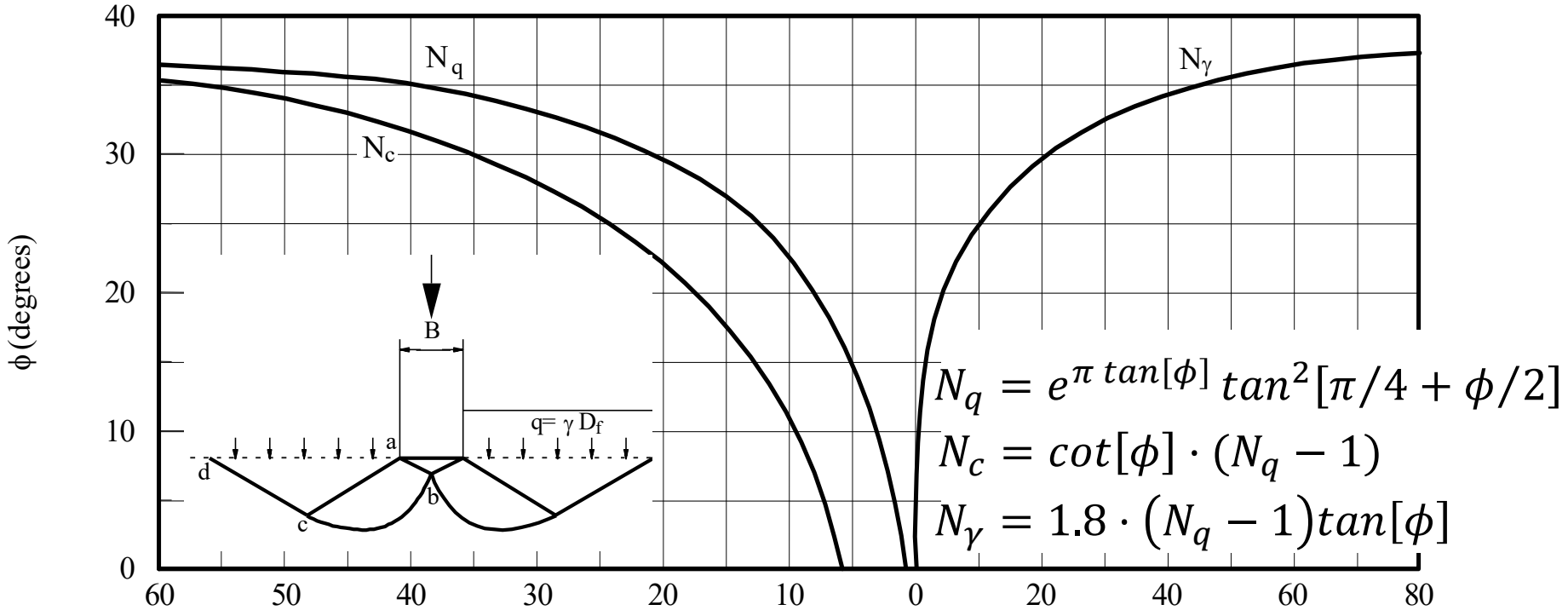
Fórmula de Terzaghi

$$q_f = c\, N_c[\phi] + \sigma_0'\, N_q[\phi] + \frac{1}{2} B\, \gamma\, N_\gamma[\phi]$$



