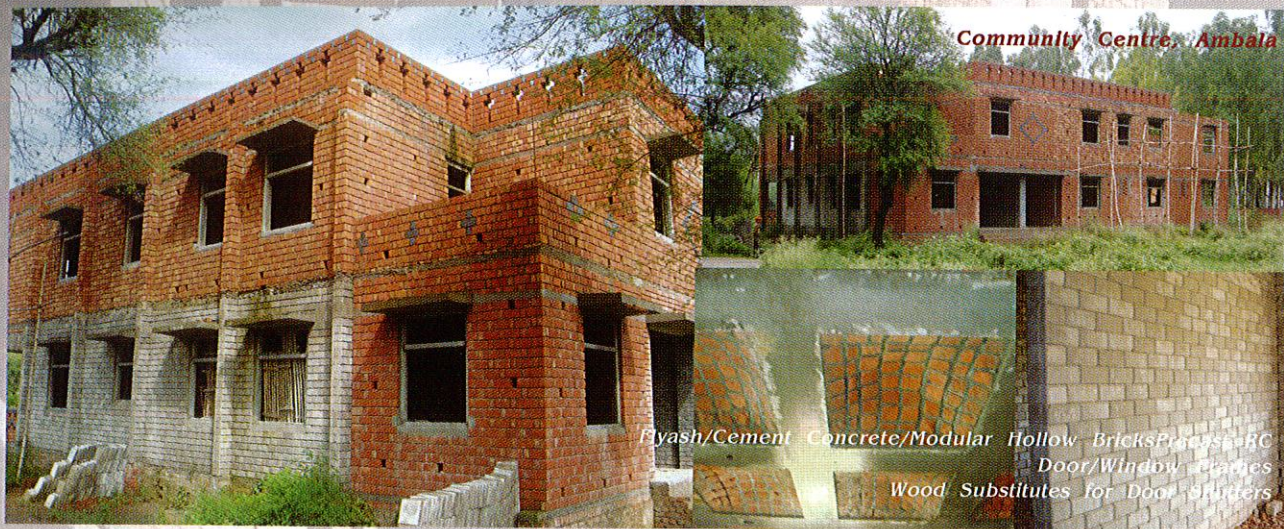


Field Level Interventions through Construction of Demonstration Houses



Field Level Interventions through Construction of Demonstration Houses

Demonstration Construction Projects in Progress



Field Level Interventions through Construction of Demonstration Houses

Demonstration Construction Projects in Progress



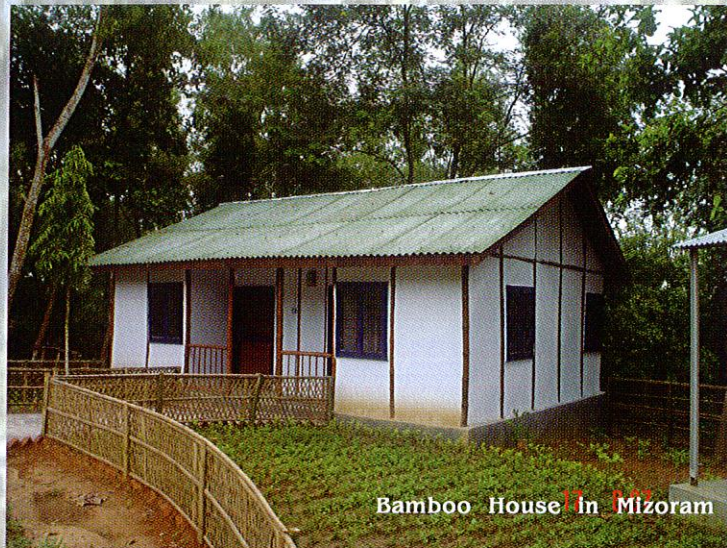
Technical Support to Mass Housing Projects

Encouraging public construction agencies through technical assistance to use cost effective technologies in mass housing projects. The construction of 3164 houses at Bawana, Delhi for Industrial Workers by DSIIDC, Govt. of Delhi has been completed. The new schemes have been initiated for construction of 1892 units in Narela, 1200 units in Borgarh and 1184 units in Bawana by DSIIDC. Greater Noida Industrial Development Authority has also initiated new scheme of 1848 EWS houses at Omicron-II, Greater Noida and 100 EWS houses at Dadra & Nagar Haveli by Omnibus Industrial Development Corporation, Govt. of Daman.

