TABLE 2.13

Angle $\bar{\beta}$ in degrees

	$m' = 0$					$m' = 1$				
D/B	Angle of internal shearing resistance of the soil Φ									
	0	10	20	30	40	0	10	20	30	40
0.0	0	0	0	0	0	0	0	0	0	0
0.2	11	7	4.5	2.5	1.5	17	10	6	3.5	1.4
0.4	23	15	9	5	3	35	19	11	6.5	3.5
0.6	36	22	13	8	4	55	30	17	9.5	5
0.8	52	28	16	9.5	5.5	90	40	22	13	7
1.0	85	35	21	12	7	90	50	27	15	8
2.0	90	85	40	23	14	90	90	50	28	16
4.0	90	90	75	40	22	90	90	90	46	27
6.0	90	90	90	55	30	90	90	90	67	35
8.0	90	90	90	68	37	90	90	90	90	44
10.0	90	90	90	90	45	90	90	90	90	53
20.0	90	90	90	90	70	90	90	90	90	87

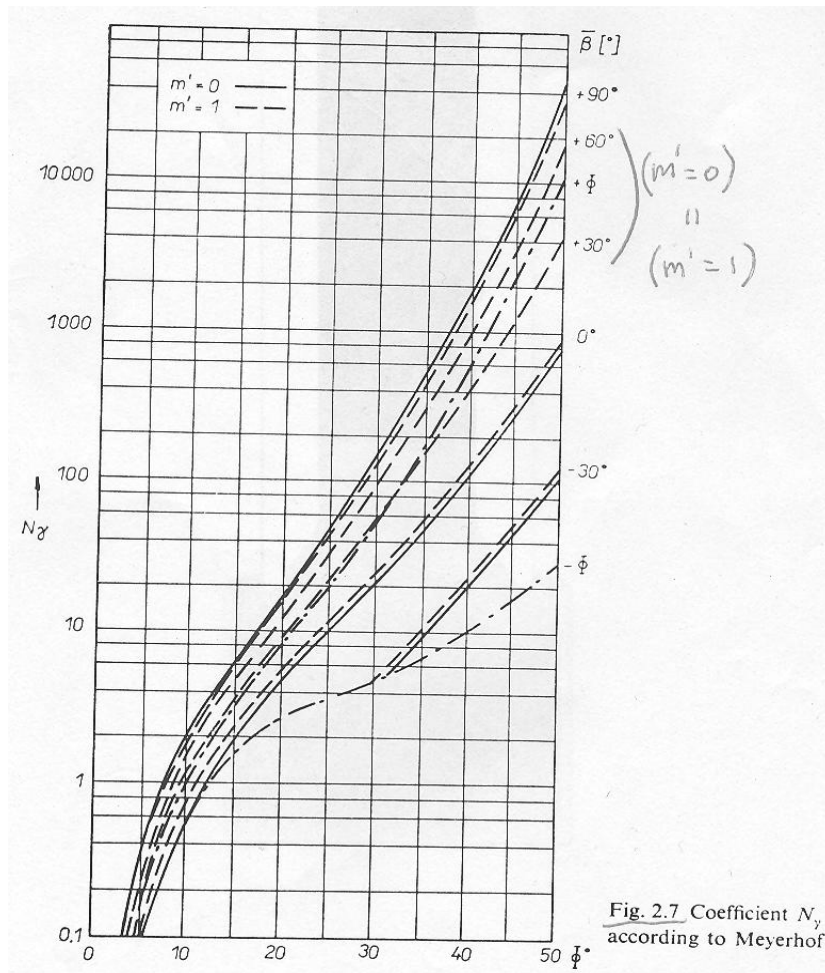Fig. 2.7 Coefficient N_γ according to Meyerhof