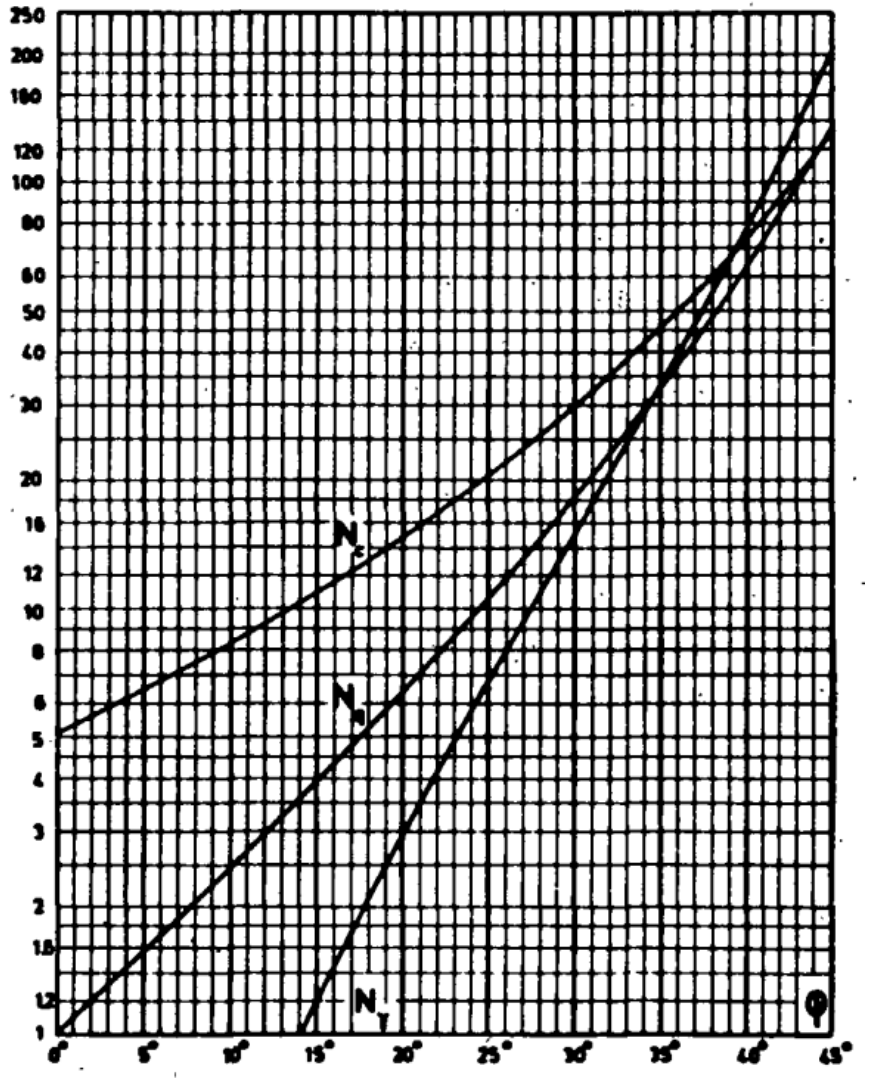
$$N_q = e^{\pi\, tan[\phi]}\, tan^2[\pi/4 + \phi/2]$$

$$N_c = cot[\phi] \cdot (N_q - 1)$$

$$N_\gamma = 1.8 \cdot (N_q - 1) tan[\phi]$$

Fórmula de Brinch-Hansen

- $q_f = \frac{1}{2}\gamma B' N_\gamma s_\gamma d_\gamma i_\gamma + \sigma_0' N_q s_q d_q i_q + c N_c s_c d_c i_c$
- $N_c = cot[\phi] \cdot (N_q - 1)$
- $N_q = e^{\pi\, tan[\phi]}\, tan^2[\pi/4 + \phi/2]$
- $N_\gamma = 1.5 \cdot (N_q - 1) tan[\phi]$



Factores de la fórmula de Brinch-Hansen

$$i_c = i_q - \frac{1-i_q}{N_q-1} \quad | \quad i_\gamma = \left(1 - \frac{0.7H}{V+A'\,c\cot[\phi]}\right)^5 \quad | \quad i_q = \left(1 - \frac{0.5H}{V+A'\,c\cot[\phi]}\right)^5$$

$$s_c = 1 + (0.2 + \tan^6[\phi])\,\frac{B'}{L'} \quad | \quad s_\gamma = 1 - \frac{1}{2}(0.2 + \tan^6[\phi])\,\frac{B'}{L'}$$

