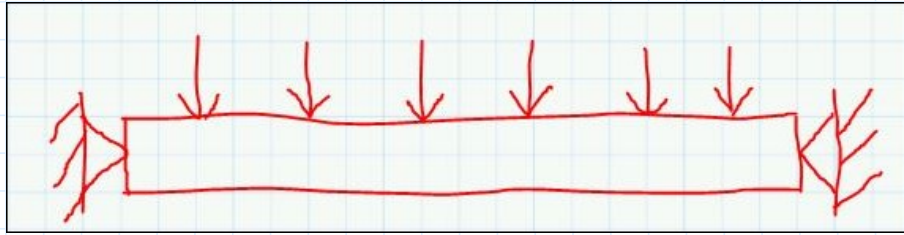


plastic collapse calculation



$$f_{y_S235} := 235 \text{ MPa}$$

$$l := 1000 \text{ mm}$$

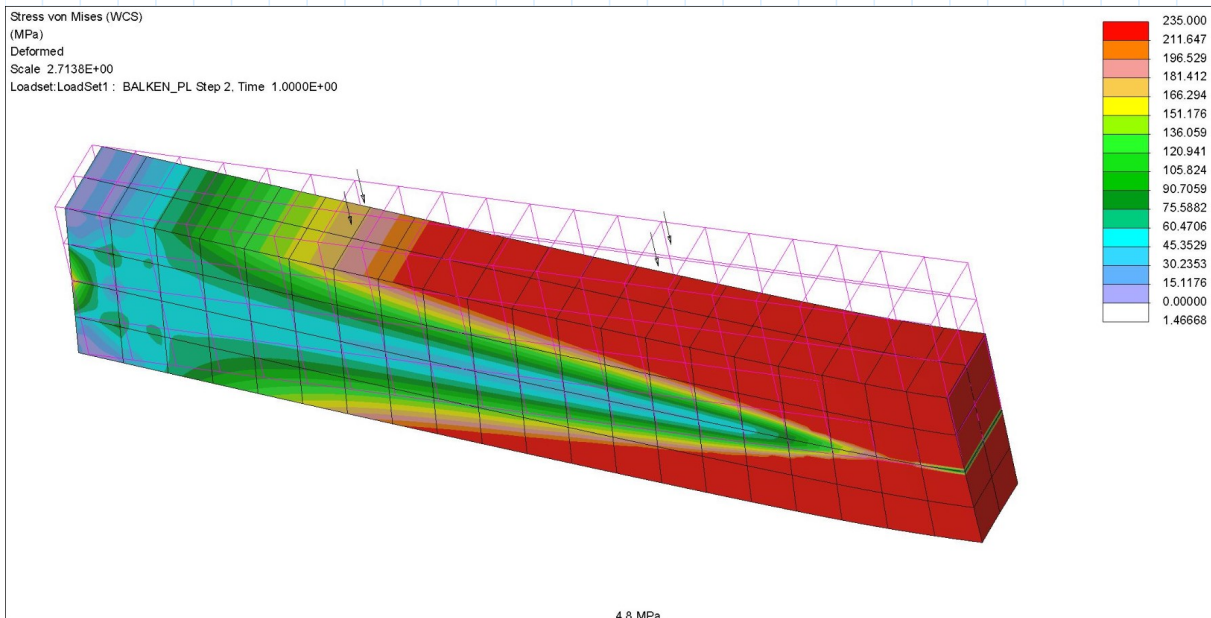
$$h := 100 \text{ mm}$$

$$b := 50 \text{ mm}$$

$$M_{pl} := f_{y_S235} \cdot \frac{b \cdot h^2}{4} = 29.375 \text{ kN} \cdot \text{m}$$

$$q_{pl} := M_{pl} \cdot \frac{8}{l^2} = 235 \frac{\text{kN}}{\text{m}}$$

$$p_{pl} := \frac{q_{pl}}{b} = 4.7 \text{ MPa}$$



plot: control of plastic collapse ($> 4,8 \text{ MPa}$)