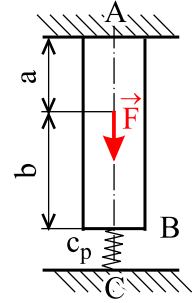


---

### Problem 419

The bar in the figure is welded to the base on one of its ends and supported by the spring of the compliance  $c_p$  [m/N] on the other end. It is loaded by the force  $\vec{F}$ . Evaluate the safety factor against the limit state of elasticity. The geometry, loads and material characteristics (yield stress  $\sigma_K$  and Young's modulus  $E$ ) are known. Gravitational forces can be neglected, as well as production inaccuracies and temperature changes.



---

Solutions

simple tension loaded bars

support parameters