Remarks: See §4.4, pages 168 till 170
See §4.5, pages 171 till 184
See §4.6, pages 184 till 186

Answer:

$F_{w;max} = 3$ kN

Explanation:

$A = 2\pi(500\text{ mm})t = (1000\text{ mm})\pi t$

$I = \frac{1}{2} I_p = \frac{1}{2} \times (1000\text{ mm})\pi t \times (500\text{ mm})^2 = (125 \times 10^6\text{ mm}^3)\pi t$

$$\sigma_{max} = +\frac{F_w \times (5000\text{ mm}) \times (500\text{ mm})}{(125 \times 10^6\text{ mm}^3)\pi t} - \frac{60 \times 10^3\text{ N}}{(1000\text{ mm})\pi t} \leq 0\text{ N/mm}^2$$

Therfore: $F_w \leq 3000$ N