“TRC Damper” first introduced in China to junior high school building
~TRI eyes for full-scale marketing of the seismic damper for buildings in China~

Tokai Rubber Industries, Ltd. (TRI) (Head office: Komaki City, Aichi Prefecture, President: Yoshiaki Nishimura) develops, manufactures, and markets “quakeproof products” with the know-how it has accumulated through the development and manufacturing of automobile and general industrial materials. This time, one of those products was first adopted in China. “TRC damper,” a seismic damper for buildings, was introduced to buildings of a junior high school in Beijing as countermeasures against earthquakes.

【Growing needs for countermeasures against earthquakes in China】
China has been developing its economy remarkably in recent years with the continued construction boom. Meanwhile, the importance of earthquake countermeasures has been in the spotlight among people in China since a major tremor struck Sichuan Province in 2008. More and more public facilities including schools and hospitals are proactively adopting highly-advanced countermeasures such as seismic isolation and seismic damping. ※1

(※1) Each technology has different approaches in how to stop vibration energy from transferring.
・Seismic isolation is a method or structure to absorb vibration energy and isolate a building from shaking with a seismic isolation device installed between the building and the ground.
・Seismic damping is to control the shaking of a building with dampers (device for reducing vibrations) installed within the building.

【How was TRC damper chosen? What are the future perspectives?】
TRC damper prevents a building from collapsing and alleviates damage to it in a major earthquake, receiving high evaluation in Japan and Taiwan. It is effective against fearful long-period earthquake ground motions and can be applied in existing buildings for renovation as well as new ones. Cost-effectiveness is also a great feature compared with “seismic isolation” devices. With these advantages and high performance, we have been engaged in sales promotion activities for the device in China because we believe that TRC damper will definitely meet the needs for earthquake countermeasures.

In a joint experiment held at Tsinghua University, the product was proved to meet the earthquake-resistant design requirement for the buildings of a junior high school in Beijing. Thanks to a high evaluation TRC damper received in the experiment, the school decided to adopt it for their buildings.

As for our future plans, we will obtain the CMA, ※2 China’s national standard, in November, 2011 before launching a full-scale marketing of the product. Specifically, we are going to tie up with local companies capable of construction and designing with the use of TRC damper, and promote the product for local architect companies and property owners. We will also provide technical support (response analysis ※3 for a building with TRC dampers installed in it) and move forward sales promotion activities in China.

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CMA, or “China Metrology Accreditation,” is a certification program for inspection bodies. Only certified inspection organizations are allowed to use the CMA mark on their inspection reports. Reports with the CMA mark are legally effective.

Response analysis is one of the structure calculation methods used for buildings. “Response” indicates a phenomenon in which a building vibrates with an external stimulation such as earthquakes.

【TRC damper introduced to buildings of a junior high school in Beijing】

【Reference : Outline and characteristics of TRC damper】
●High damping performance
TRC damper is a seismic control device using special viscoelastic rubber that can be installed within a wall of a building. When an earthquake occurs, this special rubber, attached to the steel plates, changes shape and converts vibration energy applied to the building to thermal energy, alleviating the shaking of the building.

●Delivers stable performance for a long time
Viscoelastic rubber used in TRC damper is tolerant of temperature changes, which allows the product to virtually maintain high performance over time. TRC damper delivers stable performance for a long time without any maintenance and protects precious life and properties from earthquakes.

●Thin and very compact
TRC damper is very compact but still delivers high performance. As for its dimension, TRC500C-10, a model introduced to buildings of a junior high school in Beijing, measures 57mm in thickness, 900mm in width, and 1,110mm in height. This feature makes it possible to secure wider opening sections for windows, etc. and ensure a high degree of freedom for designing condominiums and office buildings.