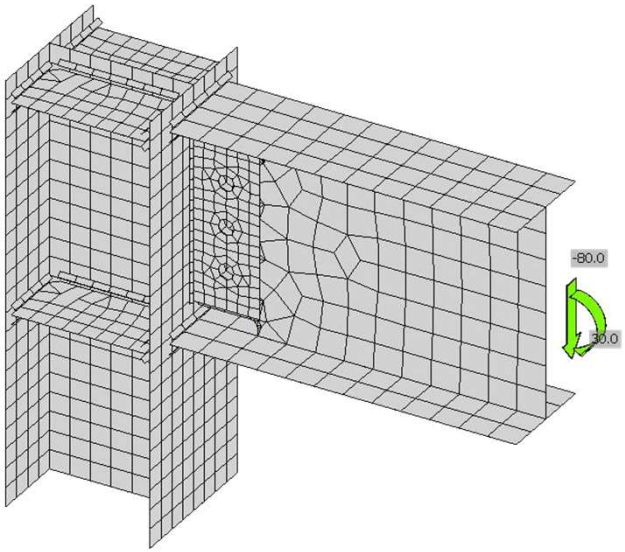
Plate model:



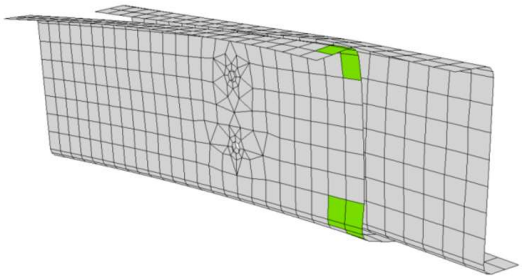
Model and mesh

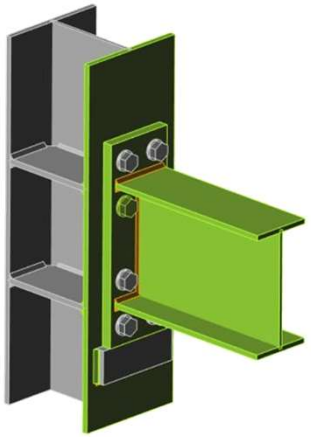
Default length of standard member [h]	1.25
Default length of member with hollow section [h]	1.25
Division of surface of the biggest circular hollow me	64
Division of arc of rectangular hollow member	3
Number of elements on biggest member web or fla	8
Number of elements on biggest web of RHS membe	16
Number of analysis iterations	25
Divergent iterations count	3
Minimal size of element [mm]	10
Maximal size of element [mm]	50
Number of buckling modes	6

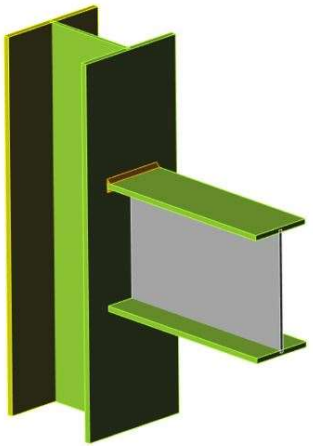
Expand Collapse Reset Save OK Cancel

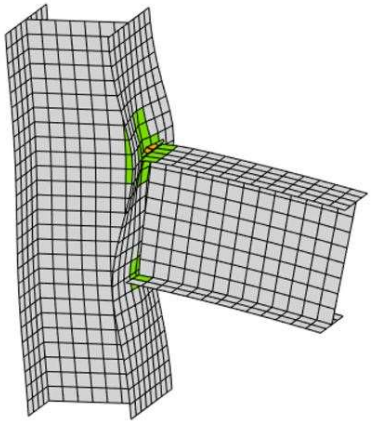
Contact:

