

POS. 33: BOLT IN TENSION

4H-EC3GK version: 1/2012-1k

bolt in tension in column flange, end-plate or flange cleat

Basic component 10

EC 3-1-8 (12.10), NA: Germany



M 1:5.0

connection device:

bolt, property class 8.8, bolt size M20

large width across flats (high tensile bolt), preloaded

material safety factor: $\gamma_{M2} = 1.25$

stress:

Lk 1 : $F_{tr,Ed} = 100.0$ kN per bolt

design resistance

bolt category D:

tension resistance of one bolt: $F_{t,Rd} = (k_2 \cdot f_{ub} \cdot A_s) / \gamma_{M2} = 141.12$ kN, $k_2 = 0.90$

verification

Lk 1: $F_{Ed} = 100.0$ kN < $F_{Rd} = 141.1$ kN \Rightarrow utilization = 0.709 < 1 ok.