

CSiPlant v6.0.0 Release Notes

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This document lists changes made to CSiPlant since v5.2.0, released 13-March-2020. Items marked with an asterisk (*) in the first column are more significant.

Analysis

Enhancements Implemented

*	Ticket	Description
*	4251	An enhancement was implemented to allow calculation of friction forces for the Line Stop, Vertical Stop, and Guide supports along the resultant direction of motion rather than separately in two orthogonal directions. This feature is controlled with the "Use resultant for support friction" option located on the Analysis Options > Model Options form. This option will be automatically enabled for newly created models and disabled for models created in previous versions of CSiPlant, although it can be changed after opening older models in the new version. When the resultant direction is used, the net reaction will tend to be smaller than when considering friction in the two orthogonal directions.

Database Tables

Enhancements Implemented

*	Ticket	Description
*	4255	An enhancement was implemented to the Table Output form allowing for more filtering/search options, ability to sort columns by ascending/descending order, and the ability to toggle column visibility.

Design – Piping

Enhancements Implemented

*	Ticket	Description
*	3610	The 2018 version of the following design codes have been added: ASME B31.1, ASME B31.3, and ASME B31.8.
*	4253	An enhancement was made providing the option to include an installation load for variable spring hangers. After spring-hanger sizing has been performed, the user can specify that hangers are initialized to an installation load level. The installation load can be based on the Hot or Cold load from the sizing results, a user-specified value, or none.

Drafting and Editing

Enhancements Implemented

*	Ticket	Description
*	176	An enhancement was added to allow users to display design results graphically. This includes the display of DCR values for pipe elements and DCR values from flange leakage checks.
	3190	An enhancement was implemented where the default Object Offset Reference for drawing and inserting reducers was changed from Mid to Start.
	3792	An enhancement was implemented allowing for previously selected draw options to be preserved after closing and reopening a draw menu.
	4123	An enhancement was implemented where CSiPlant will no longer ask whether default labeling options should be used when a new pipeline is created either by drawing new piping objects or by deleting existing piping objects. This option has instead been moved to the drawing auto options section of existing draw forms and the auto delete options form.

Graphics

Enhancements Implemented

*	Ticket	Description
	4353	An enhancement was added to remove flickering of the buttons in the bottom bar of the application when creating an animation.

Installation and Licensing

Enhancements Implemented

*	Ticket	Description
*	3936	The version number has been changed to v6.0.0 for a new major release.

Results Display and Output

Enhancements Implemented

*	Ticket	Description
	78	Parameters set on certain data-entry forms are now remembered so that they retain their values when the form is closed and later reopened. The values retained are based on the model window that is currently active. The parameters will also be updated if the active window is updated outside the form, such as by using the step buttons to display another load pattern, load case or step. The affected forms are Display Load Assignments, Display Deformed Shape, Display Joint Reactions, Display Support Reactions, Display Pipe/Frame Forces, and Display Pipe/Frame Stresses.
	3154	An enhancement was added to display the ambient temperature or pressure instead of zero when displaying temperature and pressure loads and no such loads exist in the model.
	4207	The following enhancements were made to the functionality of the step buttons when displaying results: (1) Step buttons step through the list of result sets of a selected load case before stepping to the next load case. (2) Default result set selection is set to the first designed case. (3) Intermediate load cases that do not have results are not included when stepping through load cases. (4) The result set name is now displayed in the window title. (5) A user-defined contour key retains the user-defined values for each display when stepping through load cases or steps/modes.
	4252	An enhancement has been implemented allowing the user to disable the output of moments for the Line Stop, Vertical Stop, and Guide supports. This option can be enabled through the "Show Moment Effects on Supports" option located in the Options menu. This option will be automatically enabled for newly created models and disabled for models created in previous versions of CSiPlant. Note, that this is only a reporting change. No changes have been made to the analytic model. When moments are reported, they are the resultants of the support forces taken at the center of the pipe.
	4256	An enhancement was implemented allowing for the display of an undeformed wire frame when viewing the deformed shape of the model. This option can be enabled/disabled in the Show Deformed Shape form.
	4528	An enhancement was added so the model will default to the double-line view when displaying forces and stresses in 2D.
	4613	An enhancement was added to display maximum contour values as red and minimum contour values as blue.

