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PEBs: Rising Potential

Roofing: Shingles & Tiles

Modern Offices: Co-Working Spaces





Enumerating the advantages of PEB vis a vis conventional construction, **Ar. Pankaj Gandhi at VH Designs Studio**, says, "Anything that is predesigned makes savings on time, material and effort all the more effective. When we evaluate PEBs on their sustainability criteria, they

have reduced carbon footprint due to lesser material consumption of a high embodied energy material such as steel. Centralized manufacturing also controls energy consumption and waste during the manufacturing process. Faster construction means saving of energy due to faster manufacturing and set-up of the building. A well-planned erection of PEB helps reduce site disturbances such as of the natural flora and fauna. The façade and panel can be customized for effective reduction of energy during use of the building, and a PEB with green design can reduce the heat Island effect."

According to him, PEB is an excellent example of new-edge buildings, but is restricted to the industrial segment largely, where factories require faster and more economic construction, and timely setup to start the manufacturing. "For the Residential sector, a PEB would be more cost-effective, especially in remote areas and for mass housing, and would also deliver superior quality of construction. For the Corporate sector, given the high price of urban spaces, a PEB structure would help save on the structure's footprint, and also give more floor space."

In his experience, acceptance of PEBs by consultants and clients is one of the biggest challenges, even though the PEB industry stands on defined professional and technical standards, and the reason why they are successful in Western countries. Volatile prices and a competitive market are other big hurdles in the acceptance of PEBs. But he observes that market awareness is increasing in India on the viability of PEB construction.

As regards bringing aesthetics into PEBs by architects, he says, "Industrial units have a predefined, typical look. But the industrial appearance can be made more interesting by customizing the façade with artwork,

A creative façade profile with various geometrical and material combinations can enhance the beauty of the building, and also reflect the industry owner's business philosophy. When engineering meets creation, it makes a beautiful world to work in," he concludes.

Everest Steel Building Solutions, the PEB division of Everest Industries Ltd, took just 180 days to build a 4.5 lakh sqft world-class exhibition centre - India Exposition Mart in Greater Noida in 2016. The ₹35 crore project included construction of six large halls, which required 50 m clear spans given its function as a trade fair venue. Everest started work on getting the 6 large halls ready in the month of March 2015 and completed the same in August 2015, which would not have been possible using the conventional brick & mortar methods of construction. The buildings are made using high tensile steel and all components of the buildings were factory made, ensuring stringent quality control and minimal onsite work.



Manish Sanghi, MD, Everest Industries, comments, "Use of new age pre-engineered building technology helped India Exposition Mart to get 6 world-class exhibition halls ready on time. The challenge of time was met with intelligent use of innovative technology and manpower so much so that 50% savings in time were achieved. This

apart, the Everest team also addressed the concerns of escalating cooling costs for the vast spaces with fully insulated buildings. The utilisation of PUF panels on the roof and walls reduced the heat load by 20% and helped IEML control air-conditioning expenses, and thereby, making the building environment-friendly."

According to him, the PEB industry is estimated to be close to ₹5000 cr in India, and the building concept is coming to be recognized as the most versatile, fast and economical method of constructing buildings. The economy and the speed of delivery and erection of these buildings are unmatched in the construction industry. From a simple box industrial building, which was imported into India way back in 1997, to the present day mega projects that define innovation with precision and speed, the PEB industry in India has come a long way. ♦