



हिन्दी कार्यशाला का आयोजन

श्री आर०के० द्विवेदी, निदेशक राजभाषा, निर्माण भवन, नई दिल्ली की अध्यक्षता में दिनांक 30 मार्च 2017 को बी०एम०टी०पी०सी० कार्यालय सभागार में विभागीय कार्यान्वयन समिति की हिन्दी कार्यशाला का आयोजन किया गया। जिसमें बी०एम०टी०पी०सी० के अधिकारियों एवं कर्मचारियों की बैठक हुयी। जिसमे निम्न पहलुओं पर विचार-विमर्श किया:-

निदेशक महोदय द्वारा नियमित रूप से हिन्दी बैठक कराने का निर्देश दिया। जिससे हिन्दी राजभाषा को और अधिक बढ़ावा मिले एवं माननीय मंत्री जी द्वारा 18 अप्रैल 2017 को गोवाहाटी, असम में होने वाली हिन्दी सलाहकार समिति की बैठक पर विस्तृत चर्चा की गयी। प्रधानमंत्री आवास योजना के तहत बिहार शरीफ में लाभार्थियों को आवास हेतु संबन्धित कार्यक्रम पूर्णतः हिन्दी में किया गया जिससे "क" क्षेत्र को अधिक बढ़ावा मिले, राजभाषा निदेशक महोदय ने इस कार्यक्रम की प्रशंसा की।

बी०एम०टी०पी०सी० के सूचना-पटल को राजभाषा निदेशक महोदय ने द्विभाषी करने का निर्देश दिया अनुपालन हो चुका है। कार्यालय में जनरल आदेश, करारनामा, नोटिंग, रबर स्टाम्प, सभी मानक फार्म एवं सूचनाये हिन्दी में की जा रही हैं तथा वित्त अनुभाग द्वारा जारी किए जाने वाले सभी कार्य एवं चेक पर हिन्दी में हस्ताक्षर किये जाते है। जिसकी राजभाषा निदेशक महोदय ने प्रशंसा की एवं राजभाषा हिन्दी के प्रयोग को और अधिक बढ़ाने के लिए प्रेरित किया।

राजभाषा हिन्दी को बढ़ावा देने की दिशा में कार्यालय द्वारा तकनीकी पहलुओ ध्यान में रखते हुए कार्यालय की वेबसाइट को अधिकतम हिन्दी शब्दों में रूपांतरित किया गया है। इस संदर्भ में हमारी वेबसाइट <http://hindi.bmtpc.org> का अवलोकन से सत्यापित होता है। जिसको निदेशक महोदय ने प्रशंसनीय कदम बताया। कार्यालय के सभी कम्प्युटरों में hindi indic सॉफ्टवेयर के बारे में कार्यकारी निदेशक महोदय ने राजभाषा निदेशक महोदय को जानकारी दी जिसपर निदेशक महोदय ने संतोष प्रकट किया।



Demonstration Housing Project at Bhubneshwar, Odisha

BMTPC is executing a Demonstration Housing Project at Bhubaneshwar, Odisha. Under the project, 32 houses (G + 2) are being constructed. The Housing & Urban Development Department, Government of Odisha has allotted land admeasuring 0.43 acres for construction of demonstration houses. The Demonstration Housing Project is being executed using one of the Emerging Technologies i.e. Expanded Polystyrene Core Panel System (EPS) Technology having minimum carpet area of 23.09 sq.mts. consisting of a bedroom, a multi-purpose room, kitchen Alcove, Separate WC & bathroom (as approved by BDA) including on site infrastructure development like external water supply, pavers, sewerage system and solar street lights, etc. The construction of structure upto first floor have been completed and the work on second floor is under progress.



From the Desk of the Executive Director

Urban renewal being given top priority, the construction industry is experiencing a resurgence in growth, which in turn will have a detrimental impact on the environment. Construction sector uses more than 400 million tons of material a year, many of which have an adverse impact on the environment. The building material, such as concrete, aluminum, and steel, are directly responsible for large quantities of CO₂ emissions due to high embodied energy. Construction activities consume half of all the resources extracted from nature, and account for one-sixth of global freshwater consumption, one-quarter of wood consumption, and one-quarter of global waste. The construction sector contributes to 23% of air pollution, 50% of the climatic change, 40% of drinking water pollution, and 50% of landfill wastes.

