CTBUH Travels to the Philippines for the Cyclone-Glazing Research Project

June 04 – 08, 2018

MANILA – In June 2018, CTBUH organized a research trip to the Philippines in order to meet professionals in the façade technology field and to collect further information for the research project, Cyclone Glazing and Façade Resilience for the Asia-Pacific Region sponsored by Trosifol. The aim of this research activity was the same of the previous trip to Japan and of the same-month one in Hong Kong.

In the Philippines, in addition to the meetings with experts, CTBUH met representatives from the Mapua University, visited both a Performance Test Lab and a façade contractor plant, and attended the SM Megatower building site tour which was attended by the entire team of professionals involved in the façade design, construction and installation process. Angela Mejorin, directly involved in the project since January 2017, represented CTBUH in the Philippines and attended meetings together with Yuthana Kulintharaprasert, a representative from Trosifol.

The Philippines are one of the four jurisdictions (the others being Australia, Japan, and Hong Kong) that will be included in the final output of this research, ‘Strong Winds- and Cyclone-Resistant Façades: the Best Practices’. This trip contributed to the development of the Philippine section of the publication.

The first findings of the research project were shared with the experts met in Manila. The discussion focused on the past outputs of the project and on the upcoming stages to be conducted in order to complete this project. The Japanese best practices, when it comes for typhoon-prone façades, were pointed out with the people met during this week. Additionally, the face-to-face meetings allowed engineers and architects to contribute to the ‘Building Case Study’ section of the technical publication.

The SM Megatower Building will be included in the above mentioned Publication and this trip represented the occasion to organize a building tour. This Tower is the latest addition to the SM Megamall masterplan, the flagship retail project of First Asia Realty Development Corporation. Located next to and adjoining the semicircular Mega Fashion Hall, it comprises 111,400sqm of office ground floor area across 50 stories, with 6 levels of podium and 3 levels of basement parking. The S-shaped tower is clad in seamless glass accented by vertical and horizontal fins on the undulating and flat façades respectively. This softer image is in stark contrast to the more prosaic rectilinear extrusions of the surrounding towers.

The building is under construction and, in this phase of the construction works, the installation process of the typical façade of the elevation has begun. At the building site, a meeting with the entire team of professionals involved in the façade definition was organized. The architects, the façade consultants, the façade supplier explained the considerations focus of the design, in particular related with safety issue due to the accidental breakage of the glass panes. The façade is not vertical for the entire elevation of the tower, following the S-shape of the construction. Safety against falling glass due to accidental breakage is addressed by using laminated panels on selected inclined panels and glazing clips are used as mechanical fixings to ensure glass panels remains supported in the event of structural sealant failures. CTBUH discussed the design choices, the code and standard requirements, the certification process of the façade, the role of the insurance companies in the Philippine market, finally the requirements presented in the 2015 National Structural Code of the Philippines for façades in ‘Wind-borne Debris Regions’ (which requests to follow the ASTM E1886 and ASTM E1996 standard tests).
Manila, SM Megatower.

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A report of the first part of the project, comprising an analysis of the international codes on cyclone-resistant façade solutions is available here.