
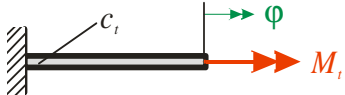
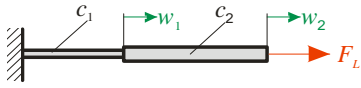
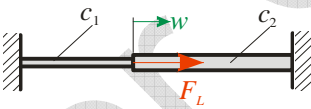
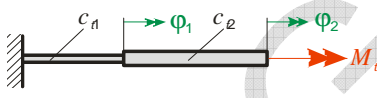
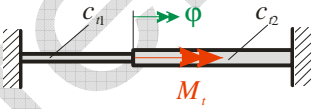


Federn

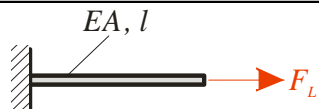
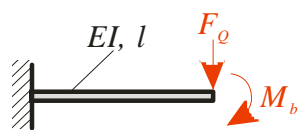
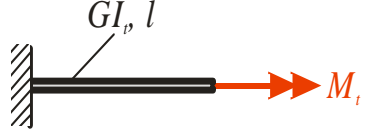
Federgesetze

Feder	Federgesetz	Potenzielle Energie
 <p>Zug-/Druck-Feder</p>	$F = c w$	$U = \frac{1}{2} c w^2$
 <p>Drehfeder</p>	$M_t = c_t \varphi$	$U = \frac{1}{2} c_t \varphi^2$

Ersatzfederkonstanten

Federschaltung	Ersatzfederkonstante
 <p>Reihenschaltung</p>	$\frac{1}{c} = \frac{1}{c_1} + \frac{1}{c_2}$
 <p>Parallelschaltung</p>	$c = c_1 + c_2$
	$\frac{1}{c_t} = \frac{1}{c_{t1}} + \frac{1}{c_{t2}}$
	$c_t = c_{t1} + c_{t2}$

Federkonstanten elastischer Linientragwerke

Beanspruchungsart	Federkonstanten
 <p>Zug</p>	$c = \frac{EA}{l}$
 <p>Biegung</p>	$F_Q: c = \frac{3 EI}{l^3} \quad c_t = \frac{2 EI}{l^2}$ $M_b: c = \frac{2 EI}{l^2} \quad c_t = \frac{EI}{l}$
 <p>Torsion</p>	$c_t = \frac{GI_t}{l}$