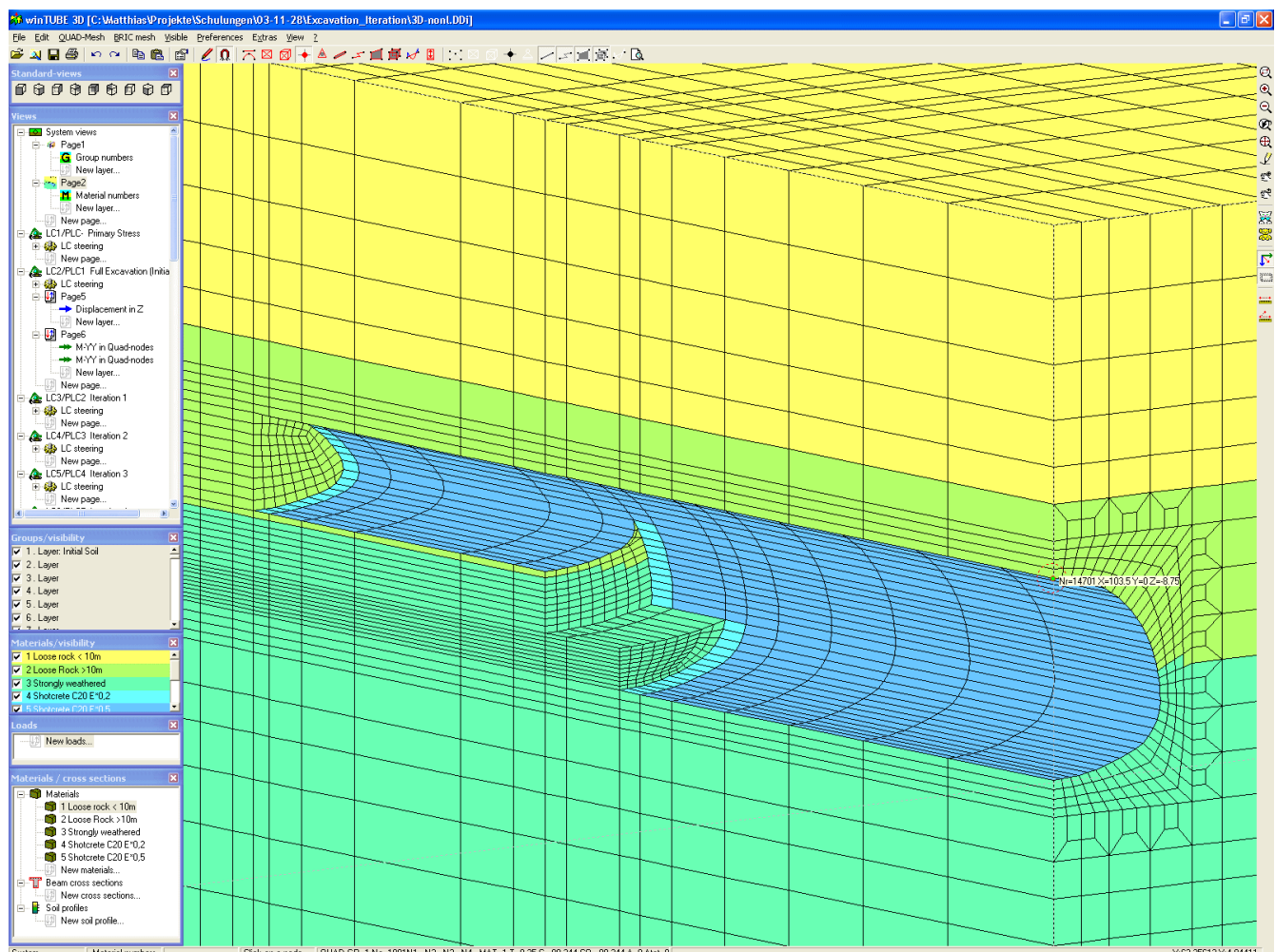


FIDES-WinTUBE

Interactive Graphical Preprocessing for Tunneling and Geotechnical Models for SOFiSTiK Solvers

FIDES-WinTUBE has been initially developed as a specialized tool for tunneling. It includes a lot of wizards to assist the user to define and carry out very easy tunneling-specific tasks. However the functionality of WinTUBE is universal enough to become the tool of choice for many general FE-analyses especially if 3D volume models should be analyzed and/or successive construction stages need to be simulated. The integrated SOFiSTiK-interface generates mesh- and calculation-control files and starts the SOFiSTiK-calculation. These ASCII files needn't, but could be edited manually. In addition to the detailed and illustrated technical report generated directly by WinTUBE, the SOFiSTiK kernel will be requested to generate a file containing a set of plots and numerical results. Additional all SOFiSTiK postprocessing tools may be used at any time.



