

On a High Note

High-rises are increasing business opportunities for the manufacturers of products that go into these buildings

by **MITALEE KURDEKAR**

With the Central and State Governments together planning on allocating Rs 10 billion to each selected smart city over a five-year-period, there will be ample opportunities ahead for high-rise development in these cities. Meanwhile, space constraints and a rising population in the metros continue to push demand for skyscrapers. This brings along a requirement for products that are specifically suited to high-rises.

Whether it is glass for a façade or a crane for construction, building automation, lighting, or high-speed elevators; innovative products are making it possible for skyscrapers to soar today. While the premium on land has always steered real estate developers toward the construction of high-rises, they are now quickly beginning to realise the value of quality products in the creation of a successful project, thereby leading to both more business for product vendors as well as the introduction of more technologically advanced products.

Jayanand Potdar, chief operating officer, Godrej Properties, states, "There has been a great deal of innovation and technological upgradation when it comes to construction of high rises. Advanced mechanised formwork systems such as slip, jump, climb, table and tunnel forms help in achieving better quality construction, with significant reduction in the concrete slab cycle time."

At Lodha's World Towers in Mumbai, for example, Jump Form Technology was brought into play. According to an official spokesperson, it led to a reduction in the construction time, which resulted in World Crest, a 60-storey tower, being completed in flat 32 months. The quality of the finish was also much better and more consistent. "Despite a higher cost, these technologies would reduce the time and effort put in construction, achieving higher efficiency," the spokesperson noted.

Similarly, the choice of cranes is also critical. Using high capacity cranes and placer booms for placing concrete at greater heights also enables faster construction, confesses Potdar.

Tushar Mehendale, managing director, ElectroMech Material Handling Systems India, points out, "Our range of tower cranes is the perfect solution which helps developers to speed up the construction work of high-rise buildings. Reliability, user-friendliness and safety are some of the most important features of our tower cranes used in construction. They come with several innovative features such as parameter monitoring system, which ensures that all movements remain within the safe programmed limits. Self-climbing mechanism with anti-drop device ensures safe jacking operation, while the climbing frame with platform is provided for easy and quick self-erection."

Soaring Fast

Just as cranes are helping erect tall towers, another factor that is lending aesthetic value is façades, which also negate the effects of harsh weather conditions. "Glass is an essential part of the design of a tall building in modern day architecture. Due to the development of new construction techniques and glass production methods, the inner strength of this material is being revealed, and it is now considered a viable choice for more complex structural requirements. Glass is now being used for façades on an unprecedented scale to create remarkable designs and yield eco-savings," professes Vikram Khanna, CMO, CIO, Asahi India Glass.

Asahi has solutions ranging from tempered/toughened glass to laminated and reflective glass. The soft coat range titled Ecosense – the green standard in glass – comes in four categories: Enhance (Solar Control), Exceed (Solar Control Low-E), Essence (Low-E) and Edge (Solar Control & Thermal Insulation) high-performance glasses.

"The structures are high and thus, it leads to higher vertical & horizontal load, wind pressure and so on. It is necessary to adopt a construction technique, which is easier, faster, better and can provide economies of scale," believes Nishant Agarwal, MD, Avighna India. At their One Avighna Park project, which is 246m tall, they have been using a Mivan shuttering system from Malaysia, thus reducing the slab cycle to six days.

Rustomjee Group is also using aluminum formwork across most of their high-rise projects. Says Kaizad Hateria, brand custodian & chief customer delights officer, Rustomjee Group, "In the olden days, labourers would climb the stairs, now we have passenger hoist, cranes to lift heavy materials, Kevlar fire chute for speedy evacuation, ARD (Automatic Rescue Device) in all lifts, fire-resistant elevators etc. Basically, with the better use of technology, there is less reliance on manpower, as the higher the building, the higher the risk for manpower as well."

Reducing risk, while improving functionality is a tough, but necessary ask. Elevator major Otis has provided elevators to eight of the 10 buildings that hold the title of the world's tallest, including the current record-holder, the Burj Khalifa in Dubai. The Burj Khalifa uses Otis SkyRise elevators that travel at 10 mts per second. "There is an opportunity for growth in this technology, especially in Delhi, Mumbai and Bengaluru. We recently expanded our manufacturing facility in Bengaluru, which has tripled in size and doubled in manufacturing capacity, and Otis India is positioned to deliver to this growing segment. The Bengaluru facility includes a new, 51.2mt elevator test tower with the ability to test up to six elevators at a time," declares Sebi Joseph, president, Otis India.

