

ENHANCEMENTS

RELEASE 2016 | UPDATE 1

PARAMETER TABLES

The ability to create Result Parameters has been added in the Parameter Tables.

The results are automatically generated when a set of parameters are solved or when a Sensitivity Analysis has been run.

It is now possible to drag and drop inputs or results to the Excel sheet for Parameter Tables and the correct result or input parameter will be created according to the property type.

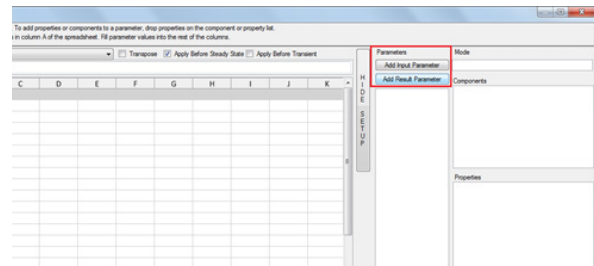


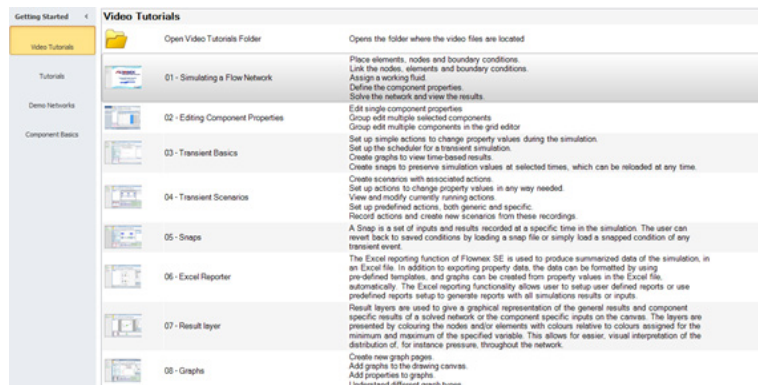
Figure 1: Parameter Table with added Result Parameters.

START PAGE

A new Start Page for the Video Tutorials, Tutorials, Demo Networks, and Component Basics was created for easy navigation.

At the top of each page of the Start Page a link has been added to the folder, containing relevant Tutorials, Networks and more.

Figure 2: New Start Page in FlowNex®.



INCREMENT SCRIPTS

Local increment conditions are now available in the Script.

A script can be used to calculate the heat transfer coefficient for increments in the Composite Heat Transfer element.

A script can be used to calculate the friction factor for increments in the Pipe element.

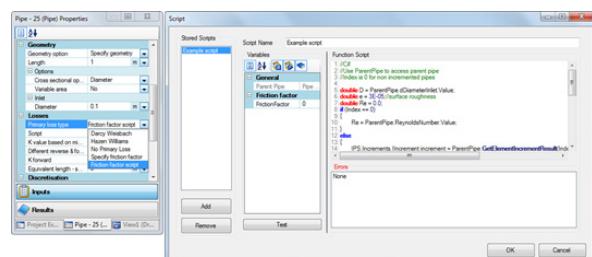


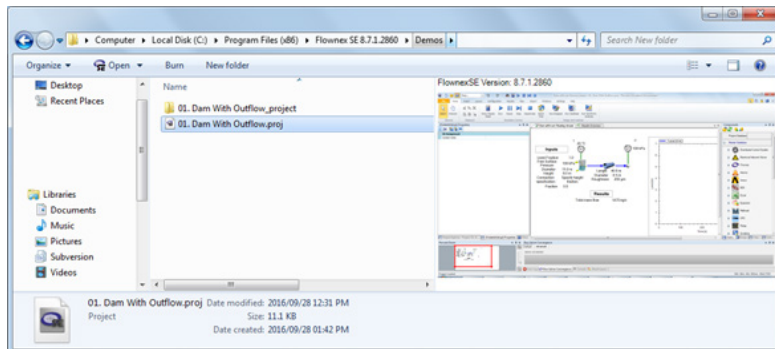
Figure 10: Friction factor script for increments in the Pipe element.

