

DC-NEWS ZTVK form

Automatic setting of the form
for all outputs (graphics + text)



NEWS

AUTHOR: DC-Software GmbH, D-80997 München, Hannah-Arendt-Weg 3
 PROGRAM: DC-PiMWin version 3.30
 CONSTRUCTION: München ASB no.:

$g = 10.00 \text{ kN/m}^3$
 $\gamma_{\text{sat}} = 20.00 \text{ kN/m}^3$
 $\gamma_{\text{eff}} = 21.00 \text{ kN/m}^3$
 $\phi = 35.00 \text{ degrees}$
 $\delta = 21.00 \text{ degrees}$
 $\alpha = 20.00 \text{ degrees}$
 $\beta = 20.00 \text{ degrees}$
 $\gamma_{\text{sat}} = 20.00 \text{ kN/m}^3$
 $\gamma_{\text{eff}} = 21.00 \text{ kN/m}^3$
 $\phi = 35.00 \text{ degrees}$
 $\delta = 21.00 \text{ degrees}$
 $\alpha = 20.00 \text{ degrees}$
 $\beta = 20.00 \text{ degrees}$

COMPONENT: Foundation pit project 2008/12
 BLOCK:
 PROCEDURE:

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Deformation w : 0.40 mm, -0.21 mm
 Shear force Q : 102.12, 63.05, 12 kNm, 88 kNm

Section forces from total loads, characteristic

COMPONENT: Founda
 BLOCK:
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Excavation phase B3, wall supported in 2 points
 Wall end free

Negative earth pressure does NOT influence stability system

No redistribution

Iteration of wall depth:

Range	Ed - Rd
7.00	115.45
8.00	86.75
9.00	-122.58
9.60	-75.68
9.30	-33.99
9.00	2.49
9.01	1.36
9.03	-0.92
9.02	.22

depth z (m)	eph,k (kN/m ²)	depth z (m)	design value eph,d (kN/m ²)
.000	.000	.000	.000
4.500	.000	4.500	.000
6.500	-13.668	6.500	-10.514
7.000	-89.922	7.000	-69.170
8.000	-169.806	8.000	-130.620
9.020	-251.200	9.020	-193.299
Sum Eph,k = -370.519 kN/m		Sum Eph,d = -205.015 kN/m	

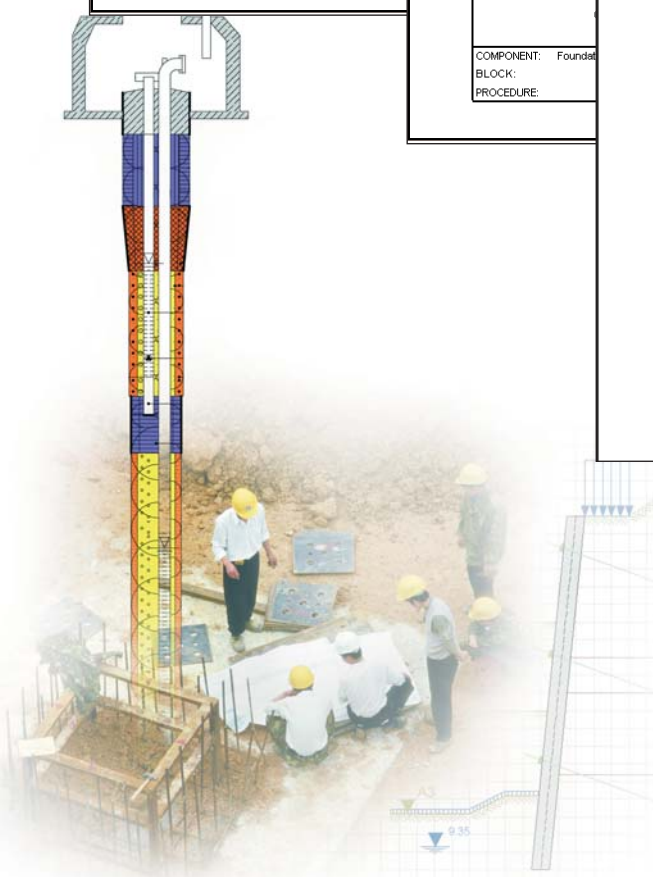
Depth z (m)	w soil side (kN/m ²)	w excv. side (kN/m ²)	w total (kN/m ²)
.000	.000	.000	.000
1.375	.000	.000	.000
2.500	11.500	.000	11.500
5.000	36.500	.000	36.500
7.000	56.500	.000	56.500
8.000	66.500	10.000	56.500
9.020	76.700	20.200	56.500

Total length of wall: 9.02 m, embedded depth t = 2.52 m

Excav. depth z = 6.50 m, water level = 7.00 m
 Foot supp. force: Ed = 285.24 kN = Rd = 285.01 kN
 Point of application = 8.07 m

Factor of safety against piping failure:
 (Approximation acc. to EMJ.E115 (Hanspurt-Davidenkoff, Brinch Hansen))
 $\frac{q_{\text{eff}} \cdot \gamma_{\text{sat}} \cdot H}{c' + q' \cdot \gamma_{\text{sat}} \cdot H} = \frac{6.96 \cdot 1.60}{11.34} < \frac{q' \cdot \gamma_{\text{sat}} \cdot H}{c' + q' \cdot \gamma_{\text{sat}} \cdot H} = \frac{13.56 \cdot 1.90}{12.21} \Rightarrow \text{OK}$

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 BLOCK:
 PROCEDURE: PAGE: 5 ARCHIVE NO.:



- ZTVK form at the push of a button
- Switching between standard and ZTVK header
- Display of all outputs in the form: system graphics, result graphics, text results
- Available for all analysis programs (DC-Foundation)