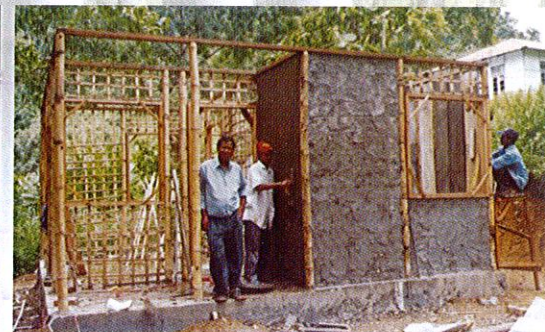


Use of Bamboo in Building Construction

To promote Bamboo as construction material, the Council has taken various initiatives such as construction of demonstration houses in Mizoram, Tripura and Meghalaya, establishment of Bamboo Mat Production Centres in North Eastern Region and Kerala.

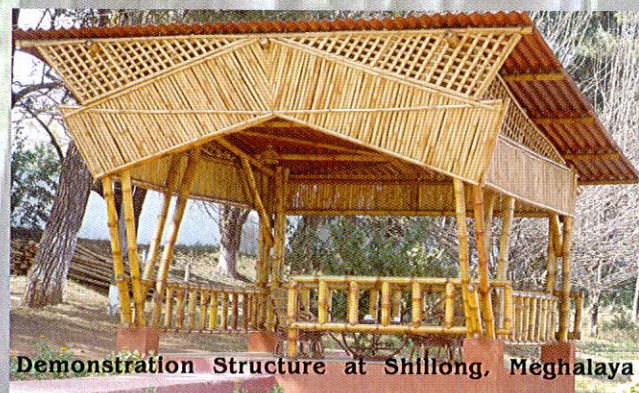


Bamboo House In Mizoram

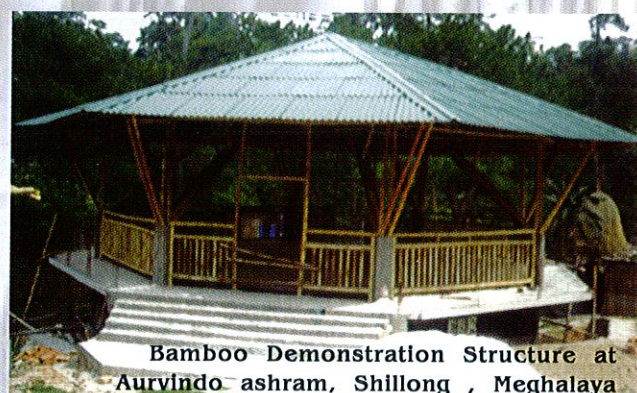


Salient Features of the Structures

- Bamboo posts
- Bamboo grid ferrocement walls
- Bamboo trusses
- Bamboo Mat Corrugated Sheet Roofing & Ridge Cap