Capabilities

Graphical User Interface

- n CAD-functionality, extensive control of visibilities, named views, intelligent selection of objects, ...
- n Windows standard like: undo/redo, copy & paste, contextmenu, ...
- n DXF-import, import of structures from an existing SOFiSTiK-database
- n Numerous wizards f.e. for: tunnel-cross-sections, tunnel-junctions, construction stages, loading, file-check, ...
- n Automatic mesh generation, structured grids and unstructured meshes may be mixed up, automatic detection of structural surfaces, functions for mesh enhancement of selected mesh regions, refinement- and compulsory points, ...
- n Generation of excavation- or construction phases and loading
- n Data generation for the SOFiSTiK program HYDRA for seepage or thermal analysis
- n Generation of non-linear 2D und 3D-Interface-elements, ...
- n Generation of 3D-Models by extrusion of any plain system, unstructured mesh generator for 3D-meshes with tetrahedral elements, ...
- n Generation of sinus shaped eccentricities, saving of the deformed structure, ...
- n Simulation of tension- and tubing-hinges, ...
- n Powerful generation of pile and pilecap systems in combination with volume elements
- n FIDES-WinTUBE generates pure ASCII-files, simultaneous editing with FIDES-WinTUBE and a texteditor is possible
- n Merging of multiple files, saving of subsystems, multiple copying, ...
- n Visualisization of input-data and results
- n Detailed and illustrated technical report (RTF)
- n Two computational methods for simulating construction stages:
Step-by-step method: mesh with groups for simulation of construction stages
Iterative (β) method: fixed mesh with stress transition during iterations

FEA Models

- n Non linear beams with distributed non linear bedding
- n 2D analysis (plain strain)
- n Non linear 3D shell structures with distributed non linear bedding
- n Non linear 3D volume structures
- n Iterative non linear 3D volume structures
- n General spatial structures, folded plate structures, bubble soap surfaces, ...

Application Fields

Tunneling

- n Cut & cover
- n Shotcreting method
- n Tunnelling machines (TBM)
- n Tubbing-lining
- n Special blocks like tunnel-junctions, branch of emergency exits, portals etc.
- n 3D detail analyses eg. tubing hinges, ...

Geotechnics

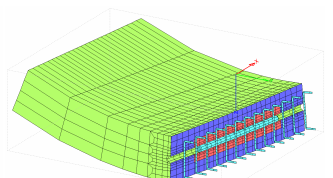
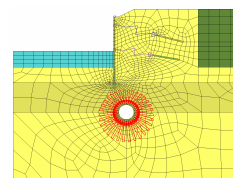
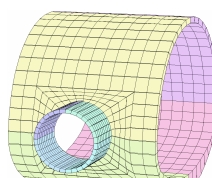
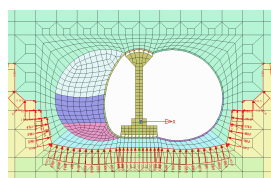
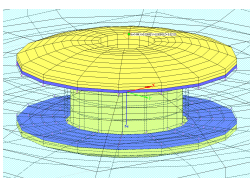
- n Shafts
- n Slopes
- n Dams, bulkheads, ...
- n Foundations of overall-structures on volume elements, pile- or combined pile-raft-foundations, ...

Various

- n All kinds of volume-structures eg. laminated glass, elastomer bearing, ...
- n Dynamic analysis eg. falling rocks, ...

Versions

- n FIDES-WinTUBE-Beam (planar beams)
- n FIDES-WinTUBE-2D (plane strain)
- n FIDES-WinTUBE-3D (spatial structures, complete package)



www.fides-dvp.de



Ihre Partner für anspruchsvolle Software



info@fides-dvp.de