V_R	30	40	50	60	70	80	90	100	110	120
x	0.909	0.773	0.654	0.555	0.469	0.396	0.338	0.290	0.252	0.224
f_r	0.25	0.22	0.20	0.17	0.15	0.13	0.12	0.11	0.09	0.08
R_{min}	25	45	75	120	180	250	350	450	600	750

$$d = \sqrt{(x_i - x_{i+1})^2 + (y_i - y_{i+1})^2}$$

$$tg\, V_A^{T_1} = \frac{\Delta Y}{\Delta X} = \frac{Y_{T_1} - Y_A}{X_{T_1} - X_A}$$

$$d = \frac{L}{2} \qquad \tau = arctg \frac{L}{2R} \qquad \Delta R = \frac{L^2}{24R}$$

$$\min R = \frac{V_r^2}{127(\max f_r + \underbrace{\max ip}_{0.07})}$$

$$\min L = \frac{2{,}725 \cdot V_r \cdot f_r}{x}$$

$$\alpha_{A1} = \left| V_{T_1}^{T_2} - V_A^{T_1} \right|$$

	ΔY	ΔX	V_α
I	+	+	$arctg\, \Delta Y / \Delta X$
II	+	−	$arctg\, \lvert\Delta X\rvert / \Delta Y + 90$
III	−	−	$arctg\, \lvert\Delta Y\rvert / \lvert\Delta X\rvert + 180$
IV	−	+	$arctg\, \Delta X / \lvert\Delta Y\rvert + 270$

$$T_{gi} = R_i \cdot tg \frac{\alpha_1}{2}$$

$$m_1 = \overline{T_1 T_2} - (T_{g1} + T_{g2})$$

$$D_{kl_{2S}} = \frac{V_R \cdot 2}{3{,}6} \; ; \; D_{kl_{2S}} = D_{kl} = \frac{R\pi(\alpha - 2\tau)}{180^\circ} \Longrightarrow \tau$$

$$\Rightarrow \tau = arctg \frac{L}{2R} \Rightarrow L_1 \; ;$$

$$\boxed{L_1 + L_2 = m_1} \qquad \boxed{\tau_1 \leq \frac{\alpha_1}{2}}$$

$$R_1 L_1 = R_2 L_2$$

$$D_{kl} = R_1 \pi \cdot \frac{(\alpha_1 - 2\tau)}{180}$$

$$T_{g1} = (R_1 + \Delta R_1) \cdot tg \frac{\alpha_1}{2} + d$$

$$S_1 = (R_1 + \Delta R_1)\left(\frac{1}{\cos \frac{\alpha_1}{2}} - 1\right) + \Delta R_1$$

$$m_1 = \frac{L_1 + L_2^L}{2} = L_2^L = a$$

$$R_1 L_1 = R_2 L_2^L = L_2^L = b \qquad b < L_2^L < a$$

$$\tau_2^L < \frac{\alpha_2}{2} = \_\_\_$$

$$\vdots$$

$$D_{kl} = \frac{R_2 \pi (\alpha_2 - \tau_2^L(\tau_2^0))}{180} \Longrightarrow \tau_2^0 = c$$

$$T_{gK} = (R_2 + \Delta R_{K2})\, tg \frac{\alpha_2}{2} + d_{K2} \pm \frac{(\Delta R_{d2} - \Delta R_{K2})}{\sin \alpha_2}$$

$$T_{gd} = (R_2 + \Delta R_{K2})\, tg \frac{\alpha_2}{2} + d_{d2} \pm \frac{(\Delta R_{d2} - \Delta R_{K2})}{tg\, \alpha_2}$$

$\alpha (0-90^\circ)? \Rightarrow \ominus$

$$S = (R_2 + \Delta R_{K2}) \cdot \left(\frac{1}{\cos \frac{\alpha_2}{2}} - 1\right) + \Delta R_{K2}$$

$$D_{kl} = \frac{R \cdot \pi \cdot [\alpha_2 - (\tau_{lK2} + \tau_{ld2})]}{180^\circ}$$

$\min R_V^{KONV} = 0{,}25 \cdot P_z^2$

$P_z = L_{zf} + \Delta L$ $\quad$ min $h_1 = 0{,}8$

$L_{zf} = \frac{t_r \cdot V_r}{3{,}6} + \frac{V_R^2}{255 \cdot (f_T + W_K \pm i_H)}$

$t_r = 2$ sec $\quad$ $W_K = 0{,}02$ $\quad$ $\Delta L = 5\text{–}10$ m

$T_g = R_V \cdot tg\,\alpha = R_V \cdot \frac{\Delta i_N}{2}$

$max\,y = \frac{T_g^2}{2R_V}$

$y_i = \frac{x^2}{2R}$

$R_V = \frac{8 \cdot max\,y}{\Delta i_N^2}$

$\Delta i_N = \frac{|i_{N_1} - i_{N_2}|}{100}$

$K_N = K_p - y_i$

V_R	50	50	60	70	80	90	100	110	120
f_T	0.44	0.41	0.38	0.36	0.34	0.31	0.30	0.29	0.28
min R_V^{KONV}	500	1000	2000	3000	4000	6000	9000	12000	17000
min R_V^{KORK}	500	500	1000	2000	3000	4000	6000	8000	11000

$\min R_V^{KONK} = \frac{2}{3} R_V^{KONV}$

$b = max\,y, \Delta i_N, R_V, \frac{T_g^2}{2R_V} = b \Rightarrow T_g \quad L = 2T_g$

$K_n + y_i = K_p$

$100 + 0{,}04 \cdot 100 = K_p$

$A = \sqrt{R \cdot L}$ $\quad$ $T_g = (R + \Delta R) tg \frac{\alpha}{2} + X_C$

$b = \left((R + \Delta R)\left(\frac{1}{\cos \frac{\alpha}{2}} - 1\right)\right) + \Delta R$

$D = 2L + L_K$ $\quad$ $L_K = \frac{R\pi(\alpha - 2\tau)}{180}$

$\tau = \_\_\_\,; \alpha = 90° - \tau = \_\_\_\,; d = AT_1 - T_g$ $\quad$ $\Delta x = d \sin\alpha \ldots Y_1 = Y_A +$

$\Delta y = d \cos\alpha \ldots X_1 = X_A$

$i_{pki} = 7 \cdot \sqrt[3]{\left(\frac{\min R}{R_i}\right)^2}$

$c_{Ri} = \frac{V_R^2}{127 R_i}$

$\Delta h_o = B/2 \cdot i_{pki}$ $\quad$ $(i_r > 0{,}2\%)$ $\quad$ $i_p^{PVP} = 2\text{–}2{,}5\%$ $\Rightarrow h'$

$\Delta h_{VI} = B \cdot i_{pki}$ $\quad$ $(i_r > 0{,}4\%)$

$C_R = i_{pki} + f_r$ $\quad$ $f_R^{PVP} = 0$

$i_R = \frac{\Delta h'}{d'} = 0{,}002$

$d' = \frac{\Delta l'}{i_R}$