Demonstration Structure at Shillong, Meghalaya



Bamboo Demonstration Structure at Aurvindo ashram, Shillong, Meghalaya



Picnic Hut In Mizoram

Use of Bamboo in Building Construction



Bamboo Mat Production Centre In Mizoram



Bamboo Mat Production Centre In Meghalaya

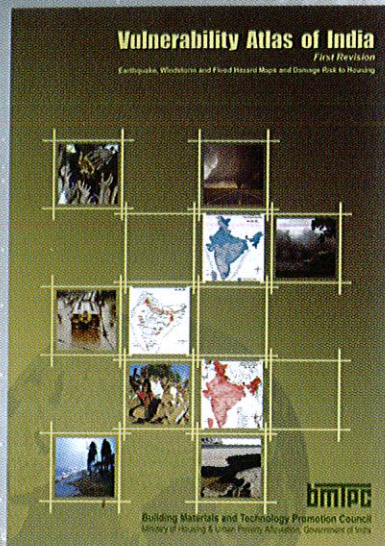


Bamboo Mat Production Centre In Kerala



School Building In Tripura

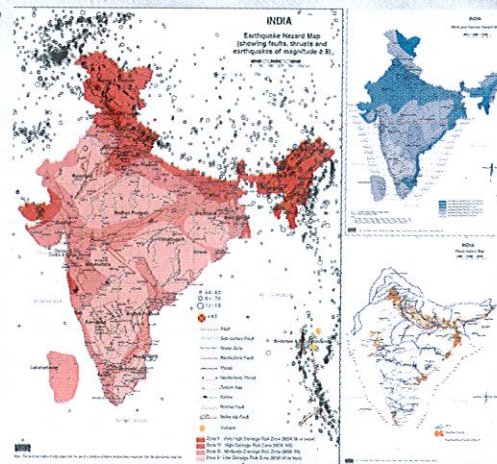
Disaster Mitigation & Prevention



Vulnerability Atlas of India (Updated and Revised)

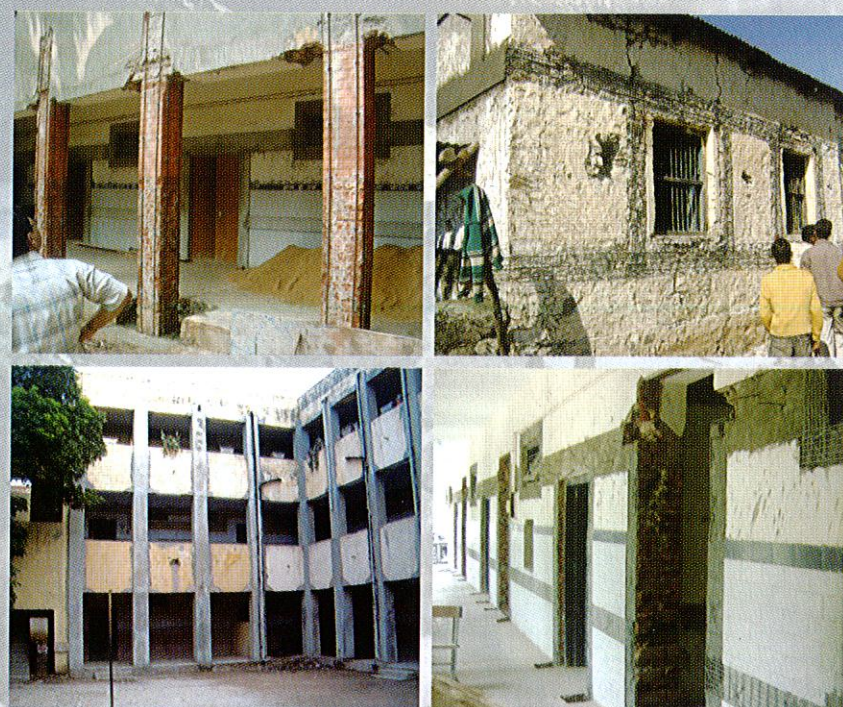
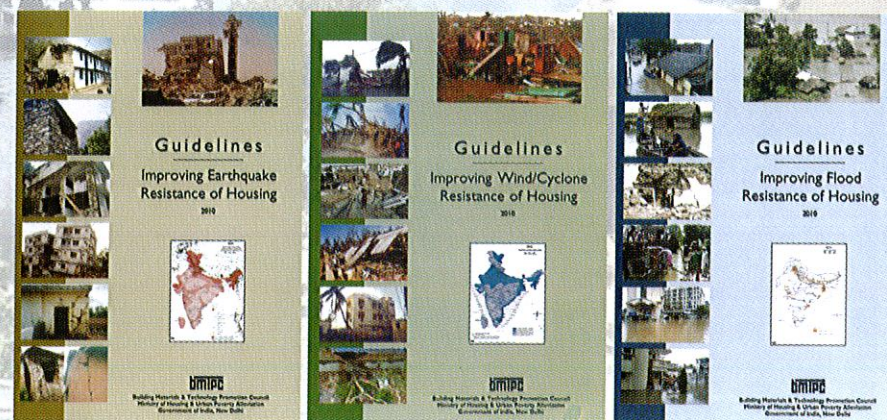
A Tool for Natural Disaster Prevention, Preparedness and Mitigation for Housing and Related Infrastructure

