

New Port Control Tower, a triumph of safety and stability

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The 65-metre high glass and steel control tower, under construction in Genoa's Levante Waterfront, will be equipped with a technologically innovative system designed to protect the building from vibrations caused by strong winds and severe sea conditions. Tuned mass dampers will be programmed and activated by electrical engines, across the Electro Pro system planned and built by ISAAC, to counteract all possible swaying motions of the tower and eliminate vibrations.

At the heart of this state-of-the art technology is a central command system which records the movement of the building across motion sensors applied to the walls and calculates in real-time the amount of force required to counterbalance the oscillations of the tower caused by strong winds. The New Port Control Tower will, consequently, deploy an innovative system used in skyscrapers across the world, including the Taipei 101 in Taiwan, although the latter has been installed with a giant steel sphere, weighing 660 tons, which acts as a pendulum that counteracts swaying motions caused by strong winds or earthquakes, whilst Genoa's tower will be equipped with four smaller spheres, at 300 kilos each, activated by electrical engines to move in the opposite direction of the vibrations.

In the meantime, quayside works progress on schedule where the construction of the elevated building with office and back-up service facilities is near completion; whilst the rooftop is under construction on-site at Calata Bettolo in the Sampierdarena basin and is set to be installed on top of the control room, at a height of 60 metres. at the end of July. The New Control Tower will watch over Genoa's port and, in the words of its architect Renzo Piano, recalls the outline of a giant sailor who, protecting his eyes from the glare of the sun with his hand, scans the horizon.