In these days, for preventing buildings from severe structural damage by earthquakes, various design methods for controlling building’s vibration by the dampers have been adopted. Obayashi Co. developed the high-performance friction damper called “Brake-Damper” in the latter half of the 1990s and has improved it from then on. During an earthquake, the damper absorbs building’s vibration energy by the friction between a brake pad and a stainless steel plate fastened with high-tension bolts and disk springs. It shows a stable damping force and durability against repeated sliding. Moreover, it enables onsite fabrication in construction of buildings. Various types of Brake-Dampers are available and they have been applied to many buildings. Brake-Damper is a simple and useful damper. It will be also adaptable to coming mega-earthquakes: for example, long-period ground motions with long duration and near-fault ground motions.