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ULTIMATE STRENGTH OF T-SHAPED SOCKET JOINTS BETWEEN STEEL BEAM AND CONCRETE-FILLED STEEL TUBULAR COLUMN

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As a method of connecting two concrete-filled circular steel tubular constructions, a simple socket joint in which a small diameter tube is inserted with the specific length to a large diameter tube with concrete filling the gap between two tubes has been proposed as an economical and effective joint connection. The T-shaped joint specimens which differed in parameters such as the path of the shear connector on tube faces and the plate welded to the small diameter tube, thickness of a large diameter tube, length of a large diameter tube, etc. were tested in order to investigate the failure mechanism and the ultimate strength of the joint connection. In this paper, we propose the equation for calculating the ultimate strength.

Key Words: concrete-filled steel tube, joint, ultimate strength, shear connector, diaphragm

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