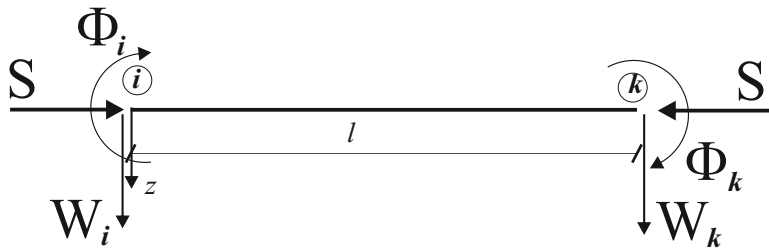
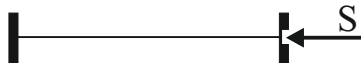


Wzory transformacyjne zginania z udziałem dużych sił osiowych



$$\sigma = l \sqrt{\frac{S}{EJ}}$$

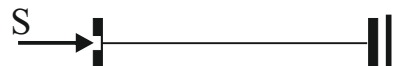
$$\psi = \frac{w_k - w_i}{l}$$



$$\Phi_i = \frac{EJ}{l} [\alpha(\sigma)\varphi_i + \beta(\sigma)\varphi_k - \vartheta(\sigma)\psi]$$

$$\Phi_k = \frac{EJ}{l} [\beta(\sigma)\varphi_i + \alpha(\sigma)\varphi_k - \vartheta(\sigma)\psi]$$

$$W_i = -W_k = \frac{EJ}{l^2} [\vartheta(\sigma)\varphi_i + \vartheta(\sigma)\varphi_k - \delta(\sigma)\psi]$$



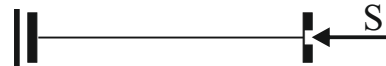
$$\Phi_i = \frac{EJ}{l} [\alpha''(\sigma)\varphi_i - \beta''(\sigma)\varphi_k]$$

$$\Phi_k = \frac{EJ}{l} [-\beta''(\sigma)\varphi_i + \alpha''(\sigma)\varphi_k]$$



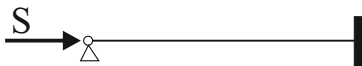
$$\Phi_i = \frac{EJ}{l} [\alpha'(\sigma)(\varphi_i - \psi)]$$

$$W_i = -W_k = \frac{EJ}{l^2} [\alpha'(\sigma)\varphi_i - \delta'(\sigma)\psi]$$



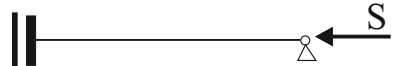
$$\Phi_i = \frac{EJ}{l} [\alpha''(\sigma)\varphi_i - \beta''(\sigma)\varphi_k]$$

$$\Phi_k = \frac{EJ}{l} [-\beta''(\sigma)\varphi_i + \alpha''(\sigma)\varphi_k]$$

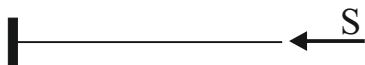


$$\Phi_k = \frac{EJ}{l} [\alpha'(\sigma)(\varphi_k - \psi)]$$

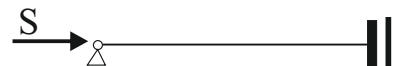
$$W_i = -W_k = \frac{EJ}{l^2} [\alpha'(\sigma)\varphi_k - \delta'(\sigma)\psi]$$



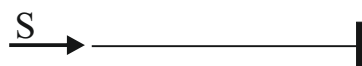
$$\Phi_i = \frac{EJ}{l} \alpha'''(\sigma)\varphi_i$$



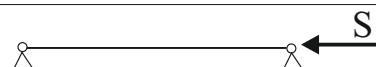
$$\Phi_i = \frac{EJ}{l} \alpha'''(\sigma)\varphi_i$$



$$\Phi_k = \frac{EJ}{l} \alpha'''(\sigma)\varphi_k$$



$$\Phi_k = \frac{EJ}{l} \alpha'''(\sigma)\varphi_k$$



$$W_i = -W_k = \frac{EJ}{l^2} \sigma^2 \psi$$