

AVEVA Pipe Stress Interface 11.6

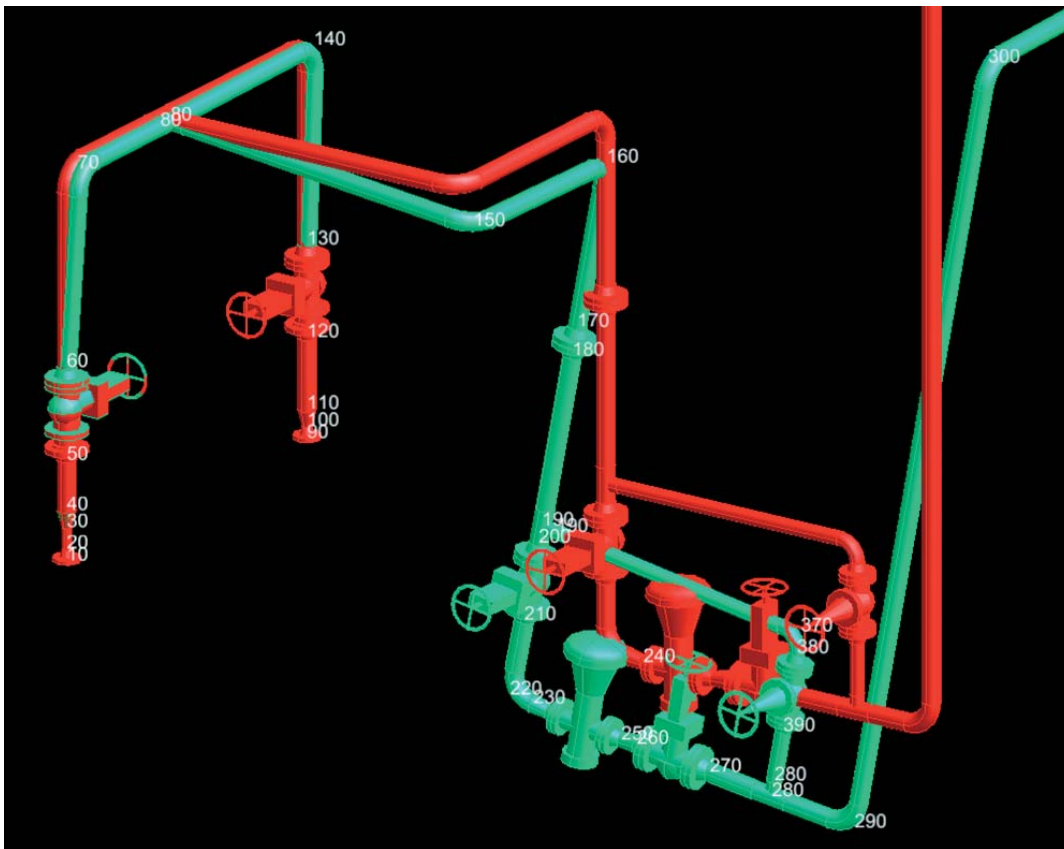
Integrates pipe stress analysis with AVEVA PDMS and AVEVA Outfitting design

Piping designs often need to be analysed to check the stress in the system and to design the supports. This is a specialist job, but major savings can be made by automating the flow of information between designers and stress analysts.

AVEVA Pipe Stress Interface is designed to be used within AVEVA PDMS or AVEVA Outfitting design environment and provides an intuitive and interactive method of specifying a stress network and a straightforward design to stress analysis workflow. It provides a two-way interface designed to exchange information with pipe stress systems and interfaces; the interface is customisable and can be adapted to work with any pipe stress tool.

Business Benefits

- Pipe Stress Interface gives you better support of your piping workflow, saving time for both the piping designer and the stress analyst. This can amount to many hours for each stress network – AVEVA estimates savings of well over 50% of the time associated with pipe stress, reducing not only schedule time, but costs as well.



Visualisation of pipeline deflections in AVEVA PDMS, showing node numbers used for the stress analysis process. The original pipes are in red and the deflected in green.

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Key Features

- Two-way interactive interface from PDMS and Outfitting to CAESAR II, providing full workflow interaction. Piping designers and stress engineers can exchange design and stress information seamlessly, without duplicating information.
- Supports positioned by the piping or stress engineer are transferred between PDMS and Outfitting and the pipe stress system.
- Visualisation of pipeline deflections and suggested routes can be clash-checked within the 3D model before you commit to the new route. This reduces the time you could waste re-routing, then finding new clashes with other design elements.
- Customisation facilities allow the reuse of existing catalogue data, such as weights, reducing the work/start-up time required to use the system.

