LIGNATUR®

$A_{c,eff,D02}$ = $m * d * (l_{a,D02} + 30)$

$t_{iii,mit,D02}$ = $h_{e,D02} / 20$

$A_{S,D02}$ = $m * d * h_{e,D02} + n * d_i * t_{iii,mit,D02}$

$s_{y,S,D02}$ = $(m * d * h_{e,D02}^2 / 2 + n * d_i * t_{iii,mit,D02}^2 / 2) / A_{S,D02}$

$I_{y,S,D02}$ = $m * d * h_{e,D02}^3 / 12 + m * d * h_{e,D02} * (h_{e,D02} / 2 - s_{y,S,D02})^2 + n * d_i * t_{iii,mit,D02}^3 / 12 + n * d_i * t_{iii,mit,D02} * (t_{iii,mit,D02} / 2 - s_{y,S,D02})^2$

$S_{y,D02}$ = $m * d * s_{y,S,D02}^2 / 2 + n * d_i * t_{iii,mit,D02} * (s_{y,S,D02} - t_{iii,mit,D02} / 2)$

$A_{w,D02}$ = $m * d * I_{y,S,D02} / S_{y,D02}$

α_{D02} = $h_{e,D02} / h$

$k_{v,90,D02}$ = $MIN (5 / (h^{0.5} * ((\alpha_{D02} *(1 - \alpha_{D02}))^{0.5} + 0.8 * l_{a,D02} / 2 / h * (1 / \alpha_{D02} - \alpha_{D02}^2)^{0.5})) \;\; ; \;\; 1.0)$

$R_{v,z,k,D02}$ = $MIN (A_{c,eff,D02} * k_{c,90} * f_{c,90,k} / b \;\; ; \;\; A_{w,D02} * k_{v,90,D02} * f_{v,k} / b)$

$R_{v,z,d,D02}$ = $R_{v,z,k,D02} * k_{mod} / \gamma_M$

Mit: $k_{c,90} = 1$; $f_{c,90,k} = 2.5$ N/mm²; $f_{v,k} = 2.0$ N/mm²

Formeln Nachweise D02