11. Development of Buckling Restrained Brace Using H-shaped Steel

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Buckling-restrained braces prevent total buckling under a compressed axial force by covering the perimeter of the core steel that carries axial forces with restraining materials. They are available for practical purposes in various shapes. Ready-made products exist in large numbers but are costly and have problems with design at the joint with the building proper. Then, a buckling-restrained brace using H-section as the core and composed of simple materials was developed. Full-scale tests were conducted for the brace including the joint and it was verified that the brace had the performance under compressive axial forces equivalent to that in tension. Design methods were established for the brace.

Key words: buckling-restrained braces, H-sections, separators, joints