With the above data in mind, it is incumbent upon us to make judicious use of materials & go for clean efficient construction technologies & materials. A set of 16 such new systems are assessed, evaluated & certified by BMTPC. They are namely formwork systems, precast steel & concrete construction systems & sandwich panel systems. These systems not only help in faster construction but also optimizes use of cement, sand & steel with improved structural & functional performance. All are encouraged to make use of the information & start using emerging systems before it becomes too late.

Shailesh
(Dr. Shailesh Kr. Agrawal)

औरंगाबाद जागीर, लखनऊ, उत्तर प्रदेश में प्रदर्शन आवास परियोजना का शिलान्यास



श्री राजनाथ सिंह, माननीय गृह मंत्री, भारत सरकार ने दिनांक 3 जनवरी, 2017 को औरंगाबाद जागीर, लखनऊ, उत्तर प्रदेश में "प्रदर्शन आवास परियोजना" का शिलान्यास वीडियो कॉन्फ्रेंसिंग द्वारा किया। बी.एम.टी.पी.सी., उभरती हुई एवं आपादारोधी तकनीकों के अपने प्रयासों को निरंतर प्रदर्शित करने के क्रम में प्रदर्शन आवासों का निर्माण करने की एक योजना उत्तर प्रदेश में औरंगाबाद जागीर, तहसील सरोजनी नगर, लखनऊ में प्रारंभ की है। इस दिशा में 40 घरों (जी+1) के निर्माण हेतु औरंगाबाद जागीर, तहसील सरोजनी नगर, लखनऊ, उत्तर प्रदेश में भूमि का चयन किया गया है। प्रत्येक घर का क्षेत्रफल 380 वर्ग फुट है, उसमें दो कमरे, रसोई, स्नानागार तथा शौचालय की सुविधा है। इस प्रदर्शन आवास परियोजना में आवश्यक संरचना जैसे जल आपूर्ति की लाइने, ट्यूब वेल का निर्माण, जल-मल निष्पादन, बरसाती पानी की निकास नालियां, कंक्रीट की सड़क, इंटरलॉकिंग टाइल की पगडंडी (पेवमेंट्स), बाउंड्रीवाल (चारदीवारी), बाहरी विद्युतीकरण सुविधाएं भी मुहैया करायी जायेंगी। इस प्रदर्शन आवास परियोजना की अनुमानित लागत 360 लाख रुपये के लगभग आयेगी। चाहरदीवारी और पीसीसी का निर्माण कार्य पूरा हो चुका है। इस परियोजना का निर्माण करने का ध्येय इस क्षेत्र में उभरती हुई तकनीकियों को लोकप्रिय बनाना है। साथ ही आस पास के क्षेत्रों में पढ़ रहे इंजीनियरिंग और आर्किटेक्चर के छात्रों तथा राजमिस्त्रीयों को इन तकनीकों में प्रशिक्षण दिया जाएगा।



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Emerging Technologies for Building Construction

INSULATING CONCRETE FORMS

Insulating concrete Forms (ICF) System comprises of a panel of two walls of Expandable Polystyrene (EPS) separated by a nominal distance of 150 mm by hard plastic ties. These are assembled on site to hold reinforced concrete. The forms are open ended hollow polystyrene blocks which fit tightly together to form a shuttering system. Concrete poured into the hollow space to form a continuous wall. When cured, this wall supports the structural loads from floors and roofs, and the shuttering provides thermal insulation. Reinforcing steel shall be as required from design.

Upper and lower surfaces of the polystyrene panels are castellated and the vertical mating surfaces are tongue-and-groove to form a tight fit when joined together. The rigid formwork does not require supporting falsework. The inner surfaces have tapered grooves running vertically and have offset on opposite faces to ensure uniform concrete thickness. They also form locks for end stops. The outer surfaces are grooved vertically at 50mm centres to aid cutting and trimming.

Materials Used

- Expanded Polystyrene (EPS): Shall be self-extinguishing type as per IS 4671: 1984, Density not less than 15 kg/m³
- Polyurethane (PU) Foam Adhesive: Shall have Skin Formation of 8 min and Density not less than 25 kg/m³
- Plasticizer: Shall be as per IS 9103:1999
- Hard Plastic Tie: Shall be made with HDPE
- Cast-in-place concrete: Shall be used as per IS 456:2000.