PREVIEW

A screenshot of a project is now saved as part of the project, which makes it easier to find a specific project in a folder full of projects.

This screenshot is shown in the preview pane of Windows Explorer when the preview pane is visible and a .proj file is selected.

Figure 11: Screenshot of Flownex® project available in Windows Explorer.



GENERAL

Added the ability to copy and paste images or image files directly on to the drawing canvas.

Added the ability to copy and paste text directly on the drawing canvas.

INPUTS/RESULTS

Added the option to “Copy display identifiers to clipboard” or “Copy internal identifiers to clipboard” to the context menu on the property grid.

The internal identifiers can be used in scripts like the incremented scripts.

ORIFICE DESIGN

Added the “Design for mass flow” option to the Restrictor with Discharge Coefficient and Restrictor with Loss Coefficient elements. This is useful for designing orifice sizes and balancing flow.

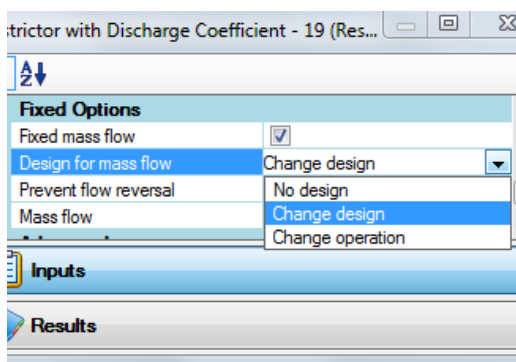


Figure 8: Design for mass flow option added to the Restrictor with Discharge Coefficient.

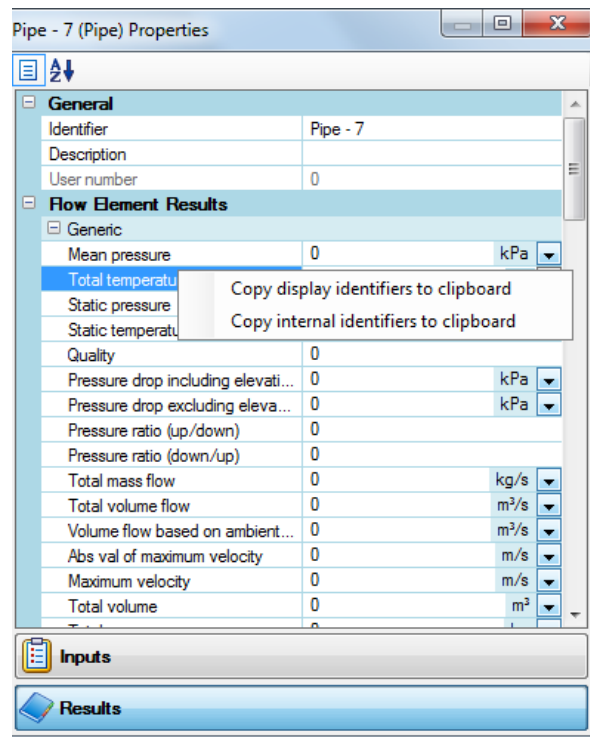


Figure 4: Copy display identifiers or internal identifiers to clipboard.

API/CO-SIMULATION

Added Matrix and Vector interaction capabilities to the MathCad component.

Made the Input and Result Parameters in the Parameter Table accessible to the API.

HEAT TRANSFER

Added Solid Node Volume and Heat capacitance results on Nodes.

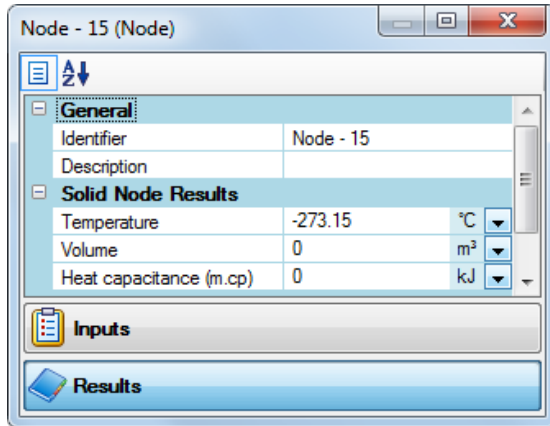


Figure 6: Volume and Heat capacitance results.

