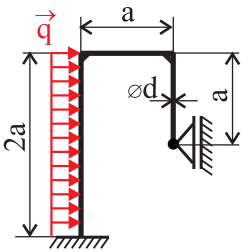
Problem 612

Determine the maximum value of the distributed load $\vec{q}$ which the beam (in the figure) can be acted upon by, if the safety factor against the limit state of elasticity should be at least 2. Gravitational forces can be neglected.

Input values:

$a = 1\,\mathrm{m}$, $\quad \varnothing d = 40\,\mathrm{mm}$,

$E = 2 \cdot 10^5\,\mathrm{MPa}$, $\quad \sigma_K = 300\,\mathrm{MPa}$



angular beams procedure of solving supported beams