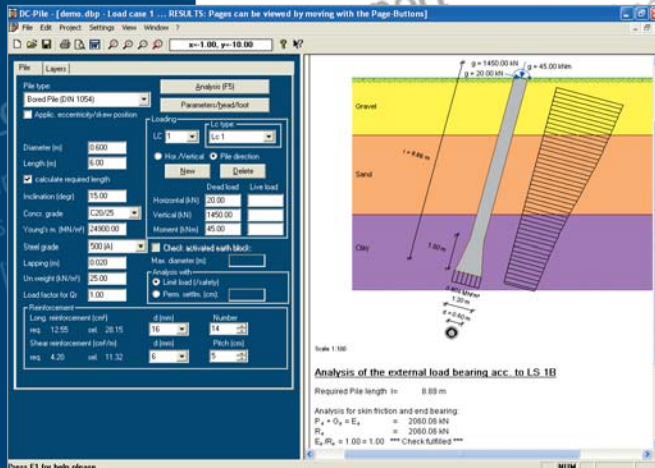


# Analysis of piles DC-Pile



Input of the pile parameters

- German, English, French, Romanian program version
- Bearing or tie piles, vertical or inclined
- With or without foot distension
- Loads horizontal/vertical or in the direction of the pile in different load cases
- Layering of the subsoil with selection of perm.  $\sigma$  and  $\tau$  including suggestions
- Analysis of skin friction and eventually end bearing for vertical loads
- Elastic bedding to transfer H-loads, with automatic adaptation to the passive earth pressure
- Determination of the required pile length or safety with available length
- Optional determination of the settlement under a defined load or of the permissible load for predefined settlement
- Diagram of the settlement or heave vs. resistance
- With tie piles: analysis of the activated earth block

## Analysis of the external load bearing

Required Pile length  $l = 9.63 \text{ m}$

Analysis for skin friction and end bearing:  
 $P_{avail} + G = Q_{scall} = 1498.66 \text{ kN}$   
 $Q_{Lb,rt} = 2997.31 \text{ kN}$   
 Avail. safety  $\eta = 2.00 = \text{requ. safety} = 2.00$

Acceptable skin friction:

Layer	l [m]	avail. $\tau$ [MN/m <sup>2</sup> ]	Friction force $Q_i$ [kN]
Gravel	2.59	0.080	390.29
Sand	3.62	0.120	819.61
Clay	3.42	0.080	515.07

Acc. end bearing force  $S$  [kN]: 1272.35

Sum =  $Q_{Lb,rt} = 2997.31 \text{ kN}$

Avail. end bearing force avail.  $S = P_{scall} + G - \text{sum}(Q_i)/\eta_{er1} = 636.17 \text{ kN}$   
 Resulting end bearing = avail.  $S/A = 0.563 \text{ MN/m}^2 > \text{perm. end bearing} = 0.563 \text{ MN/m}^2$

Settlement from resistance settlement line:  $s = 0.9 \text{ cm}$

## Determination of the external load bearing

- Bore piles acc. to DIN 1054:2005, DIN 4014, DIN EN 1536, ÖNORM B 4440, SIA 267
- Driven piles acc. to DIN 1054:2005, DIN 4026, SIA 267
- Grouted piles (micro piles) acc. to DIN 1054:2005, DIN 4128, SIA 267
- Design of reinforced concrete of the circular section incl. shear design acc. to DIN 1045, DIN 1045-1, ÖNORM B 4700, SIA 262, British Standard BS 8110 and Indian IS 456

- Analysis of the punching with load spreading in worse layers
- Use of steel bars, anchor steels, GEWI or Ischebeck Titan
- Selection of the reinforcement according to diameter and spacing or pitch of spiral respectively number of anchors
- Optional output with dimensioning diagram
- Graphic of bedding, section forces and deformation

12.0 cm = 0,10 D