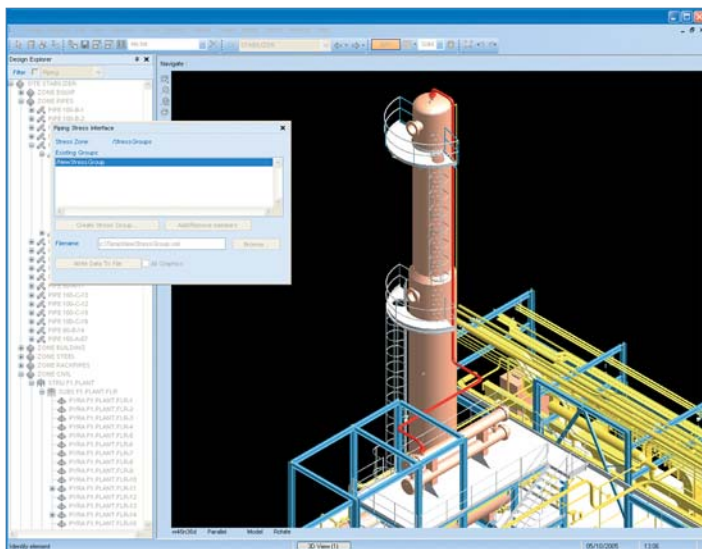
Creating a Pipe Stress System - example with PDMS

Pipe Stress Interface provides a two-way interface for the exchange of information with pipe stress systems. This release interfaces with COADE's pipe stress system, CAESAR II, functioning either with version 4.50 or with their recently released version 5.00.

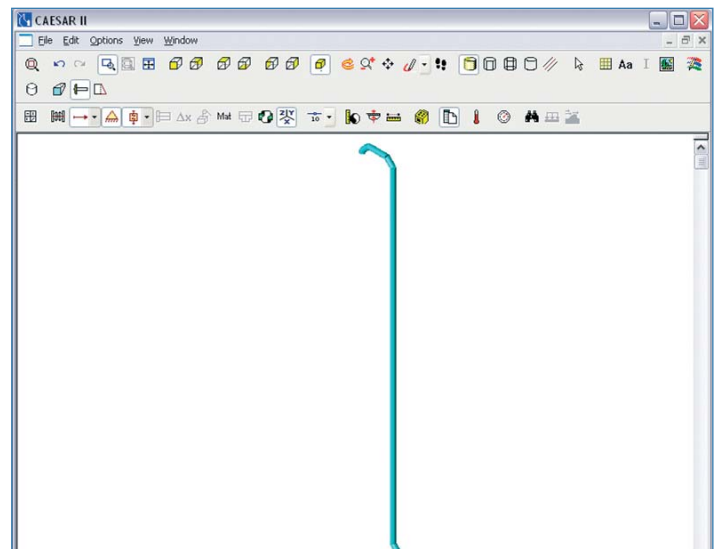
The system architecture is designed to enable future interfaces with other pipe stress systems, while still retaining the same PDMS application layer.

Pipe Stress Interface provides an interactive and intuitive application within the PDMS design environment. It facilitates the creation of a pipe stress system, which is selected from PDMS pipe branches. The user can modify the order in which the stress system will be processed.

The stress system is first selected in PDMS then transferred to CAESAR II.



Selecting the stress system in AVEVA PDMS (shown in red)



Transferring the stress system to CAESAR II. This screenshot shows the selected pipe from the previous screenshot, ready for analysis in CAESAR II

Data, such as suggested redesign of pipe routes, loads at supports and displacements under load, may be transferred back to PDMS and stored for further use. For example, the loads may be used to design the supports. The process uses an intermediate file created from an adjusted CII file and other data files. Pipe Stress Interface requires PDMS for its interactive user interface. Although primarily

designed for PDMS 11.6 onwards, it can also be used with PDMS 11.5.

Pipe Stress Interface is configurable by the customer to suit a company's working practice, including:

- Node increments.
- Location of data including weights, wall thickness, temperature and pressure.

- Units of measure.

For example, weights and wall thicknesses of pipe components could be obtained from anywhere appropriate in the PDMS project – or even from an external source. Pipe Stress Interface's two-way interface is easy to adopt and can be used productively at all stages – from initial layout to final detailed design.

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