SINETZ

Steady State Calculation of Flow Distribution, Pressure Drop and Heat Loss in Branched and Intermeshed Piping Networks for compressible and incompressible media

SINETZfluid - Flow Distribution and Pressure Drop of incompressible Media

SINETZ Update 4.2
January 2025
New Features and Improvements

The program system SINETZ with its additional modules is checked and modified continuously within the scope of the maintenance agreement.
The program release SINETZ 4.2 replaces the SINETZ 4.1.
This document shows the improvements and enhancements of the program release SINETZ 4.2.

Overview

- - There is now a filter option for the list functions
- - User-defined shortcuts can be defined
- - Extended editing options for text patterns and macros
- - Extended definition options for boundary conditions
- - New function for optimizing pipe measurements
- - Extended documentation options

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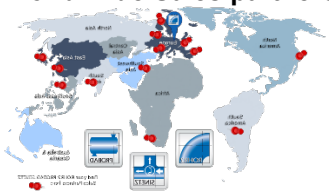

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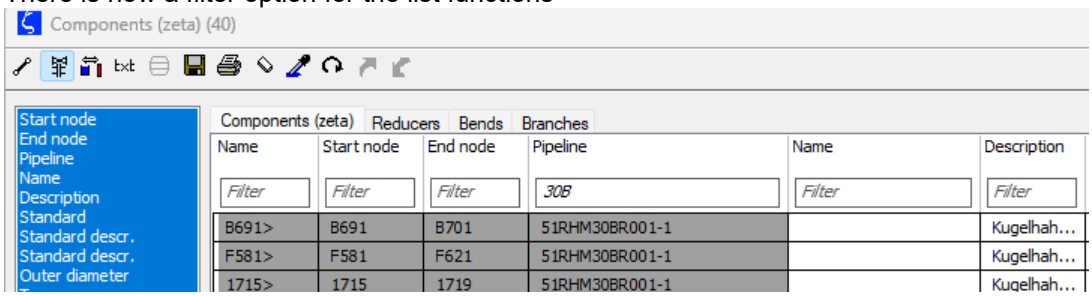
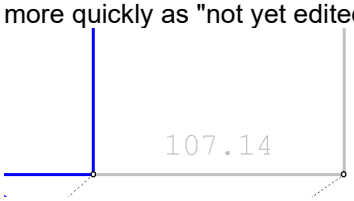
SINETZ 4.2, Changes and Improvements, detailed

SINETZ user interface

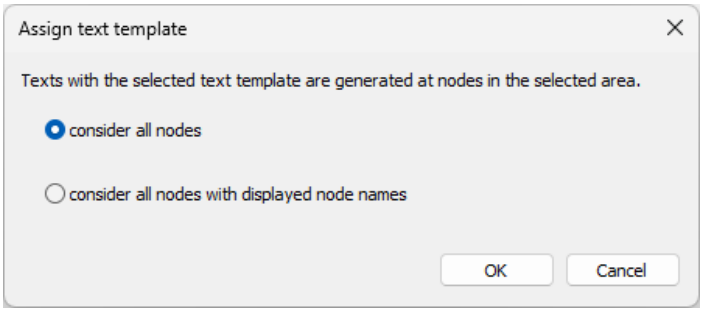
- There is now a filter option for the list functions



- There is now a filter option in the Segments' parameters dialog box
- New segments entered via the interface are displayed separately so that they can be recognized more quickly as "not yet edited"



- User-defined shortcuts can defined
- The "Print lines", "Print regions" and "Print views" functions have been enhanced:
  - for lines/areas, only currently visible lines/regions can optionally be displayed
  - in addition to the "Select all" button, there is now also a "Reset selection" button
- Display of the coordinate system has been changed
- There are now filter functions for inserting macros/placeholders when entering texts to make the selection clearer
- The settings for the display and texts can be exported and imported so that these settings can be exchanged between different users, for example
- Existing text patterns can be edited
- Text patterns for nodes can optionally be inserted at all or selected nodes in the selected area



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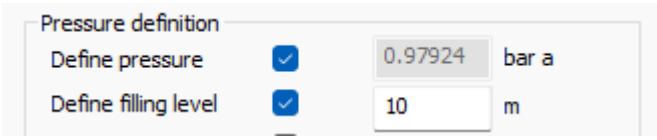
- The text fields now contain a calculation function similar to the input fields in the dialog windows
- the sensitivity when zooming with the mouse wheel can be adjusted
- the visibility check for (dialog) windows has been revised, especially for multiple unequal monitors
- Listing: The insertion of data from the clipboard has been optimized. If data is available in CSV format, it can be inserted anywhere in the list using Ctrl+V. Write-protected fields are not changed. Multi-line data records can be pasted
- List texts: Texts of several entries can now be changed simultaneously
- Dialog window "Properties values water/steam": the steam pressure and the evaporation temperature are now also displayed
- Listing of components has been enabled
- Multiple insertion of bends was made possible

Components, boundary conditions

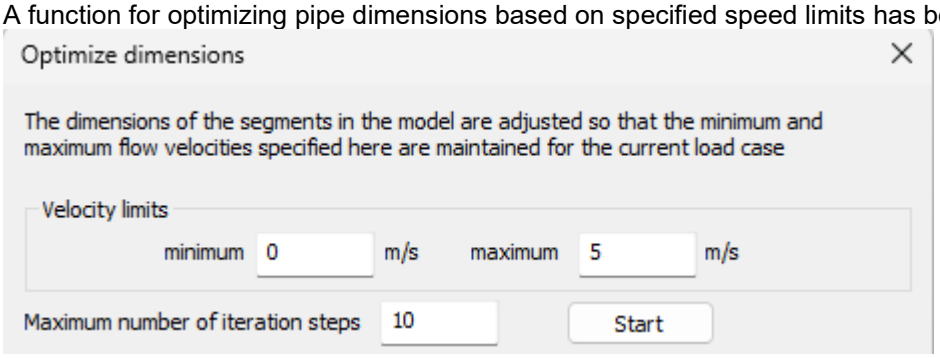
- Pressure losses in a component can be taken into account as zeta values
- Pressure specification for liquids also possible by specifying a fill level (P=rho*g*h)



- It is now also possible to specify a mass flow rate by specifying the operating volume flow rate if pressure and temperature are also specified at the same time

Calculation

- A function for optimizing pipe dimensions based on specified speed limits has been added



- Heat exchanger with flow and return: The calculation is now also possible without a specified pressure loss or resistance

Presentation of results

- The legend of the results at nodes and sections can optionally be displayed in the normal window. The size of the display can be controlled using the slider in the status bar
- Component results: in addition to the pressure loss, the resulting zeta and KV values are now also displayed
- The results display now also shows the specific heat capacity CP at the node
- The zeta value determined for the heat exchanger is now displayed in results mode

Documentation

- Parameters of the medium can be documented in the report
- New table with dimensions for the report
- Edit sample report: additional "Line designations" can be used
- several data marked in the tree can be copied and pasted simultaneously
- In the standard report and in the output file, the gas constant is now always also output for gases

Software Development, Sales and Support

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