Outline

The “FIRST Brace” is a Fujita-style Buckling Restrained Brace (BRB), and a highly seismic resistant brace without buckling under compression.

Conventional steel braces lose compressive strength when they buckle. The “FIRST Brace” is designed in a way so it will not buckle under compression. It retains equal yield strength and deformation capacity through both compression and tension.

The “FIRST Brace” can reduce the number of braces and quantity of structural steel. In addition, the “FIRST Brace” will not give damages to ambient members because it will not buckle. As of March in 2017, the “FIRST Brace” system has applied to actual 23 projects such as logistics facilities, factories, offices, cultural facilities and seismic retrofits.

Characteristics

The “FIRST brace” is a proprietary technology of FUJITA, and it was certified as a seismic member by the General Building Research Corporation of Japan in 2013 (GBRC performance verification No. 12-34).

The “FIRST Brace” is composed of a steel tube (as buckling restrained member), a H-steel located in the center of the steel tube and cement mortar filled in the steel tube. Both sides of the H-steel are strengthened with steel cover plates.

Actual installation