CTBUH Research Kick-off Meeting: Cyclone-Glazing and Façade Resilience for the Asia-Pacific Region

January 27, 2017
MIA MIAMI BEACH, FLORIDA - The kick-off meeting for the CTBUH research project entitled “Cyclone-Glazing and Façade Resilience for the Asia-Pacific Region” was held at the AC Hotel Miami Beach in Miami Beach on January 27th, 2017.

After a brief welcome, Dario Trabucco, CTBUH Research Manager, presented a general overview of the research project, which is divided in three main steps. The first part of the research aims to give a scale to the problem of building affected by natural disasters in the Asia-Pacific Region. The second part of the research will analyze existing cyclone-resistant curtain wall codes in the Asia-Pacific region, with a view to develop a matrix examining similarities and differences between these codes. Through the support of international experts and consultants operating in the local markets, CTBUH will be able to identify the most suitable codes and the best local practices. The experts and consultants will form part of the steering committee for the research. A third step will identify what is missing in each regional code and how the various codes available can be used to generate a new region-wide standard. The Florida Building Code will serve as the benchmark when examining these codes.

Angela Mejorin, CTBUH Research Assistant, presented the results of the first phase of the research, which was conducted by Will Miranda, CTBUH Research Assistant. This research gave a scale to the problem of buildings that have been and will be affected by typhoons. Using Geographic Information System (GIS) modeling and the CTBUH database of tall buildings, the number of skyscrapers in cyclone-prone areas within the Asia-Pacific region has been determined. This emphasized the growing market for cyclone-resistant curtain wall technologies. Country by country, CTBUH analyzed the amount of regional populations that could be affected by typhoons and the risk of mortalities and economic losses that could occur.

David Rinehart, the Kuraray-Trosifol North America Protective Glazing Marketing Manager, gave a presentation of the existing codes, standards, and testing requirements that prevent glazing from being affected by wind-borne debris regions in US countries, including regulations for missile impact and pressure cycling for systems. Furthermore, he analyzed the benefits of wet glazed systems and compared them with dry glazed systems, recognizing the performance attributes of laminated glass interlayers used in impact test systems. Finally, he made additional considerations regarding the energy performance, intrusion resistance, blast resistance, and tornado resistance of glazed solutions.

During the meeting, organized by Ron Hull, the Kuraray-Trosifol Marketing Manager, all the participants took part in a proactive conversation on the design and commissioning of typhoon resistant facades in the US and in the East-Asia Pacific Region. Subsequently, the discussion verged into the economic impact that the construction of high performance façades in typhoon prone areas would have.

After the meeting at the AC Hotel Miami Beach, a part of the participants took a tour of the Fenestration Testing Laboratory in Medley, FL and the Manufacturing of Continental Glass System Company Building in Place Hialeah, FL. In the laboratory, glazed specimen tests were shown according to the Florida Building Code and the ASTM standards. In the second location, the manufacturing of wind borne debris glass facades was shown by Matthew Ward, Continental Glass System’s Vice President. Furthermore, he gave a presentation of his company’s realized projects and he organized a tour of the soon-to-be-completed Porche Design Tower.

The participants of the meeting were as follows: Valerie L. Block (Kuraray-Trosifol), Keith M. Camara (FM Global), Richard J. Davis (FM Global), Ron Hull (Kuraray-Trosifol), Angela Mejorin (CTBUH), Hammad Muzaffar (Al-Farooq Corporation), Mic Patterson (Schuco), David Rinehart (Kuraray-Trosifol), Jennifer Schneider (Kuraray-Trosifol), Donald Scott (PCS Structural Solutions), F. Enrique Soto (Al-Farooq Corporation), Dario Trabucco (CTBUH).