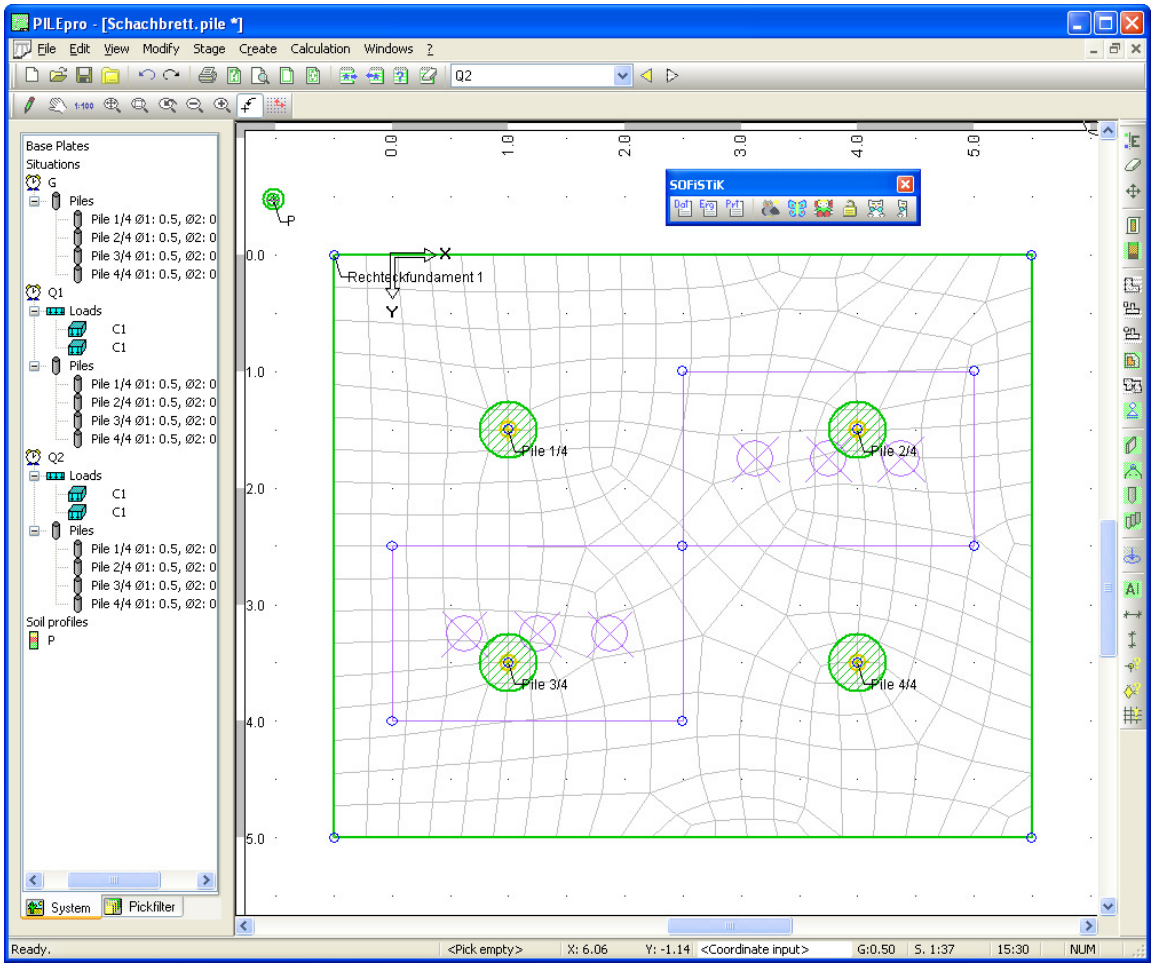
FIDES DV-PARTNER
SOFiSTiK SYSTEMHAUS

FIDES-PILEpro

Interactive generation and calculation of pile-plate foundations

The analysis of pile-plate foundations with consideration of different linear and non linear effects is a demanding task. With FIDES-PILEpro it is possible to solve such kind of problems in an economic way. Normally the pile heads will be coupled together over a rigid plate, FIDES-PILEpro also makes it possible to consider elastic plates (Finite Element Analysis), that may be hardened by arising walls. Moreover also integrated is the automatic calculation of the two-way transverse bedding effects of the piles as well as the dimensioning of the piles.



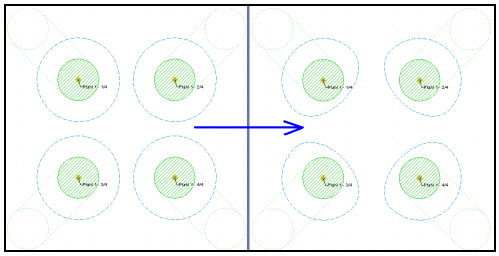
Performance Characteristics

User interface

- CAD-like input functionality
- Extensive import possibilities like e.g. DXF, XML,
- Input of the properties of the layered semi infinite space models per drilling profiles in combination with the soil layer database used by all FIDES series of geotechnics programs in common.
- Automatic Finite Element mesh generation
- Intelligent input helps e.g. at polygon intersections, multiple object selection, ...
- Windows standard like e.g. undo and redo for all actions, copy & paste, contextmenu, system-explorer, ...

Calculation

- Integrated calculation kernel PFAHL resp. ASE* from Sofistik
- Linear and non linear* calculation
- Rigid or elastic pile head plate*
- Consideration of the plate bedding*
- Vertical walls will be considered*
- Connection of the pile heads rigid or flexible
- Non linear bedded piles
- Automatic calculation of the transverse values



- Sliding of the piles
- Clearly construction stage generation and load case superposition
- Automatic dimensioning of the piles
- Preparation for automatic plate dimensioning, and punch through verification*, ...
  (needs SOFiSTiK-module BEMESS)
- Assistance for all common standards (EC, DIN, BS, ACI, ASSHTO uvm.)
- Fully compatibile to the SOFiSTiK modules
- Automatic mesh generation*

* extension PILEpro-FEM is necessary

Results

- Settlements, stresses and dimensioning of the piles
- Internal plate forces + displacements*
- Envelopes for extremal values
- Output: text and graphics mixed
- Whole SOFiSTiK postprocessing usable (ANIMATOR, URSULA, DBVIEW, WINGRAF, ...)
- Many exporting possiblities like e.g. DXF, RTF, MS-Word, ...

Application range

- Pile - and pile plate foundations
- Bridge counter bearing
- Optimisation of settlement and geometry of foundation plates
- Minimisation of reinforcement of foundation plates

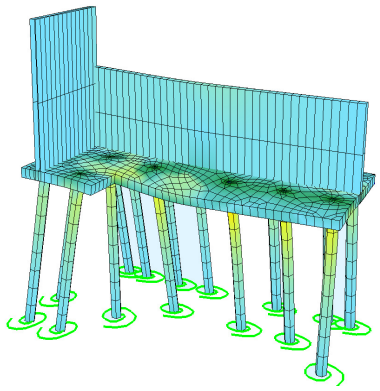
Extensions

FIDES-PILEpro-Base

- Basic version with only rigid pile heads

FIDES-PILEpro-FEM

- Extended version with elastic pile head plates
- Vertical arising walls for hardening of the plate
- Constant elastic bedding of the plate
- Dimensioning of the plate ist prepared (BEMESS from SOFiSTiK is necessary)



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