Fig. 2.8 Coefficient N_q according to Meyerhof

Fig. 2.9 Coefficient N_c according to Meyerhof

Fig. 2.13 Values of the depth factor d_c

The depth coefficient

$$d_c \doteq 1 + \frac{0.35}{B/D + 0.6/(1 + 7 \tan^4 \Phi)} \qquad (2.50)$$

The depth factor d_c can be determined from the nomogram in Fig. 2.13

$$d_q = d_c - \frac{d_c - 1}{N_q}; \qquad d_q \doteq d_c \qquad \text{for } \Phi \geqq 25^0 \qquad (2.51)$$

$$d_\gamma = 1 \qquad (2.52)$$

The influence of the depth can also be approximately calculated from equation

$$d_q = d_c \approx 1 + 0.35 D/B \qquad (2.53)$$
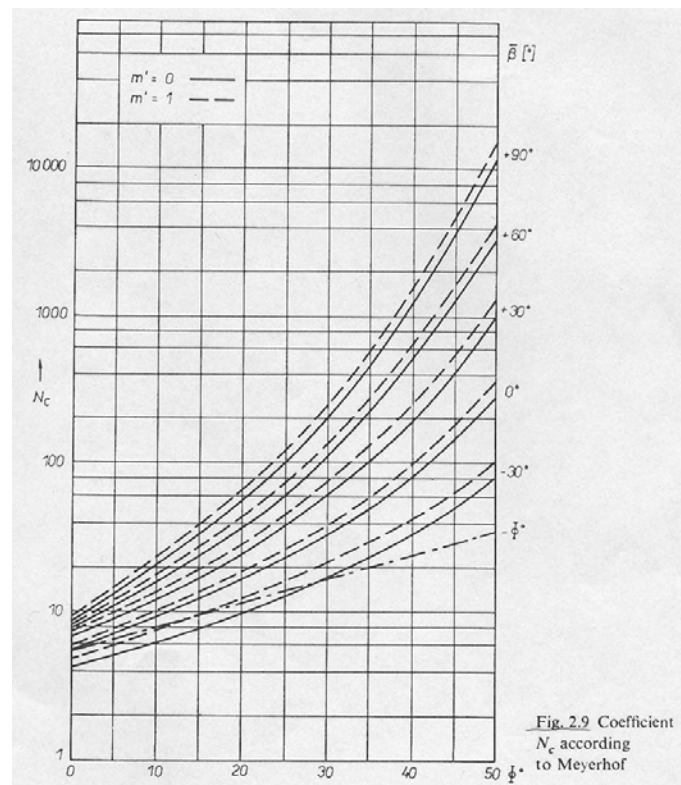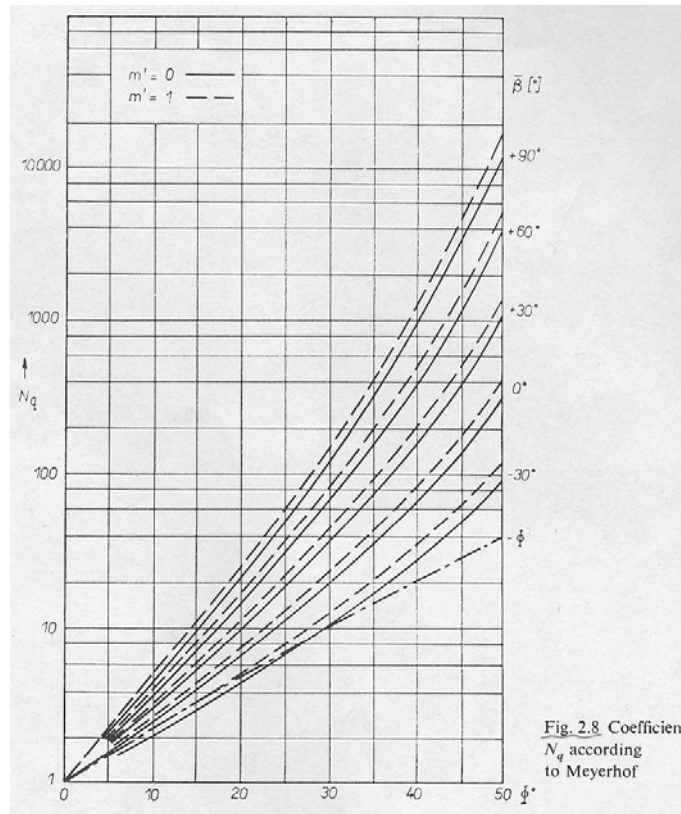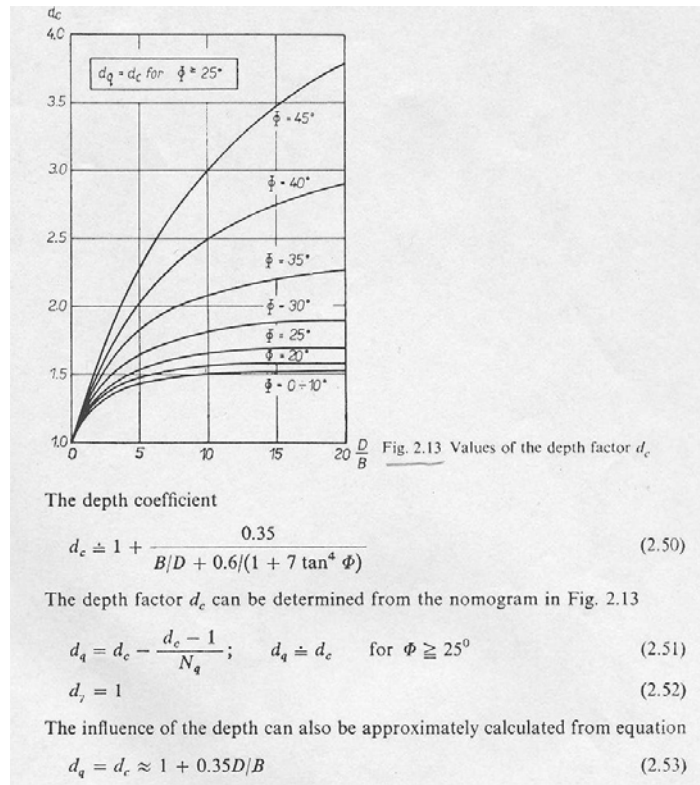
TABLE 2.14