- two surfaces
- two edges
- edge and surface

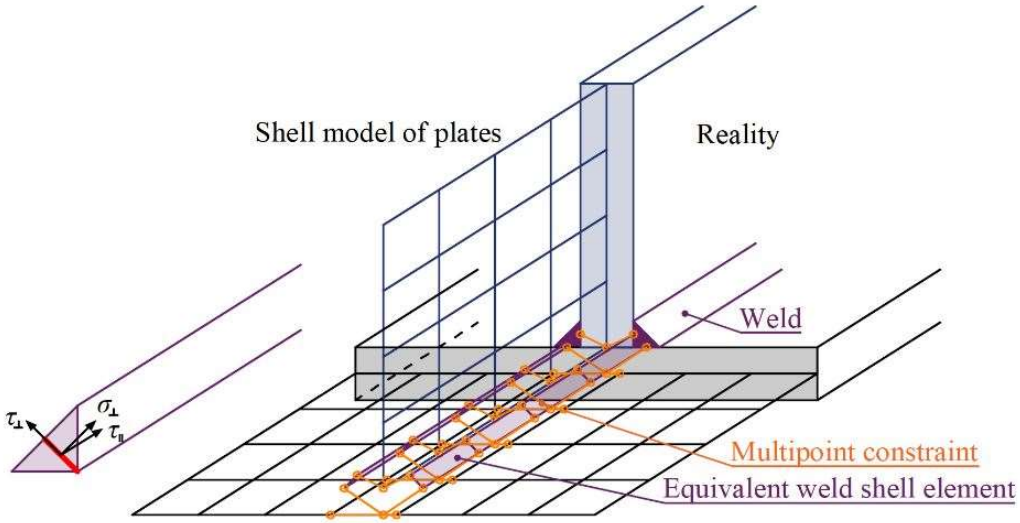






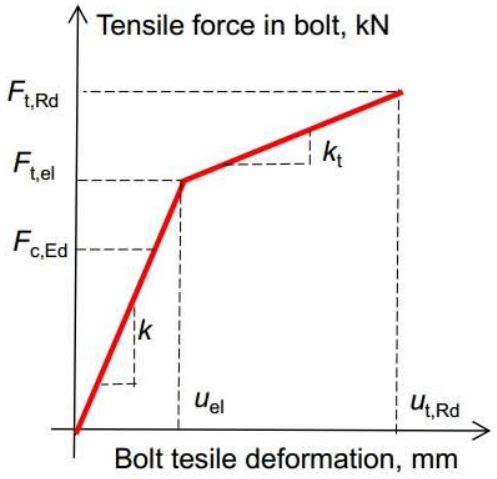


Welds:



Bolts:

EN1993-1-8:2006



$$k = \frac{EA_s}{L_b}$$

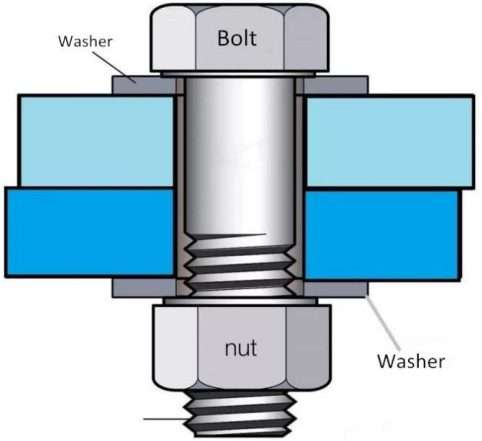
$$k_t = c_1 k$$

$$F_{t,el} = \frac{F_{t,Rd}}{c_1 c_2 - c_1 + 1}$$

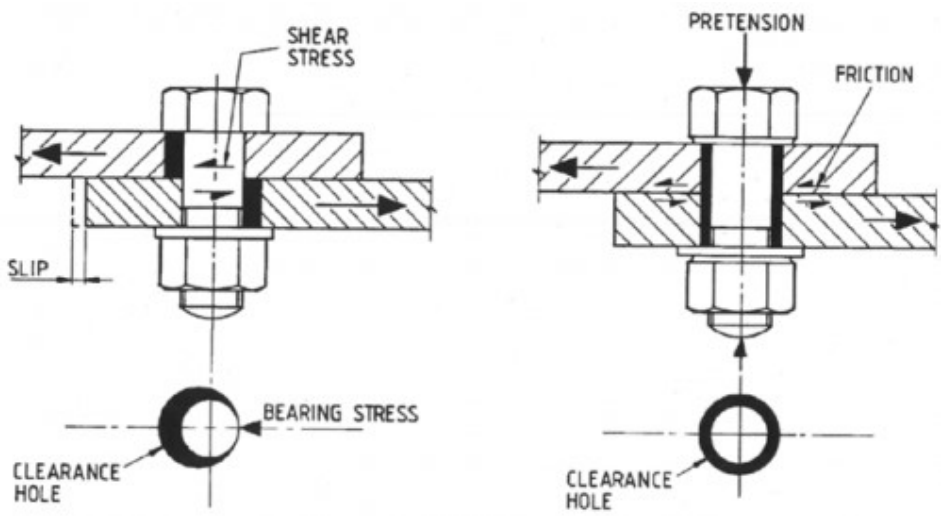
$$u_{el} = \frac{F_{t,el}}{k}$$

$$u_{t,Rd} = c_2 u_{el}$$

$$c_1 = \frac{R_m - R_e}{0.25AE_e} \quad ; \quad c_2 = \frac{AE}{4R_e}$$

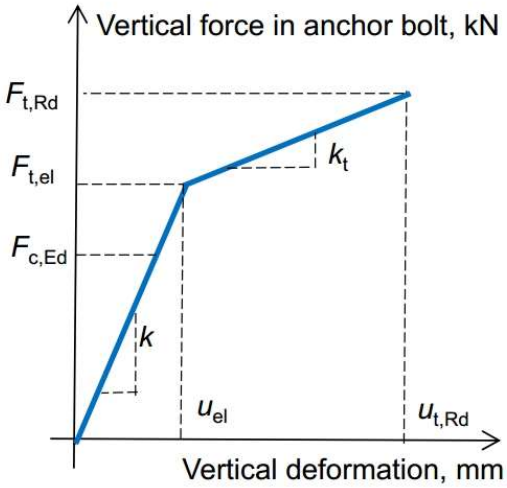


Bolts:



Anchors:

EN1993-1-8



Concrete Block:

Winkler-Pasternak subsoil model

$$k = \frac{E_c}{(\alpha_1 + \nu)\sqrt{\frac{A_{eff}}{A_{ref}}}}\left(\frac{1}{\frac{h}{a_2 d} + a_3} + a_4\right) \quad N/m^3$$

$a_1 = 1.65\ ;\ \ a_2 = 0.5\ ;\ a_3 = 0.3\ ;\ a_4 = 1.0$

- A_{eff} – Effective area in compression
- A_{ref} = 10 m^2 – reference area