



# CTBUH India

## Challenges in Elevatoring in India

**CTBUH India, the country chapter of CTBUH – a not-for-profit organization with headquarters in Shanghai, Venice, and Chicago, recently organized a conference on the challenges and opportunities of elevatoring in the Indian context.**

Opening the session, **Girish Dravid, Chairman - CTBUH India** (and Director at Sterling Engineering Consultancy Services), who has been involved in propagating CTBUH objectives in India since 2014, gave a presentation on CTBUH, its objectives and vast network. He informed that CTBUH is authorized to decide the height of buildings and certify tall structures, as it has developed international standards for measuring tall buildings, and is also recognized as the arbiter for bestowing designations such as “The World’s Tallest Building”. Its research department is spearheading investigation of the next generation of tall buildings with respect to their sustainability and development issues.

He informed the audience of CTBUH’s efforts to facilitate exchange of the latest information on tall buildings around the world through its 20,000 offices worldwide,

and extensive network of around 30 lakh representatives that include real estate developers, builders, architects, engineers, contractors and other professionals involved in construction of tall buildings and sustainable cities. CTBUH’s country chapters are responsible for organizing regional networking events for propagating its objective and also the design, height, construction, and operation of tall buildings and future cities.

As the rapid developments in tall building technology in India require a paradigm shift in the way elevatoring is conceptualized, major brands KONE, OTIS, SCHLINDER and thyssenkrupp, along with regional experts, discussed the challenges and their technical expertise in overcoming them, and introduced their latest and upcoming innovations.

**Rajesh Bywar of KONE** gave an insight on Kone’s track record of providing industry-leading eco-efficient solutions

that enable smooth mobility for the people and add value to buildings throughout their lifecycle. “Through more effective People Flow®, Kone is making people’s journeys safe, convenient and reliable, in taller and smarter buildings. Kone elevators comply with the latest standards and are energy efficient, deliver reliable performance, and do not compromise on safety,” he said.

He introduced KONE’s new hoisting technology UltraRope® – a super-light rope with a carbon-fiber core and special high-friction coating. UltraRope is superior to conventional steel cables in every way. It reduces weights by up to 80% allowing elevators to move farther and faster. It allows the elevator to travel up to one km in a single run, double of what’s currently possible with a steel cable. UltraRope also makes maintenance hassle-free. Unlike steel, it does not rust, stretch or wear. Its special coating does not require lubrication, which makes maintenance environment-



friendly as well. KONE UltraRope's longer product lifetime is a boon too, as changing ropes in a tall building is no easy task.

**Ian Smith from thyssenkrupp** spoke on how TWIN and multi elevators can address the challenges of urbanization and introduced thyssenkrupp TWIN Car elevator concept in a single shaft - a model example of technological efficiency and precision. Two elevator cabs travel independently – one above the other in the same shaft. TWIN saves space, reduces passenger travel time and saves energy. This is the industry's first system with two independent cars in one shaft and gives the same conveyance capacity in 25% less space. Both the cabins use the same guide rails and landing doors. Each car is equipped with its own traction drive, controller, ropes, counterweight and governor. An intelligent Destination Selection Control (DSC) system gets people to their destination faster by grouping together individuals travelling to the same floor. TWIN also boasts a TÜV-tested safety concept to satisfy even the most stringent requirements.

**Anil Tak from Schindler** gave a presentation of Schindler's digital portfolio for smart elevators and escalators, which

is the industry's first fully closed-loop platform that enables real-time flow of information. It analyzes cloud-based data to deliver improved uptime, insights and convenience. It brings intrinsic value to our customers with considerably higher uptime and provides real time detailed insights to building owners and facility managers from connected elevators and escalators. Digital connectivity allows for easy maintenance and management of the equipment, while adding higher levels

of comfort for passengers. It improves diagnostics, service reliability and the long-term health of the asset. The digital solutions seamlessly integrate into the existing infrastructure – benefiting building owners, managers and residents alike.

**Sebi Joseph, OTIS India**, talked about their 'green' elevators, such as the Gen2™ elevator with ReGen™ drive, which captures energy that would otherwise be wasted by the elevator and feeds it back into the building's power grid. He



informed that the Gen2 elevator and ReGen drive combine to reduce energy consumption by up to 75 percent under normal operating conditions, compared to conventional systems with non-regenerative drives. The Gen2 range is focused on efficiency while providing environmentally responsible features and benefits. Apart from green elevators, Otis is inventing a new generation of elevators that are connected, smarter, data rich and more efficient and comfortable. A smart elevator is a connected elevator capable of communicating with passengers, building managers, service staff and other building systems to improve passenger experience and elevator performance, especially through improved elevator maintenance.

According to him, the next developments in elevator technology will leverage digitalization. "Using sensors and new digital technology, the next generation of elevators will be an integral part of the

connected building and enable even more proactive service solutions and remote capabilities to reduce downtime," he informed the audience.

**Tak Mathews, Principal Consultant at TAK Consulting** (and one of the first consultants worldwide to be approved as a Qualified Elevator Consultant and the only Qualified Elevator Consultant in Asia), in his presentation stated that vertical transportation is the lifeline of a building, so, elevating design should be part of the main design process (and not an afterthought). "The effectiveness of any elevating system depends on the balance of maintaining all elements (internal and external), irrespective of a good design or technology. The alignment of the elevating systems should be in response to the surrounding environment, demographics, transportation elements, etc. It is not just the design of the elevators but the focus also needs to be expanded to installation

and maintenance," he said.

A panel discussion was hosted by **Anil Hira, who heads Buro Happold** operations in India. His expertise in tall building designs of over 70 high rise buildings of over 40 stories in Australia, India, China, Indonesia, Vietnam and Middle East countries, encompasses structural design, engineering and construction advice.

The panel discussed important aspects related to design and construction of buildings, its challenges, safety regulations and audits, innovations in elevator design for occupant evacuation in case of emergency (Fire), and, most importantly, the need for joint efforts of the construction fraternity (builders, contractors, developers, architects, material suppliers, manufacturers etc) to come forth and discuss the issues and challenges in vertical construction, and bring proper regulations and guidelines into effect. The event concluded with a networking session.