

I. TUNED MASS DAMPER

MUNICIPALITY TOWER OF RIETI, ITALY

PROJECT INFORMATION



PROJECT

The project foresees the realization of seismic retrofit on the last level of the municipal tower.

Following the demolition of the existing roof slab and the subsequent reconstruction, the project foreseen the insertion of a seismic damper.

The new structure described is supported by a metallic system made with tubular steel.

The whole system connect the new slab and the floor with lastomeric seismic isolators.

The TMD system is applied to avoid the vibration control on the structures.

It consists of the installation of an auxiliary mass on the top of the building. The mass has to be suitably connected to the building. This mass has the function of damping the vibration of the structure thanks to the dissipation of the energy. With the application of this system it is possible to reach a reduction of the response of the structure against the dynamic excitations that could be of several nature.

SOMMA supplied 4 ISI-S 400/100 elastomeric isolators, diameter 400 mm, equivalent stiffness K_h , $e_q = 0.5$ KN/mm, dissipation $\alpha > 10\%$ and maximum shift ± 200 mm.