Implemented the option to specify the volumetric heat source on solid Nodes

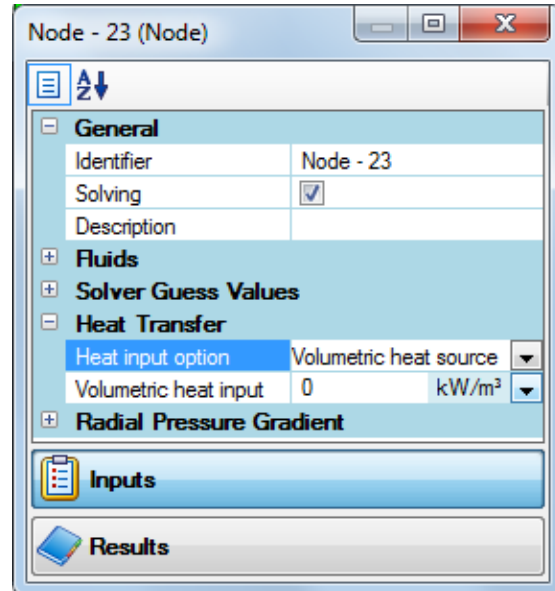


Figure 7: Volumetric heat source option on Nodes.

ROTATING COMPONENTS

Added the ability to determine flow angles from neighbouring elements for the Rotating Channel and Rotating Nozzle.

Added the Tangential Reynolds number result for the Rotor-Rotor and Rotor-Stator and implemented a check on the validity range of the correlations.

Added Relative total pressure and Relative total temperature results.

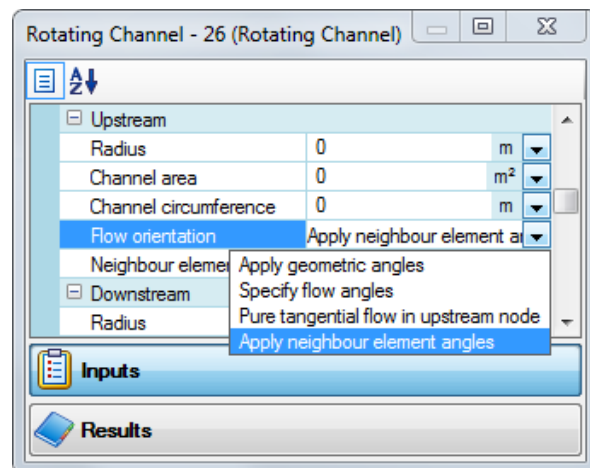
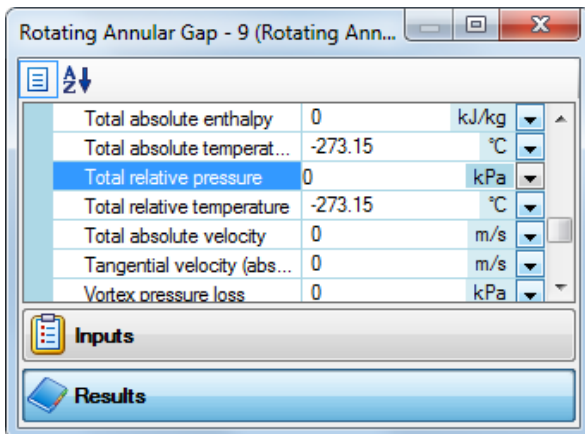


Figure 9: Apply neighbour element angles option for the Rotating Channel.

Added Total relative pressure and Total relative temperature results to the applicable Rotating Components.

Figure 5: Total relative pressure and Total relative temperature results.