CASE STUDY

CITIC TOWER, BEIJING: **FLEXIBLY SUSPENDED**

A cable suspension system developed by Datwyler for the CITIC Tower solves many of the problems posed by high-rise elevator installations.

The CITIC Tower in the Central Business District, the centre of the financial world, media and corporate services in Beijing, was opened in 2018. The skyscraper, also known as "China Zun", has 108 floors and at 528 metres is the highest building in the Chinese capital.

There are 27 elevators in the building, and the cabins travel up to the top floor – at a nominal speed of ten metres per second, which is equivalent to 36 kilometres per hour. Datwyler supplied specially developed high-rise elevator cables for these elevator installations.

Maintain distance

Space in the shafts is very restricted in the CITIC Tower. Due to the shaft dimensions, moreover, it is not easy to balance the equilibrium of the cabin to optimum effect.

Datwyler therefore developed new suspension for this specific project. The mechanism makes possible the flexible adjustment of the ideal position of the elevator cable below the cabin in order to compensate for lateral misalignment and to maintain the necessary distance between the cabin and the walls.

Datwyler's new suspension also opens the possibility of easily correcting any incorrect alignments during assembly, thus ensuring the safe movement of the travelling cable in the shaft and preventing collisions with movable parts of the elevator.

This solution was developed on the basis of several construction site visits and the knowledge gained thereby in close collaboration with the client. Datwyler was responsible for the project planning and implementation.

Passed the test

Following the first prototypes, which were manufactured in Datwyler's plants in China and Europe, the trial installations and test runs of the new suspension system have now been completed. Successfully! The mechanism is working as expected.

The next steps will be to develop further variants and industrialise the solution.

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