Manufacturing Process

- ICFs are produced under quality controlled conditions, which ensure consistency of its physical and chemical properties including density, thermal conductivity and fire characteristics.
- Dimensional consistency and close tolerances are important. ICFs lower and upper surfaces are castellated and rebated and the vertical mating surfaces are tongued or grooved. When joined together, the fit should be very tight and stable. This produces a shutter which is strong and straight both horizontally and vertically, and able to contain the wet concrete without leakage at horizontal and vertical junctions.
- The opposite faces of the forms are joined by slim, high density plastic ties. The ties fulfil two purposes, initially they restrain the shutter faces from distortion during the concrete infilling process and then they assist in permanently securing the insulation to body of the concrete. Their positioning and shape assists in the accurate location of any steel reinforcement required. Their thickness is approx. 2.5 mm eliminating risk of any fire penetration.
- The inner surfaces of the shutter have tapering grooves running vertically. These are to receive the wedge tongues of inserts used to form vertical stop-ends around opening for doors and windows etc. The stop-ends are effective

in reducing the possibility of cold bridges at these openings.

- The outer surfaces of the shutter are grooved vertically at 50mm centres. The grooves also provide a key for render or the adhesive used to fix external brick slips or internal dry-lining finishes.

Special Features

- Cost Effective** – Saves 70% or more in energy equipment & consumption bills for maintaining cooling temperatures
- Quicker** – Commissioned in nearly half the normal time period, with less manpower & no heavy machines
- Resource Conserving** – No water for curing, hence time & labour also saved at site
- Load bearing external walls** – With minimized need for columns or beams
- Minimal on site waste** – Modular form work enables any wall height or design complexity with ease,
- 100% insulation** – With zero thermal leaks (R-Value = 19, higher than any other new or traditional constructions
- Durable** – Monolithic structure can be designed for highest degree of fire & disaster resistance 3 h of fire rating and to withstand earthquakes of +7 magnitude
- Sound Insulation** – Up to 60 Db
- Maintenance free** – Fibre glass mesh reinforced, crack resistant plaster on walls
- Heat resistant external roof** – Can be achieved with interlocking insulation tiles of uniformly high R-Value)
- Code Compliance** – System designed to meet National Building Codes.



Skill Development and Capacity Building

Programmes on Good Construction Practices and Disaster Resistant Construction

Capacity building and skill development is one of the core activities of BMTPC. The Council organizes capacity building and training programmes, workshops, exhibition on regular basis in the areas of Sustainable Construction practices, Earthquake Resistant Design & Construction, Quality Control and Assurance, Repair, Rehabilitation and Seismic Retrofitting of Buildings, etc. During the period, following programmes were organised successfully:

- “Training on Good Engineering Practices including Disaster resistant aspects in Construction” were imparted to ULB/State engineers & construction professionals from North Eastern areas (prone to earthquakes and landslides) & UTs during the Regional Workshop & Experience sharing on Pradhan Mantri Awas Yojana PMAY-HFA (Urban) for North Eastern States & UTs held on 20-21 January, 2017 at Agartala, Tripura.
- Hands-on Training Programme for Masons on “Good Construction Practices include Disaster Resistant Construction” was conducted on January 20, 2017 alongside the Workshop in which 44 masons from 3 ULBs of Tripura were imparted training.
- Sensitization Programme on Quality and Disaster-resistant aspects was conducted in Bihar Sharif, Bihar on 13 February 2017, for the beneficiaries engaged in construction of their houses sanctioned under Housing for All. The masons involved in the construction and supervising engineers participated in the programme, making total participants as 80. The training comprises of lectures in forenoon session & practical aspects in the second half at one of the selected beneficiary's housing site. Some under construction houses were also visited prior to lectures. The deficiencies observed there, reasons for those deficiencies, possible measures to rectify and preventive measures were explained during the lecture. The Mayor of Bihar Sharif Nagar Nigam also addressed the gathering.
- Organized one day sensitization Programme on “Good Construction Practices and Emerging Technologies” for housing at Gandhinagar, Gujarat on February 9, 2017 and Port Blair, Andaman & Nicobar Islands on February 23, 2017. The purpose of this programme was to introduce Emerging Technologies for construction of houses to the State/UT officials which are useful for mass housing projects and also to sensitize the engineers & architects at ULB & State level in the area of Good Construction Practices for housing projects. The programme was attended by engineers, architects and other officials.