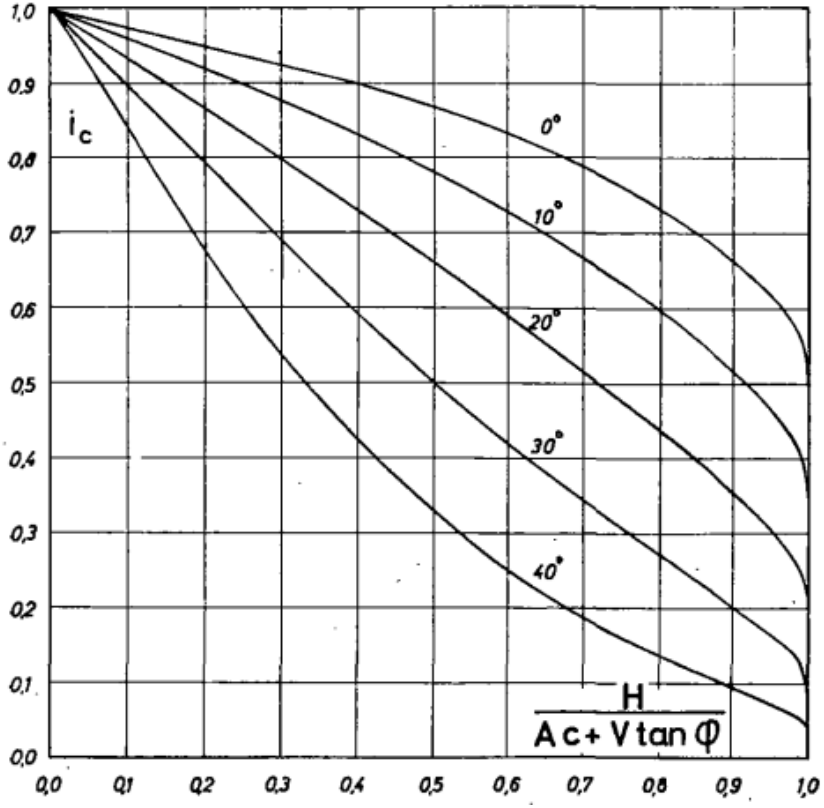
$$s_q = s_c - \frac{s_c - 1}{N_q}$$

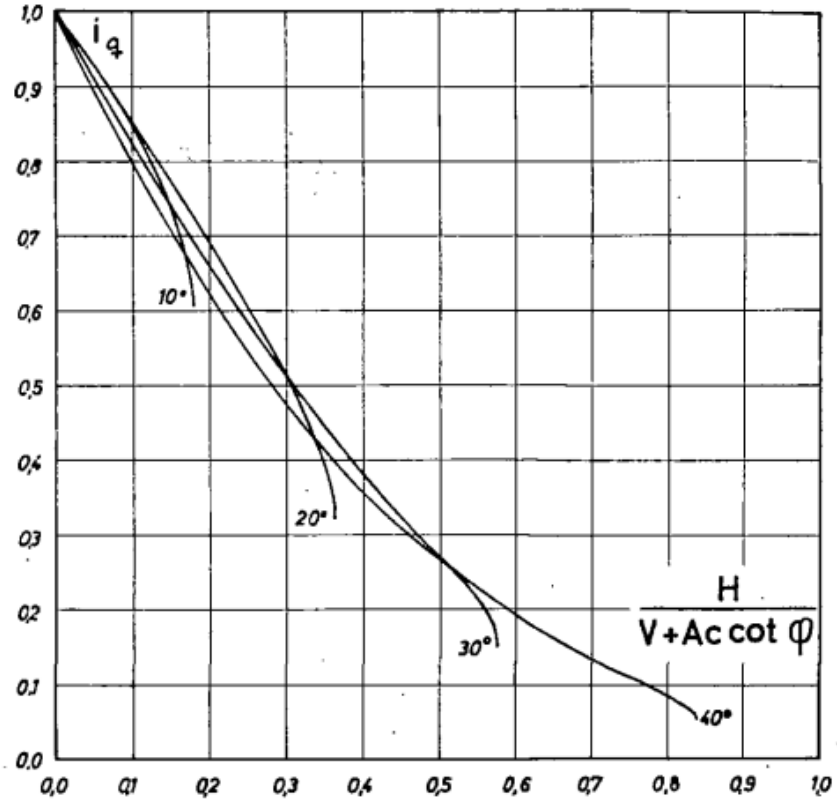
$$d_c = 1 + \frac{0.35}{\frac{B'}{d} + \frac{0{,}6}{1+7\tan^4[\phi]}} \quad | \quad d_q = d_c - \frac{d_c-1}{N_q} \quad | \quad d_\gamma = 1.0$$

