

Tipco Tower 2

client Tipco

period 2016-2020

GFA 31,000m²

height 117m

floors 22

architect Palmer & Turner (Thailand)

contractor Peterson 1990

office

unitised curtain wall

cable net

The original Tipco Tower on Rama VI Road in Bangkok and designed by SOM with A49 was completed in 1997 (An FA staff member had a small role in the original construction under the Facade Contractor).

This extension building paid homage to the clean and sharp design of the original and added new innovative facade features.

Similar to the original building the main facades are unitised curtain wall in overlapping large planes creating internal and external corners and oversails (cantilevered edge elements).

Parts of the podium car parking and corners of the building use a unique unitised system with an external glass fin. External glass fins create a problem in that they must be replaceable in case of breakage, but they look better if there are no visible brackets. There are many examples of external glass fins in facades but as far as we know, this is the only example without externally visible brackets or clips.

FA designed a cassette type element that hooks into an adapted unitised mullion. The ionoplast laminated glass fin is then bonded

to this element and the whole piece can be removed and replaced if required without disturbing fins above and below.

Above the podium mass a double height space creates a garden zone that is bordered by a tall cable net glass wall with an internal and external corner. Due to the large allowable deflection of cable nets corners become difficult to resolve as both planes are trying to move away from each other under load.

FA resolved the problem by removing the windload resisting cable entirely, using a thinner low-tensioned cable for dead load support only, carefully managing pre-tensions of cables adjacent to the corner and designing a unique hinged edge connector bonded to the corner edges of glass in the two planes. The corner pieces use the adjacent orthogonal plane for windload support with loads transmitted through the corner hinge. The hinge also accommodates angular variations between glass planes under load without putting bending stresses into the glass edge.

The result is a building worthy of its well regarded predecessor and with some subtle technical innovations to upstage it.

