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**Problem 608**

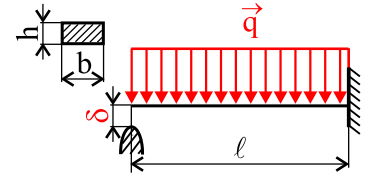
Determine the the safety factor against the limit state of elasticity of the beam with rectangular cross section according the figure. Gravitational forces can be neglected.

Input values:

$$l = 1,75 \text{ m}, \quad q = 150 \text{ Nm}^{-1}, \quad E = 2 \cdot 10^5 \text{ MPa},$$

$$b = 0,03 \text{ m}, \quad h = 0,02 \text{ m}, \quad \sigma_K = 200 \text{ MPa}$$

$$\delta = 10 \text{ mm}$$



flexion

extreme stress

supported beam