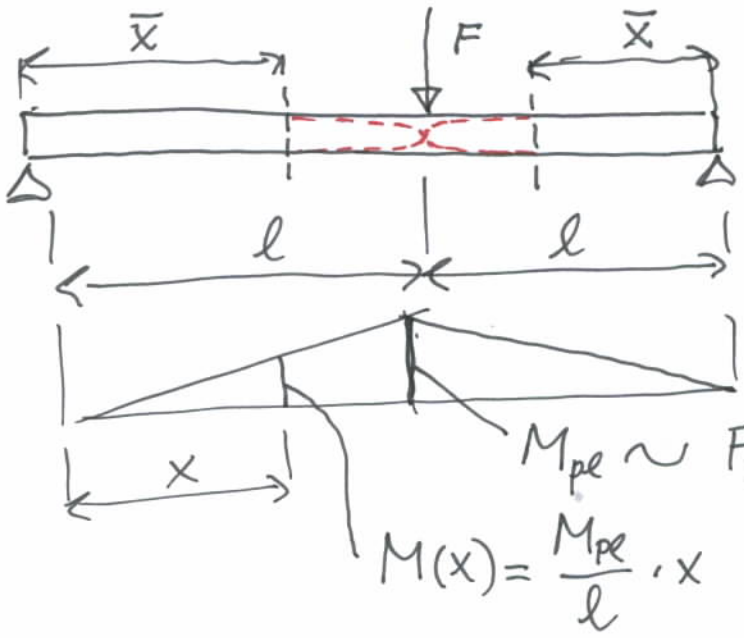
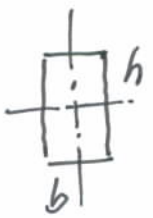




$$M_1 = \sigma_K \cdot \frac{bh^2}{6}$$

$$M_{pe} = \sigma_K \cdot \frac{bh^2}{4}$$

$$\frac{F_M}{2} \cdot \ell = M_{pe}$$

$$F_M = \frac{2 M_{pe}}{\ell}$$

Počátek plast. oblasti:

$$M(\bar{x}) = M_1$$

$$\frac{M_{pe}}{\ell} \cdot \bar{x} = M_1$$

$$\sigma_K \frac{bh^2}{4} \cdot \frac{\bar{x}}{\ell} = \sigma_K \cdot \frac{bh^2}{6}$$

$$\frac{\bar{x}}{\ell} = \frac{2}{3}$$

v el-pl. oblasti
$x > \bar{x}$

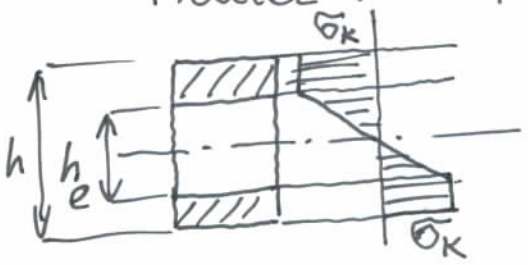
$$\frac{M_{pe}}{\ell} \cdot x = M_{e-p}$$

$$\frac{\sigma_K b h^2}{4} \cdot \frac{x}{\ell} = \frac{\sigma_K b h_e^2}{6} + \frac{\sigma_K b}{4}(h^2 - h_e^2)$$

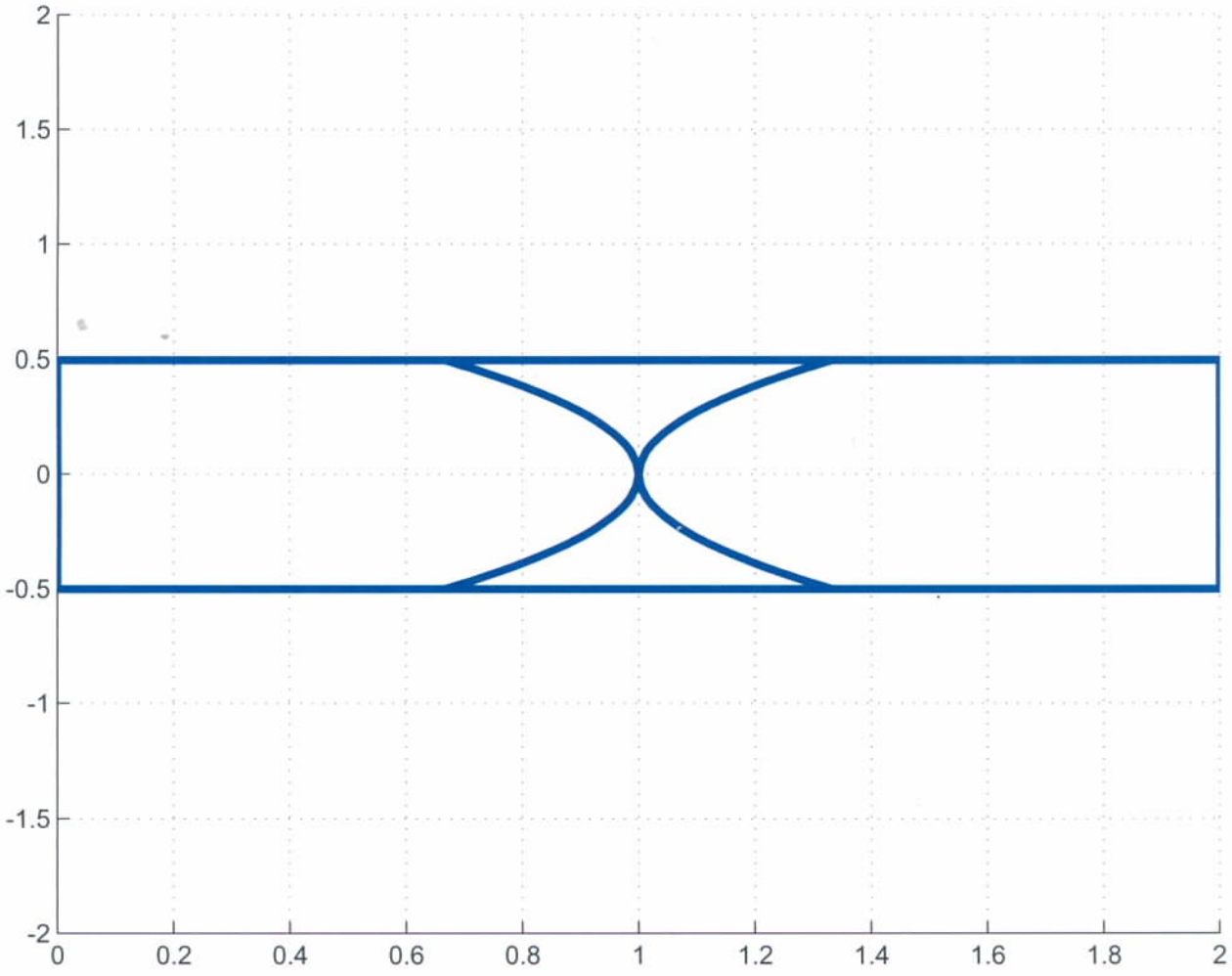
$$\frac{x}{\ell} = 1 - \frac{1}{3}\left(\frac{h_e}{h}\right)^2$$

$$\frac{h_e}{h} = \sqrt{3}\sqrt{1 - \frac{x}{\ell}}$$

Průřez v el-plast stavu



$$M_{e-p} = \sigma_K \cdot \frac{bh_e^2}{6} + \frac{\sigma_K b}{4}(h^2 - h_e^2)$$


2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2