

# SINETZ

Steady State Calculation of Flow Distribution, Pressure Drop and Heat loss in Branched and Intermeshed Piping Networks

## SINETZ Update 3.4, November 2009 New Features and Improvements

The update of the Program System ROHR2 by software releases is an essential component of the maintenance agreement. The software is developed continuously. The adaptation to the current version of the implemented norms and databases has highest priority for the user.

These are the significant changes and enhancements of SINETZ since Service Release 3.3c/ May 2008:

### SINETZ 3.4, Changes and Improvements

#### SINETZ Web Update

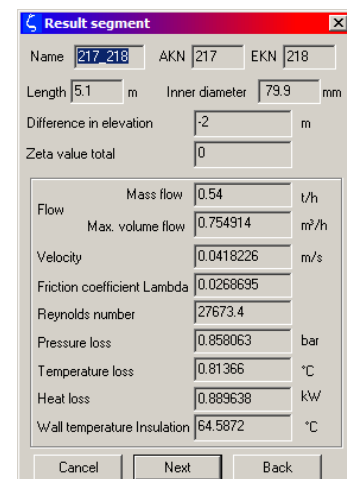
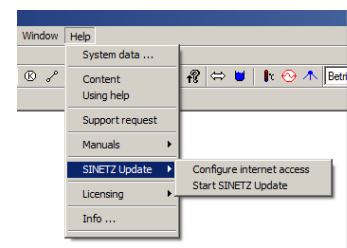
- From Program version 3.4 or higher SINETZ may be updated via Internet connection.

#### Enhanced Interface Capabilities

- Data in ROHR2 Neutral interface format (\*.ntr) can be imported. Read data from 3D CAD systems like PDMS, HICADnext into SINETZ directly.

#### System Input and Calculation

- Improved calculation speed at systems with valves and/or blocked parts.
- Extended calculation of zeta values at branches; now available for sloping branches
- Load case depending input of ambient conditions.
- Heating-up of the medium through insulation is considered now
- Input and calculation of sprinklers at node ends.
- List functions completely revised: more editing capabilities directly form the list
- The input of an alternative company logo or text field makes it easier to work on commission orders.
- The capabilities for documentations were extended



The following feature list includes details about program development and enhancements of SINETZ 3.4. Please contact us for more information or a program offer.

### SINETZ 3.4, Modifications and enhancements, detailed

- Internet-Update included. The program can be updated via internet.
- Import of files in ROHR2 Neutral file format (\*.NTR) included. Direct reading of 3D system data like PDMS, HICADnext, now available. Additional CAD interfaces optionally.
- The treatment of blocked parts of the systems has been completely revised. Blocked parts are not calculated any more. Convergence problems in such systems have been removed with this change and the calculation time has been decreased. Results in such parts are = 0 now.
- Iteration of zeta values at valves completely revised which makes the convergence significantly faster.
- Heating-up of the medium through insulation (if outside temperature > medium temperature) is considered now.
- Extended calculation of zeta values at branches. Zeta values now can be calculated at sloping branches, considering the fillet radius.
- Load case depending input of ambient conditions (outside temperature, wind speed, ...) for determination of temperature loss
- Calculation of sprinklers
- Pipe names can be assigned to segments. Pipe names may be used for assigning data and checking input parameters.
- Enhanced and revised pump dialog window
- The quantity/inflow dialog window has been revised completely, the input temperature can be entered directly now.
- Definition of pressure loss: the pressure now is considered by a zeta value to avoid convergence problems requiring the additional input of a mass which needs additional input of a mass flow and density. The direct input of the pressure loss has not been removed. It is available as in previous releases.
- Reducers can be inserted automatically
- List functions completely revised: more editing capabilities directly from the list.
- 'ToolTip' for objects (nodes, segments, boundary conditions, components) implemented: if the mouse cursor hovers above an object for a short time properties of the object are displayed.
- Parameters of nodes and segments to be shown in the graphic can be selected by the user.
- In addition to the static pressure the total pressure is shown (static and dynamic).
- Define a project related text field, e.g. for
- The last project revisions are stored in the /backup directory in the project directory.

## SINETZ 3.4, Manual modifications

### **sninstall Document**

- completely revised

### **SINETZ manual**

- 2.7 Toolbars revised
- 2.11 Dialog windows revised
- 2.12 Mouse commands revised
- 3. Interfaces new
- 4.1.2 File Open revised
- 4.1.7 Set pipe dimensions revised
- 4.2.1 Undo revised
- 4.2.2 Load cases revised
- 4.2.6 Update all reducers new
- 4.2.11 Change node distances new
- 4.2.14.5 Delete Line names new
- 4.2.15.4 Select pipelines new
- 4.2.16.2 Pipe dimensions and insulation revised
- 4.2.16.3 Free laid pipes - insulation revised
- 4.2.16.4 Buried pipes - insulation revised
- 4.2.17 Line name new
- 4.2.19.2 Pressure revised
- 4.2.19.3 Inflow/ Outflow revised
- 4.2.19.5 Sprinkler new
- 4.2.20 Ambient conditions new
- 4.2.21.1 Branch revised
- 4.2.21.2 Pump revised
- 4.2.21.2.2 Save to pump database new
- 4.2.21.2.3 Pump curve revised
- 4.2.21.4 Pressure loss revised
- 4.2.21.6 Orifice revised
- 4.2.22 Insert text, graphics revised
- 4.3.3.1 Bend revised
- 4.3.4 List data new
- 4.5.8 Pressure chart definition revised
- 4.6.3 Zoom limits new
- 4.6.9 Show subsystems revised
- 4.6.13 Reset toolbar positions new
- 4.7. Options menu, completely revised
- 4.8.1 Orifice dimensioning revised
- 4.10 Help menu, SINETZ update completely revised
- 5.3.1.1 Showing results revised
- 5.3.2 Results at segments revised
- 5.3.3 Results at nodes revised
- 8.2 Neutral Interface SINETZ revised
- 9 Structure of the input file revised
- 9.4.5 MED - Selection of the medium revised
- 9.4.14 KR - Zeta-value determination in bends revised
- 9.4.15 AB - Zeta value determination at branches revised
- 9.4.20 TE - Temperature revised
- 9.4.21 DR - Defined pressure revised
- 9.4.22 ME - Inflow/Outflow , Quantity injection revised
- 9.4.23 SP – Sprinkler new

### **SINETZ Tutorial**

- Tutorial completely revised

## Software Development, Sales and Support

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