# Analysis of fixed pylon footings
DC-Footing/Pylon

- Approach acc. to Steckner improved with soil layers, ground water level, excavation depths and berms!
- German, English, French, Romanian, Hungarian language
- Analysis acc. to Eurocode 7, DIN 1054:2010 and SIA 267
- Fixing of the footing by active and passive earth pressure
- Activation of the earth pressure by rotation of the footing
- Iteration of the level of the zero line y
- Serviceability check by perm. inclination
- Stability analysis by the limit value of load moment
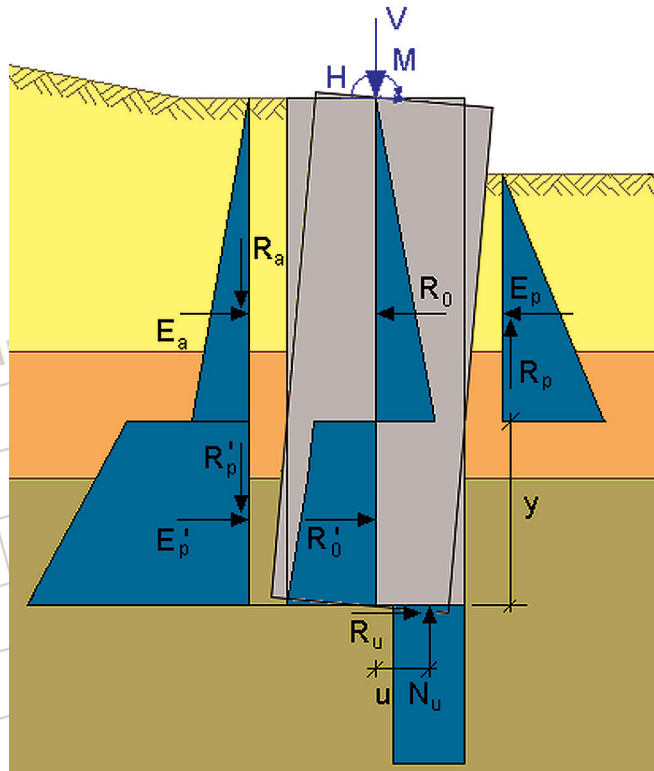
Fixed footing with earth pressures

Stability analysis
Critical load combination no. 2

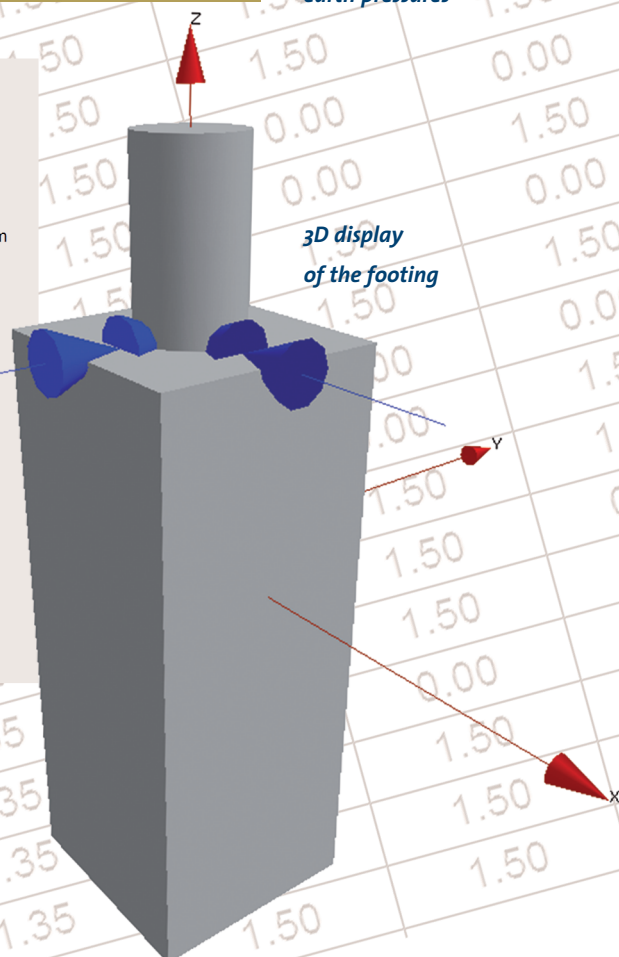|		
Vertical load N_α	=	102.6 kN
Horizontal load H_d	=	1.4 kN
Moment at top edge M_d	=	135.0 kNm

Earth pressure forces and lever arms rel. to footing top edge (Design values)

	Earth pressure [kN]	Lever arm [m]	Friction [kN]	Lever arm [m]
Active $E_{a,d}$	63.7	1.881	17.3	0.675
Passive above zero line $E_{p,d}$	103.5	2.078	53.0	0.675
Passive below zero line $E_{p,d}'$	26.1	2.946	12.1	0.675
At rest above zero line $E_{0,d}$	70.8	1.846	28.7	
At rest below zero line $E_{0,d}'$	10.2	2.946	3.7	
Res. earth resistance above zero line $E_{w,d}$	68.4	2.165		
Res. earth resistance below zero line $E_{w,d}'$	29.8	2.946		

Application of wall friction angle δ_p of		$0.667 * \varphi$
Ideal pressure width b_{id}	=	2.147 m
Height zero line y above base	=	0.210 m
Soil pressure $p_{u,d}$	=	486.6 kN/m²
Soil pressure force $N_{u,d}$	=	64.6 kN
Lever arm soil pr. force u	=	0.626 m
Friction force $R_{u,d}$	=	33.9 kN
Ultimate moment M_u	=	139.1 kNm
$M_d < M_u$, utilization factor	=	0.970 *** Check fulfilled ***

Stability analysis acc. to Steckner

3D display of the footing