

Research and Application of Anti-Seismic Device in the Engineering Field

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The first isolation building in china was built in 1993, in the past 20 years, this kind of Anti-seismic technology was widely used in thousands of civil engineering field, not only seismic isolation, but also the energy dissipation and other types of anti-seismic or anti-vibration device was applied for different purpose. With raising the level of design and manufacturing, the height of building and the span of bridge were also increased gradually.

Today, the height of the highest isolation building in china is about 65m, more than 20 floors, and this record will soon be refreshed. In 2010-2016, a super project in south of china, named HZM bridge, will adopt seismic isolation device to protect this important project. TMT were involved in these projects in the past few years, and will provide the largest size high damping rubber bearing in the world for HZM Bridge.

This report consists three parts.

- Part 1, general information of the company-TMT is introduced.
- Part 2, R&A of anti-seismic device, focusing on design, testing and application for rubber bearing, friction pendulum bearing, fluid viscous damper and steel damper, and some typical applications will be shown.
- Part 3, some other studies, such as Tuned Mass Damper, Locked-up Device are also presented.