Coefficients N_γ, N_q, d_1, d_2 according to Caquot and Kérisel

Coefficient		Φ Angle of internal shearing resistance of the soil							
	for	10°	15°	20°	25°	30°	35°	40°	45°
N_γ	$\alpha' = 0°$	0.34	0.78	1.66	3.48	7.38	16.4	39.3	104.8
	$\alpha' = \Phi$	0.88	1.78	3.51	7.24	14.8	33.4	78.1	172.5
	$\alpha' = 45° + \Phi/2$	1.60	3.00	5.69	11.4	22.7	49.8	114.0	307.5
N_q	$D = 0$	2.50	4.03	6.67	11.4	20.4	38.5	78.6	178.0
	$D = d_p/2$	3.20	5.68	11.3	21.7	47.8	110.5	286.1	866.0
	$D \geqq d_p$	3.44	6.23	12.8	26.2	56.9	134.5	355.5	1 096.0
d_1	$\delta \doteq \Phi$	0.29	0.57	1.03	1.81	3.21	5.85	11.3	23.7
	$\delta \doteq 2\Phi/3$	0.19	0.36	0.64	1.10	1.88	3.27	5.90	11.4
d_2	$\psi \geq 0 \to d_v \cong 1$	1.60	2.06	2.70	3.62	5.01	7.27	—	—
For $D' \leqq 0$, $d_1 = d_2 = 0$									
$N_{q\,max}^{2/3}/2$		1.14	1.69	2.73	4.40	7.40	13.1	25.0	53.0