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The buzz over pre-cast structures

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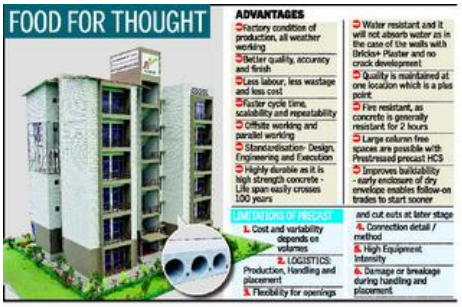
Demand for construction is increasing but the unavailability of labour is severely affecting the construction speed



In the last few years, there has been a lot of interest among the real estate community towards pre-cast construction in Hyderabad and elsewhere. This style of construction is very quickly changing the urban landscape and at the same time generating a lot of employment and throwing up options to families looking to buy their dream home.

While there are advantages and limitations to pre-cast constructions, it is also very important for everybody to understand what actually goes into this approach of construction practices.

To begin with, the concept of pre-cast (also known as prefabricated) construction includes those buildings, where the majority of structural components are standardized and produced in plants in a location away from the building, and then transported to the site for assembly.

These components are manufactured by industrial methods based on mass production in order to build a large number of buildings in a short time at low cost. Theoretically, all joints between the pre-cast units could be made in such a way that the completed pre-cast structure has the same monolithic concept as an in-situ one by adopting various developed techniques of in-situ joints, post tensioning of joints, and dry joints.

But one should also remember that if the full advantages of pre-cast concrete have to be realized, the structure should be conceived according to its specific design philosophy, considering long spans, appropriate stability concepts and simple details. Designers should, from the very outset of the project scope, consider the possibilities, restrictions and advantages of pre-cast concrete, its detailing, supplier manufacturer, transport and erection and before completing the design in pre-cast concrete.

So what is fuelling the need for pre-cast structures in India?

The burgeoning population in metropolitan cities like Hyderabad and Bangalore is resulting in huge demand for residential units in the form of multi-storied apartments, gated communities, independent villas, etc.

There is an urgent need to supply infrastructure required for commercial and residential buildings at a faster pace to meet the urban demands. Demand for construction is increasing on one side, but, the unavailability of labour, and specially the skilled labour such as carpenters, reinforcement fixers, and masons is severely affecting the construction speed and retarding the growth of construction and development across the country.

These reasons are forcing the industry to adopt new technologies such as pre-cast concrete construction, prefabricated structural steel into buildings and industrial sectors, and other composite structures, such as structural steel and concrete.

By adopting for pre-cast, builders and developers in the real estate sector should realize that the time for completion of projects will be reduced by 40 to 50 per cent. This will in-turn reduce overheads on men and machinery. The space could be leased out early and revenue accruals on early leasing will in fact give lot of savings compared to conventional construction.

While there is definitely a lot of buzz around pre-cast structure, the fact also remains that awareness among public is less.

The governments and other real estate institutions must encourage the industry to imbibe this technology and start implementing them into their projects and help the clients reap the benefits of using them. The Pre Engineered Structures Society of India (www.pessi.in) is making efforts by conducting workshops like PEPSCON every year in Hyderabad and other cities to create awareness of about pre-cast buildings. Such events help in dissemination of knowledge amongst design engineers, entrepreneurs and developers. Engineering associations like ACCE(I), ICI, and other agencies in Mumbai and Delhi are also conducting similar workshops on pre-cast structures.

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