

Exercise #12 –Plate Buckling -Part 1 - Effective widths and Class 4 cross section resistance

Check if the cross-section in Figure 1 is able to resist an axial load demand of $N_{Ed} = 5250kN$ applied in center of gravity of the gross cross-section. Perform the checks according to SIA263 and assume a steel grade of S275J2, $E=210GPa$, $\nu = 0.3$.

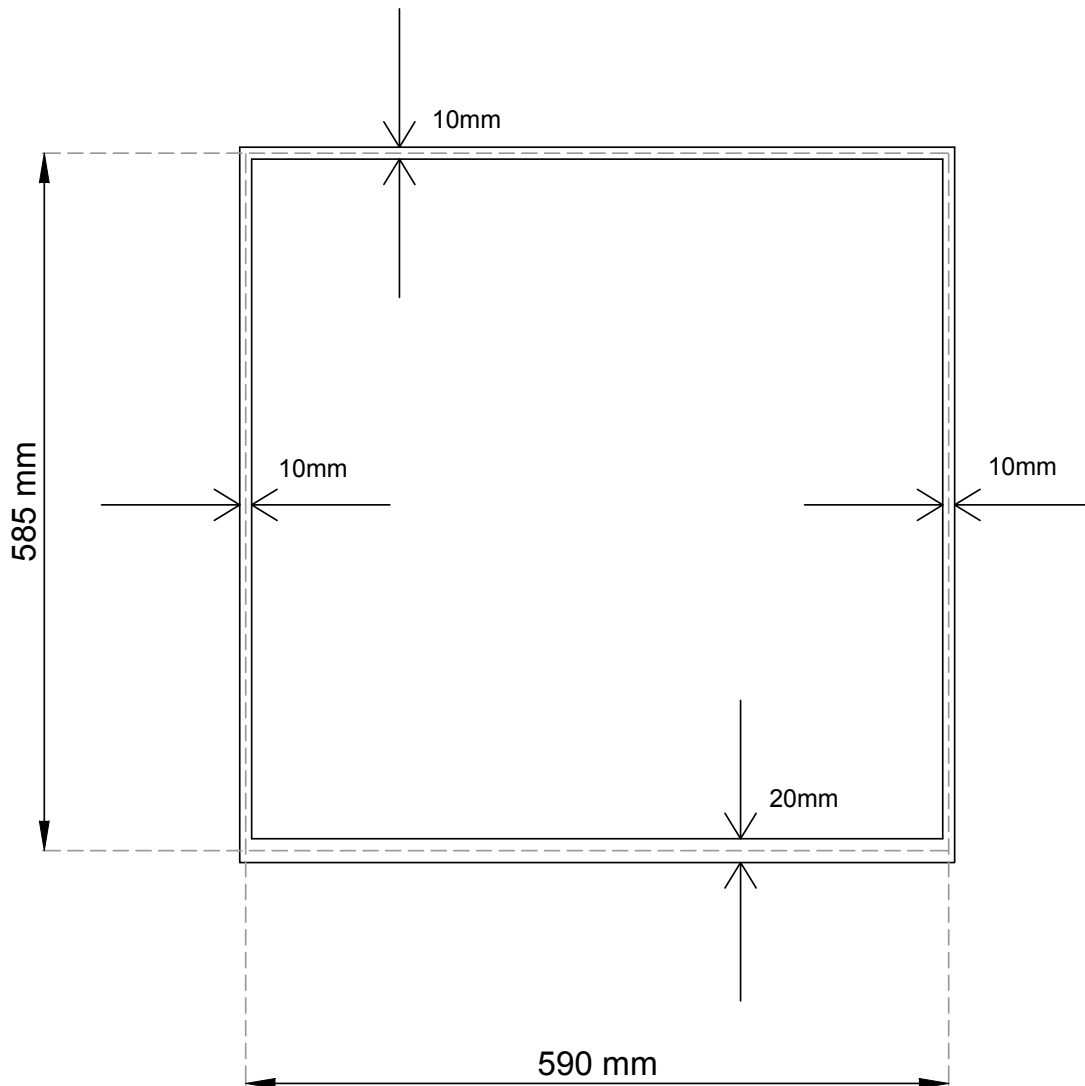


Figure 1. Box-welded steel plate cross-section