Factores de la fórmula de Brinch-Hansen

$$i_c = i_q - \frac{1-i_q}{N_q-1}$$

$$i_q = \left(1 - \frac{0.5H}{V+A'\,c\cot[\phi]}\right)^5$$

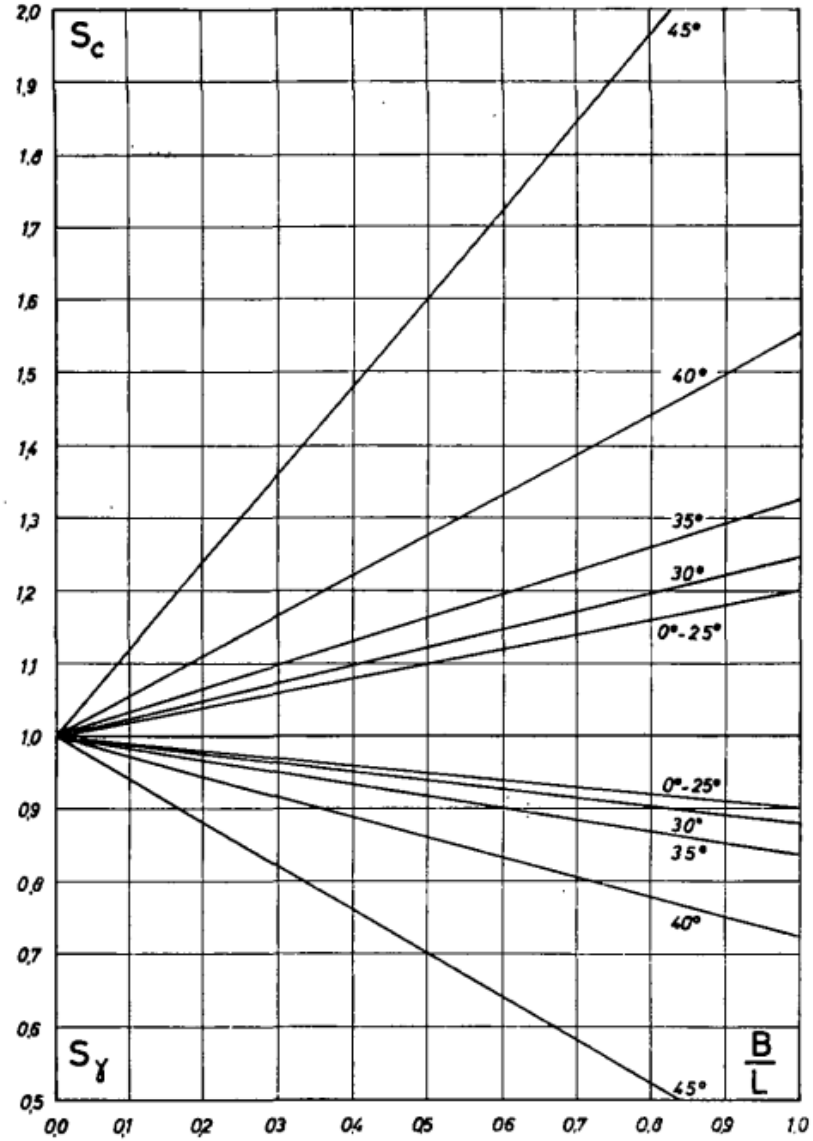




Factores de la fórmula de Brinch-Hansen

$$s_c = 1 + (0.2 + \tan^6[\phi])\ \frac{B'}{L'}$$

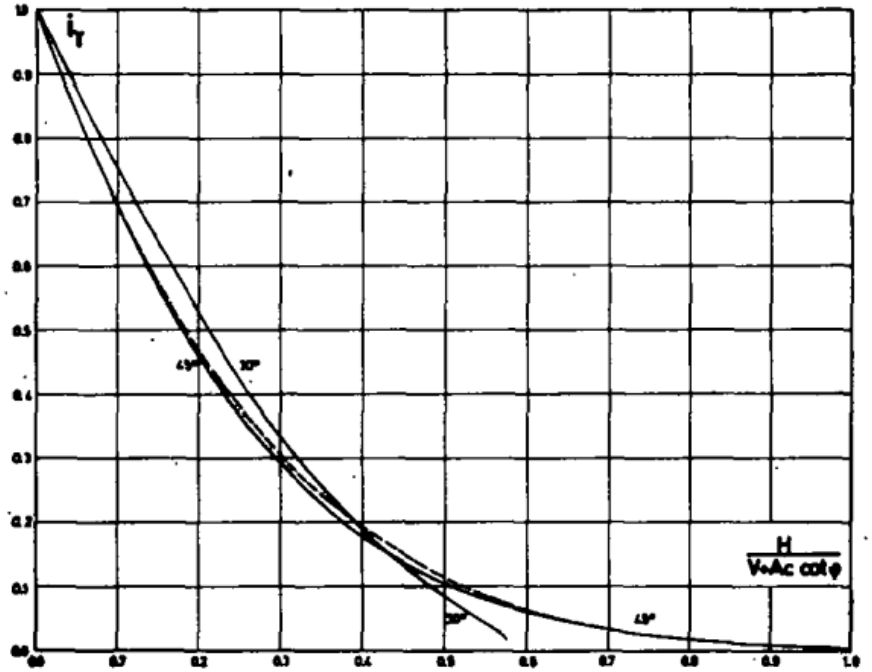