User Interface

Enhancements Implemented

*	Ticket	Description
	4091	The following enhancements have been implemented for the Table Result Options: (1) A new result set filter, <All Except Base>, was added. This filter will display results for all result sets excluding the Base result set. This option is now the new default, replacing the

*	Ticket	Description
		<p>previous default filter of <Base>. (2) All table options are now saved with the model file. Older model files will be opened with a Table Result Options filter of <All>.</p>
	4125	<p>An enhancement was implemented where results of internal intermediate load cases can be hidden when viewing results by disabling the "Show Intermediate Results" checkbox. This option has been added to the Table Options form when displaying tables and all graphical result display forms. By default, this option is set to disabled; however, by checking the "Show Intermediate Results" checkbox on these forms the results from all load cases can be displayed.</p>
	4242	<p>An enhancement was added to all results display forms to make the first designed case the default result set selection rather than the base case.</p>
	4254	<p>An enhancement was implemented allowing users to see more information about the Valve property assigned to a Valve object when looking at a Valve object's Display Information form.</p>

Analysis

Incidents Resolved

*	Ticket	Description
	4616	An incident was resolved where an error message would be displayed when attempting to run an analysis with a tee that had a mesh point located very close to, but not exactly on, the center of the tee main.

Data Files

Incidents Resolved

*	Ticket	Description
	4204	An Incident has been resolved when importing a locked model into the existing model and then drawing additional objects after the import could result in the model data getting corrupted after the model has been saved and then reopened. Affected model files can be corrected by opening them in the current version of CSiPlant.
	4525	An incident was resolved where opening certain models created in version 5.1.0 of CSiPlant could result in some pipe objects not being shown. This issue was rare and was caused by two different pipelines originating from the same joint, which is not permitted. The issue is automatically fixed in the current version of CSiPlant upon opening the model file by reversing the direction of one of the pipelines so that the two pipelines are merged into a single pipeline.

Design – Piping

Incidents Resolved

*	Ticket	Description
	4074	An incident was resolved where the default properties in the Assign Design Properties form were not set properly for models using metric units. This only affected the choice of default values. The values actually shown as defaulted or changed were correctly used for design.

Drafting and Editing

Incidents Resolved

*	Ticket	Description
	147	An incident was resolved where values in the following forms were not updated when the global units were changed: Insert Form, Assign Automatic Pipe/Frame Mesh form, Assign Tee Length form, Assign Pipe Reducer Length form, and Assign Support Connection form.
	3387	An incident was resolved where points that were inserted with an offset by clicking on an existing object could not then be used to draw new objects by clicking on the inserted point.
*	3985	An incident was resolved where an incorrect pipe configuration was being created when three pipes converged at the same point and the auto-elbows draw option was turned off. Now this case is handled by converting the common point into a tee in the case where two (and only two) of the three segments are collinear. Additionally, when the auto-elbows draw option is turned on, a pipe cannot be drawn that connects at an angle to pipe having a component at the connecting end, since an elbow cannot be created at that component. Collinear pipes can always connect at a component, but non-collinear pipes connecting at a component must be drawn with the auto-elbows option turned off.

External Import and Export

Incidents Resolved

*	Ticket	Description
	4915	An incident was resolved where the Support Reaction Export command would not export reactions for all of the Hanger and Spring Hangers supports connecting to structural sections when the number of pipe sections defined in the model is less than the number of

* Ticket	Description
	structural sections.

Results Display and Output

Incidents Resolved

* Ticket	Description
55	An incident was resolved where the "Show Animation" button was not hidden if the user clicked the button to show undeformed shape while an animation was currently being played.
2682	An incident was resolved where user-defined contour values for temperature loads displayed incorrect load values.
4604	An incident was resolved so that now a load case with all-zero response for the selected response-display will show as zero in the contour legend.
4726	An incident was resolved where the values shown for the graphical display of joint and frame displacements would alternate between correct and incorrect values when moving or hovering the mouse over the joint or frame object.
4727	An incident was resolved where the various result-display forms would show empty selections when the load case last selected using that form no longer had results available (was not run) or the load case itself had been deleted. The result-display forms will now choose a new default load case when this situation is detected.
4728	An incident was resolved where the label "Pt Obj" was used in the mouse-over information shown when displaying graphical results instead of the appropriate name for the object type.
4735	An incident was resolved where the displacements reported for pipe and frame objects connected to joints with non-default local axes could be incorrect. This affected the results shown on the screen and reported in tables. Displacements reported for the joints themselves were correct. Pipe and frame forces and stresses were not affected. Design results were not affected.
4757	An incident was resolved where the values displayed in the Joint Displacements form were presented in the joint's local coordinate system rather than the global coordinate system. These results are accessed by right-clicking on a joint while viewing the deformed shape. By default, joint local 1-2-3 axes are aligned with the global X-Y-Z axes, and the reported values were correct in this case. Tabular and design results were unaffected.

User Interface

Incidents Resolved

* Ticket	Description
3381	An Incident was resolved where the "Select > Get Previous Selection" command would not select any objects immediately after an assignment has been made via the Assign menu by first clicking the Apply button immediately followed by the OK button.
3388	An incident was resolved where an error message would be displayed after accepting any changes in the Modify Snap Options form. No results were affected.
4090	An incident was resolved where no result sets would be selected in the Table Result Options form after creating a model with several Design Requests and then selecting specific result sets in the Table Result Options form.