

$$Q_{fNB} = \underline{B} * \underline{L} * [(1 + 0,3 * \underline{B}/\underline{L}) * N_c * c_u * i_c + (1 + 1,5 * \underline{B}/\underline{L}) * N_D * r_D * g * D_{min} * i_D + (1 - 0,25 * \underline{B}/\underline{L}) * N_B * r_B * g * \underline{B} * i_B]$$

| | | | | | | | | |
|-----------|-------|--------------------|-------|-------------------|-----------|---------|-------|-------------------|
| $r_D^K =$ | 1,80 | T/m ³ = | 18,00 | kN/m ³ | $g = 0,9$ | $r_D =$ | 16,20 | kN/m ³ |
| $r_B^K =$ | 1,80 | T/m ³ = | 18,00 | kN/m ³ | $g = 0,9$ | $r_B =$ | 16,20 | kN/m ³ |
| $c_u^K =$ | 13,00 | kPa = | 13,00 | kN/m ² | $g = 0,9$ | $c_u =$ | 11,70 | kN/m ² |
| $f_u^K =$ | 29,00 | ° = | | | $g = 0,9$ | $f_u =$ | 26,10 | ° |

$N_r = 3497,75$ kN
 $T_r = 0,00$ kN
 $M_r = 0,00$ kNm

**STAROSTWO POWIATOWE
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| | | | |
|---------------------------------|-------------|------|---|
| $e_L = (M_r + T_r * h_f) / N_r$ | $h_f =$ | 1,20 | m |
| $e_L = 0,00$ m | $D_{min} =$ | 0,40 | m |

płyta fundamentowa o średnicy

$D_f = 8,70$ m

wymiary zredykowanej płyty zastępczej

$B = \underline{L} = 0,885 * D_f$

$\underline{B} = 7,70$ m
 $\underline{L} = 7,70$ m

$N_D = e^{p \cdot \text{tg} \Phi} * \text{tg}^2(p/4 + \Phi/2)$

$N_D = 11,981$

$N_C = (N_D - 1) * \text{ctg} \Phi$

$N_C = 22,416$

$N_B = 0,75 * (N_D - 1) * \text{tg} \Phi$

$N_B = 4,035$

$\text{tg} \delta = T_r / N_r = 0,000$
 $\text{tg} \Phi = 0,490$
 $\text{tg} \delta / \text{tg} \Phi = 0,000$

z
nomogramu:

$i_D = 1,00$

$i_C = 1,00$

$i_B = 1,00$

$Q_{fNB} = 54095,10$ kN

$N_r \leq m * Q_{fNB}$

$N_r = 3497,75$ kN < $0,81 * Q_{fNB} = 43817,03$ kN warunek spełniony