$$s_\gamma = 1 - \frac{1}{2}(0.2 + \tan^6[\phi])\ \frac{B'}{L'}$$

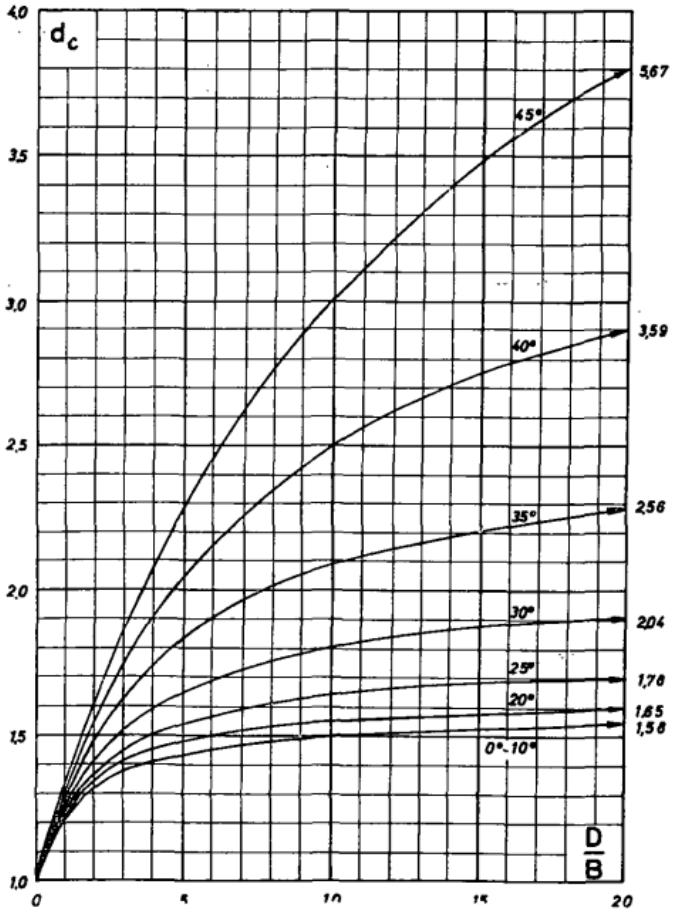


Factores de la fórmula de Brinch-Hansen

$$i_\gamma = \left(1 - \frac{0.7H}{V + A'\, c\cot[\phi]}\right)^5$$

$$d_c = 1 + \frac{0.35}{\frac{B'}{d} + \frac{0{,}6}{1 + 7\tan^4[\phi]}}$$





Fórmula de Brinch-Hansen para pilotes

$$q_f = (cN_c + \sigma_0' N_q)\, s_c\, d_c$$