

Elematic, 37801 Akaa, Finland

Modernizing the construction process in India – Real estate developers rely on precast technology

The Indian economy has suffered less than others from the global economic recession. Construction is one of the sectors expected to continue expanding rapidly. India is one of the most important emerging markets for precast technology: innovative, high-quality building materials and fast construction methodologies are needed. The demand for affordable housing is increasing rapidly due to socio-economic development. According to a report by the National Housing Bank (NHB), the housing shortage in the urban areas of India has reached 18.78 million units, with 95 % of the shortage in the economically weaker section and lower income group.

■ Sanna Tapiola, Finland ■

First precast factory for a major real estate developer

Indian real estate developer Amrapali Group has recently successfully commissioned its first precast factory to be delivered by Elematic Oy of Finland. The company opted for Elematic's hollow-core slab machinery and tilting tables, along with

support from a local team of engineers and technicians.

Amrapali's first precast factory has an annual production capacity of 10 million square feet of hollow-core slabs and 10 million square feet of walls and facades. The plant has 14 hollow-core slab lines producing 27,000 square feet of slabs per shift. The factory, located in Greater Noida in northern India, currently caters to projects within a radius of 75 kilometers.

"New precast factories are emerging and the construction industry is undergoing rapid modernization. We are the pioneers," says Mr. Ramkumar, Technical Advisor, Amrapali Group.

Precast used in major housing projects

Amrapali has two major group housing projects to be delivered within the next four years of 15 and 20 million square feet



Extruder E9 and lifting beam



Hollow-core casting line with automated concrete distribution



Hollow-core slabs and precast walls in stockyard





Construction site with precast walls and hollow-core slab

respectively with 60 and 68 towers of up to 33 storeys. The company has completed projects on residential and commercial complexes, townships, family entertainment centers, and offices spread over more than 500 acres in the Delhi National Capital Region.

Catering to the needs of these development projects, Amrapali's Greater Noida plant manufactures both structural and non-structural elements, such as load-bearing walls, pre-stressed hollow-core slabs, columns, beams, facades, staircases, and balconies. The company plans to expand the existing facilities and invest in new plants after successfully implementing precast in its current building projects.

Strong foothold for precast in the growing market

India's location is a challenge for the construction industry due to seismic activity and the rainy seasons. Precast concrete construction is safer and more durable than some traditional methods. Precast elements are manufactured in a factory environment with strict quality control and the negative effects of weather conditions are eliminated.

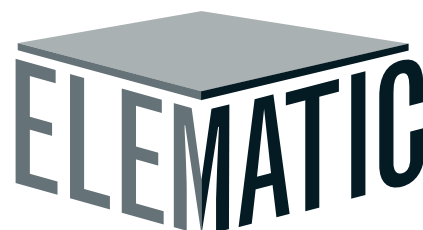
In India, precast concrete technology is already being used extensively in the infrastructure industry. Many tunnels and bridges are made using precast, but significant growth is taking place in the construction of residential, commercial, and industrial buildings.

"The position of modern precast concrete technology in India today is strong because of the number of current construction projects and the scope of work in the future. There is a real need for affordable, fast, and durable construction," says Mr. Nishant Mukul, Technical Director, Amrapali Group.

The Indian construction and real estate industry began to expand rapidly in 2007. Developers are facing challenges to deliver projects on time and it is not possible to execute the enormous construction projects using traditional construction methods. There is also a shortage of skilled labor. Real estate developers have to look for alternative construction technologies. Precast fulfills these requirements with timely, cost-effective, and high-quality construction.



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Quality construction with speed

Precast technology combines construction quality and an extended building life cycle, which makes it a suitable tool for developing Amrapali's business. Amrapali has a massive volume of projects with a high level of replication and others with unique architecture, allowing the company to provide affordable houses and luxurious apartments of good quality in a remarkably short timespan.

According to Amrapali, precast will revolutionize the construction sector in India by modernizing the construction process, particularly in terms of the speed of construction work. "Investing in precast technology supports Amrapali's vision of improving site productivity through effective job controls, by maintaining a safe workplace, and utilizing the latest technology," says Mr. Nishant Mukul, Technical Director, Amrapali Group.

Global technology provider Elematic

Elematic is a leading supplier of complete precast plants, machinery, and equipment worldwide. With 3,600 deliveries around the world during the last 50 years, the company has proven its capability and required resources to deliver complete precast factories globally. Elematic's solutions can be found in over 100 countries across six continents.

Elematic India, a subsidiary of Elematic, has over 45 employees in two offices in New Delhi and Pune, offering end-to-end services from supply and installation of precast plants to structural design of residential, industrial, and commercial buildings.

"We have a very good working relationship with Elematic; a very experienced team of Finnish and local engineers and technicians has provided unparalleled support to us. We look forward to having a long-term relationship with Elematic in our current and future projects," says Mr. Manoj Patterson, GM Precast, Amrapali Group.



Mr. Ramkumar, Technical Advisor, Amrapali Group and Mr. Patterson, GM Precast, Amrapali Group



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