A Must Possess Atlas for All Professionals



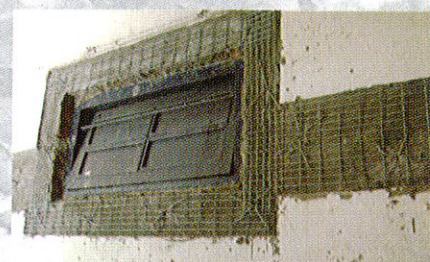
Guidelines, Manuals

Brought out number of Guidelines, Informative Booklets, Manuals, Do's and Don'ts relating to housing in disaster prone areas affected by Earthquakes, Floods, Cyclones, Tsunamis, Landslides etc., for use by the professionals and the common man.



Seismic Strengthening of Buildings

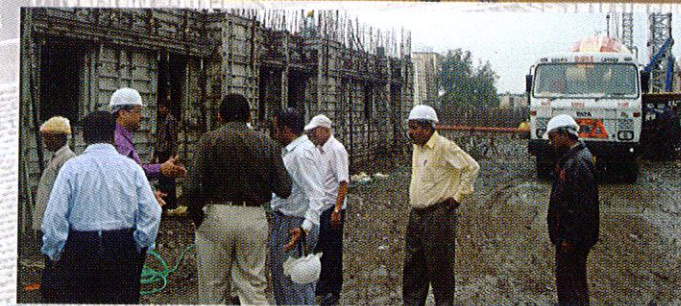
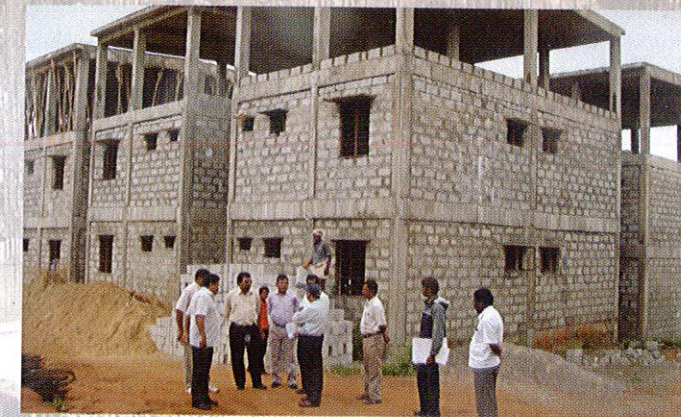
Besides, dissemination of earthquake resistant construction technologies and systems, retrofitting of life line buildings undertaken in Jammu & Kashmir, Gujarat, Uttarakhand and Delhi.



Appraisal and Monitoring

Developed Expertise in Appraisal and Monitoring of Large Scale Housing Projects

The Council is actively involved in the implementation of Jawaharlal Nehru National Urban Renewal Mission (JNNURM). It has been designated as one of the Agencies for appraisal of Detailed Project Reports received under BSUP and IHSDP from identified Mission Cities under JNNURM. The Council has also been assigned the task of Monitoring these projects and capacity building of ULBs and assisted State Govts. in preparation of DPRs, quality assurance & TPIM, project implementation, management, MIS.



