PROKON Support Portal

Applied Load Remains Constant Even When Changing the Applied Moment

Annemie - 2019-08-29 - 0 Comments - in S12:Beam column connection design

When designing a Welded Beam Column Moment Connection without stiffeners the applied load remains constant even when changing the applied moment (Eurocode 3 – 2005).

The reason for the limiting force, is due to a limitation specified in the Design code at EC 3 1993.1.8.2005 Section 4.10 (Connections to Unstiffened Flanges).

Section 4.10 (5) states that 'Even is $b_{eff} \leq b_p$, the welds connecting the plate to the flange need to be designed to transmit the design resistance of the plate $b_p t_p f_{y,P}/\gamma_{M0}$ assuming a uniform stress distribution'.

Using this formula and the chosen section dimensions will give you the limiting force.