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## STUDY ON BOLTED AND BLIND-BOLTED SINGLE SHEAR CONNECTIONS OF COLD-FORMED STEEL MEMBERS

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### Abstract

The paper presents the results of tests on single shear bolted connections of cold-formed steel sections with a wall thickness of 4 mm made with standard fully threaded M16 grade 8.8 bolts. The tests were performed for connections with washers and without washers. The obtained results were referred to earlier studies of analogous connections using blind fasteners Huck BOM R16. The failure mode was identified, the load capacity and stiffness were compared, and a method to determine the non-linear load-displacement characteristics of such connections was proposed. The effect of stiffness of joints on structural response of exemplary cold-formed steel frame was shown.

**Keywords:** Bearing resistance; Blind fasteners; Bolted shear connections; Cold-formed steel frames; Semi-rigid joints, Translational stiffness.