

## **Side Connection with Rigid and Elastic Functions in Earthquake Isolation System**

The building system, which uses the proposed connection, is based on the following principles:

- interruption of the solidarity between the building and the foundation-soil complex, by making some cuts at the top of the pillars located between the building and foundation-soil complex;
- inserting into the above cuts multidirectional movable bearings with low, sliding or rolling, friction coefficients;
- lateral arrangement of rigid connections with the alternative function of being elastic anti-seismic linkages; they are located horizontally between a circular platform linked to the building and the perimetric retaining wall, linked to the foundation-soil complex;

In the event of an earthquake, this system allows the rigid translation of the foundation-soil complex with respect to the building, which remains almost motionless under the prevailing action of the weight force. The system also has the following advantages:

- the almost total absence of a natural frequency of the building makes it possible to apply this system even to buildings where the resonance level is very low;
- easy maintenance of the multidirectional movable bearings and the side connections;
- during an earthquake, a considerable decrease in the psycho-physical discomfort for the inhabitants;
- finally, with regard to cost, the proposed system is certainly no more disadvantageous than other systems with partial or total absorption of seismic energy.