Capacity Building

To educate, upgrade knowledge, understanding of decision makers, professionals and construction workforce about new materials, systems and emerging technologies, the Council organises series of Training Programmes, Seminars, Workshops, EDPs, Exhibitions at national and international levels.



Publications

BMTPC brings out priced & unpriced publications and video films for use by the professionals as well as the common man.

Priced Publications

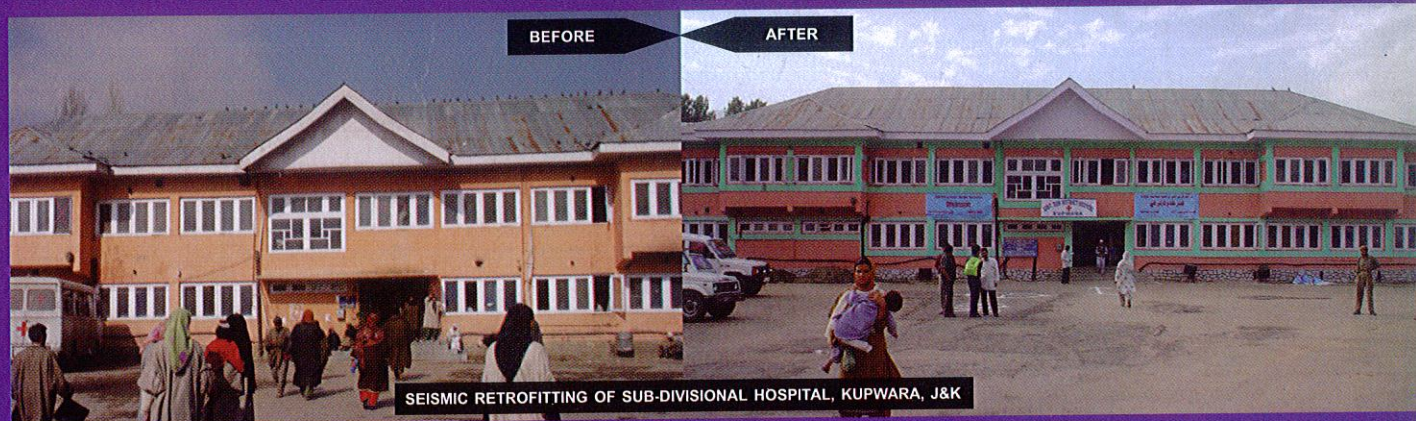
<p>DIRECTORY OF INDIAN BUILDING MATERIALS & PRODUCTS (with information on Nepal, Bhutan & Pakistan) 2009 550 pages, Rs. 1000 + 200 postage</p>	<p>VULNERABILITY ATLAS OF INDIA (First Revision - 2006) - Earthquake, Windstorm and Flood Hazard Maps and Damage Risk to Housing - 900 pages, Rs. 5000 + 200 postage</p>
<p>BUILDING MATERIALS IN INDIA: 50 YEARS - 560 pages, Rs.1500 + 200 postage</p>	<p>LANDSLIDE HAZARD ZONATION ATLAS OF INDIA - Landslide Hazard Maps and Cases Studies - 125 pages, Rs.2500 + 200 postage</p>
<p>HOUSING AND KEY BUILDING MATERIALS IN INDIA - A LONG TERM PERSPECTIVE - 98 pages, Rs. 700 + 75 postage</p>	<p>BUILDING A HAZARD-RESISTANT HOUSE: A COMMON MAN'S GUIDE - 88pages, Rs. 350+75 postage</p>
<p>INSTRUCTION MANUAL FOR APPROPRIATE BUILDING SYSTEMS 64 pages, Rs. 150 + 75 postage</p>	<p>MANUAL FOR RESTORATION AND RETROFITTING OF BUILDINGS IN UTTARAKHAND AND HIMACHAL PRADESH - 134 pages, Rs.250+ 75 postage</p>
<p>BUILDING WITH COMPRESSED EARTH BLOCKS 28 pages, Rs. 60 + 30 postage</p>	<p>GUIDELINES FOR IMPROVING EARTHQUAKE RESISTANCE OF HOUSING - 84 pages, Rs. 350 + 75 postage</p>
<p>STANDARDS AND SPECIFICATIONS FOR COST EFFECTIVE INNOVATIVE BUILDING MATERIALS AND TECHNIQUES INCLUDING RATE ANALYSIS (SECOND EDITION) 200 pages, Rs. 250 + 75 postage</p>	<p>GUIDELINES FOR IMPROVING FLOOD RESISTANCE OF HOUSING - 36 pages, Rs. 200 + 50 postage</p>
<p>DIRECTORY OF CONSTRUCTION EQUIPMENT AND MACHINERY MANUFACTURED IN INDIA - 684 pages, Rs. 1500 + 200 postage</p>	<p>GUIDELINES FOR IMPROVING WIND/CYCLONE RESISTANCE OF HOUSING - 56 pages, Rs.250 + 75 postage</p>
<p>USER'S MANUAL on Production of Cost-Effective, Environment-Friendly and Energy-Efficient Building Components - 116 Pages, Rs. 250 + 50 postage</p>	<p>EARTHQUAKE TIPS - LEARNING EARTHQUAKE DESIGN & CONSTRUCTION 58 pages, Rs.200 + 50 postage</p>
<p>MANUAL ON BASICS OF DUCTILE DETAILING - 27 pages, Rs. 100+50 postage</p>	

