Verification Method for Friction Joints Using High-Strength Bolts and Its Effect on Design

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Friction joints using high strength bolts, which are commonly used in the connection of steel structures, resist tensile forces by friction on the contact surface between the bolted plates. This paper outlines a revision of the method of setting the coefficient used to calculate the resistance force. The trial design of the joint was carried out using the revised coefficients. The result confirmed that the new coefficients are effective in reducing the number of bolts. A method for verifying the failure of the jointed plates in the event of tearing and the conditions under which tearing is likely to occur is also outlined.