Features First

Vendors are indulging in R&D to cater to evolving customer needs, while solving challenging design and construction-related problems. Besides better functionality, safety features, eco-friendliness and cost optimisation are just a few of the benefits on offer. With the new Government's focus on energy saving, high-rise buildings are eyeing different certifications and adherence to standards of energy-efficiency.

"While the new regulations have actually increased the density of living in a particular space, the indoor-air quality is one component that will definitely be affected in the near future. Anticipating these needs, Anchor has already introduced a basket of Indoor Air Quality (IAQ) products," informs Ashok Gangar, director, sales and marketing, Anchor Electricals.

Mehendale elaborates on the features of their tower cranes, such as an anti-twist device prevents twisting of wire ropes and hence avoids any potential danger. On the other hand, the trolley is equipped with safety features such as wire rope breakage protection, axle breakage protection and wire rope guide. A load limiter as well as moment limiter provided ensures extra safety measures.

On the other hand, Schindler's Miconic-10 hall call destination system optimises people mobility within buildings and thus leads to reduction in energy consumption. "The elevator is literally the lifeline of a building and breakthroughs in elevator technology have made it possible for buildings to grow tall. Our third generation – the revolutionary PORT transit management system – now interconnects the entire building and provides architects with new possibilities in vertical mobility management and security planning," says Antony Parokaran, CEO, Schindler India.

"The latest trend in the construction world is energy saving business systems, which are increasingly bringing energy analysis into the early design and construction process. Builders have increasing opportunities to model how energy efficient solutions affect a build," suggests Hiral Sheth, director, marketing, Sheth Creators.

Safety trickles down to the minutest products, even lighting. With Syska's lighting solutions, safety standards are being strictly followed. "Syska's LED lights offer ROHS (Restriction of Hazardous Substance), while energy saving promotes green energy and eco-friendliness. There is no mercury or hazardous waste," pledges Rajesh Uttamchandani, director, SSK Group.

Quality over Cost

It is heartening to see that there is a visible change in acceptance of best-quality products despite higher costs.

"Apart from the aesthetics, today it is all about durability of the product. Constructing a building is like manufacturing capital equipment. It is not about the aesthetic alone, but the daily wear and tear or maintenance it has to undergo. Cost parameters play a dual role in the selection of the best product," asserts Raman Sapru, president, EPC, Omkar Realtors & Developers.

For instance, Sapru points out that after constructing a 300m tall building, if the colours of the Aluminum Composite Panels (ACP) fade in two-three years, the objective of its utility is lost. Hence, the selection of products for construction has to be on the basis of the life span of the building. He also concurs that using innovative technologies like BIM during construction or installing high-speed elevators for passenger safety & satisfaction will contribute to better construction and a better, finished project, respectively.

Navin Makhija, MD, The Wadhwa Group, whose company is also investing in the latest technology, agrees that the consumer has become more aware and demanding, stating, "The purchasing power of the homebuyer has gone up, and people have become cognizant of how better to manage their finances. With an increase in saving, people are willing to invest more towards a better lifestyle. People are not going to compromise on the standard of living."

With end-users demanding quality products, developers are definitely taking notice, and delivering what's asked of them. Vivek Mohanani, joint MD, Ekta World, states, "There is definitely a visible change that the realty segment is noticing in the acceptance of taller structures with better amenities. Despite additional costs involving enhanced infrastructure like security, intercoms in elevators and multi-level car parking to make a high-rise project more holistic and advanced, developers can be seen delivering their projects to contemporary end-users in a feasible and timely manner."

Despite this wave of demand, it is yet unsure if the product manufacturer industry is able to translate this requirement into sales. Given that a large chunk of high-rise projects fall under the luxury sector, their makers do not want to compromise at all on quality. But a lot of the products demanded are not readily available in India or are of inferior quality. Developers are then willing to import products that serve their needs and keep customers satisfied. This is both a loss for vendors as well as developers, and of course the end-user, who has to shell out more for his purchase.

An example of this is visible in the electrical construction materials industry. As Gangar puts it, "The Indian electrical construction materials market is price and volume driven to a large extent, as the unorganised sector is almost as big as the organised one. While the local players dominate certain pockets of the country, the impetus on quality is secondary. The trend is changing for core products such as switchgear, electric switches, lighting, however, products such as wires and cables and insulation tapes still lag behind in quality. The pace of this change is slow, but it is happening." Here's hoping that the switch to superior quality products quickly spreads across industries, translating into better business opportunities for all stakeholders.