Promotional Publications (Plastering)

1. Corporate Brochure - in English and Hindi
2. BMTPC Newsletters
3. Environment Friendly Building Materials & Construction Technologies
5. Grah Nirman Mein Vishesh Savdhaniyan
6. Reconstruction of Earthquake Resistant Houses in Garhwal Region - Guidelines in Hindi
7. Retrofitting of Stone Houses in Marathwada Area of Maharashtra
8. Saste Makan: Vibhinn Vikalp Avam Suvidhain - in Hindi
9. Useful tips for House Builders
10. Local Vegetable Fibres + Industrial & Mineral Waste for Composite materials
11. Machines developed by BMTPC
12. An Introduction to the Vulnerability Atlas of India
13. Performance Appraisal Certification Scheme
14. Catalogue for Machines
15. Green Houses for ITBP at Leh
16. Bamboo - A Material for cost-effective and disaster resistant housing
17. Retrofitting of Hospital in Kupwara, Kashmir, J&K for Safety Against Earthquakes
18. Simple Ways to Earthquake Safety for Jammu & Kashmir - in English and Urdu
19. Bamboo in Housing & Building Construction - Initiatives of BMTPC
20. Disaster Prevention & Mitigation - Major Initiatives by BMTPC.
21. Aam Aadmi Series - House Building Digest (Series 1 to 12)
22. Brochure on Dissemination of Information through Demonstration Construction using Cost Effective and Disaster Resistant Technologies.

Priced Publications may be obtained by sending Demand Draft, drawn in favour of BMTPC payable at New Delhi

*Promoting Cost-Effective Building Materials & Construction Technologies
including Disaster Resistant Practices for last two decades*



Contact Us for All Your Queries on Building Materials, Construction Technologies and Systems, Requirements of Capacity Building, Assessment and Certification of Products, Field Level Demonstration of Cost Effective, Innovative and Disaster Resistant Building Materials and Construction Technologies, Detailed Project Reports, Monitoring of Projects etc.

For further details please contact:



Executive Director
Building Materials & Technology Promotion Council

Ministry of Housing & Urban Poverty Alleviation, Government of India
Core-5A, First Floor, India Habitat Centre,
Lodhi Road, New Delhi-110003
Phone: +91-11-2463 8096; Fax: +91-11-2464 2849
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