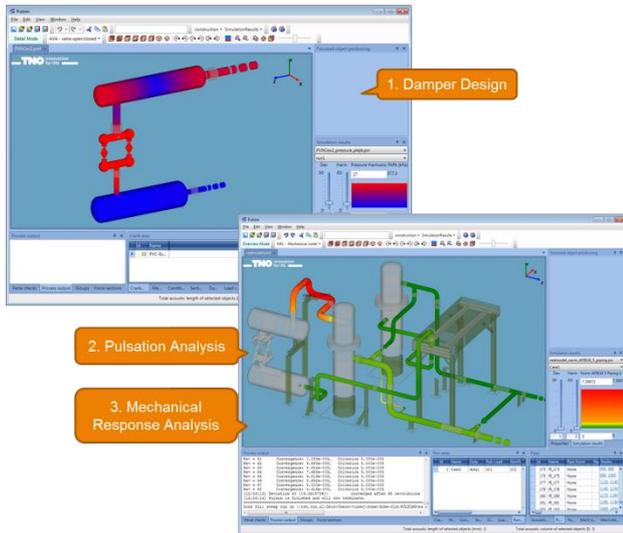


PULSIMSUITE NEWSLETTER

This is the PulsimSuite newsletter of Q3, 2017, presenting version 2.2 that was released in August 2017. We give you the latest developments in our API 618/674 pulsation & vibration software toolbox. You are also invited to check out our website: pulsim.tno.nl.

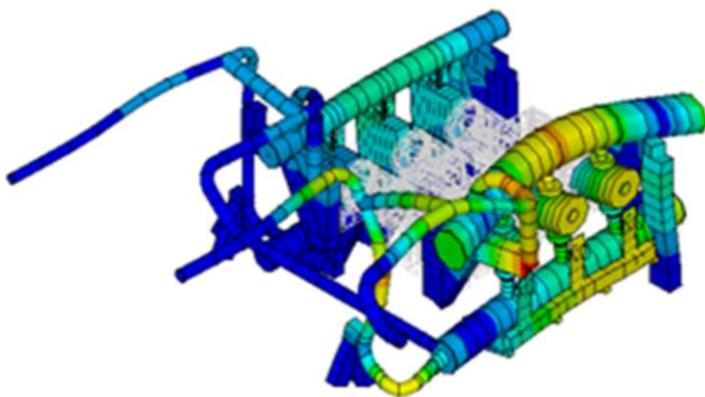


Introducing version 2.2:

The pulsation calculations have increased in speed, up to a factor 3*!

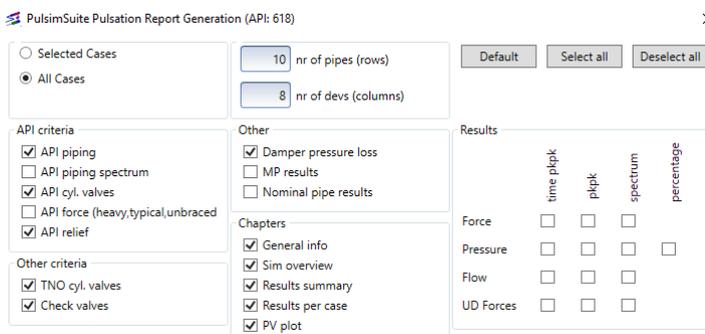
Moreover, you can now also run each simulation “sweep” on multiple processor cores. This optional functionality is available for running on 2, 4, 8, or 16 cores. Do not hesitate to request pricing information for these parallel computing options.

Reporting is now also possible in the units of your choice. The units you see in the GUI will also be used in the report. You can generate a Word report with explaining texts, or an Excel report with tabular results. The Excel report generation is much faster.



As demonstrated at the 2017 PulsimSuite Users Meeting, it has now become straightforward to include self-built ANSYS models (e.g. compressor manifold!) into the PulsimSuite mechanical model, and run mechanical simulations with the combined model. The pulsation-induced forces and the cylinder stretch forces are taken automatically from the pulsation results of the PulsimSuite model. The compressor unbalanced forces can also be added by the user, as “external excitation” forces.

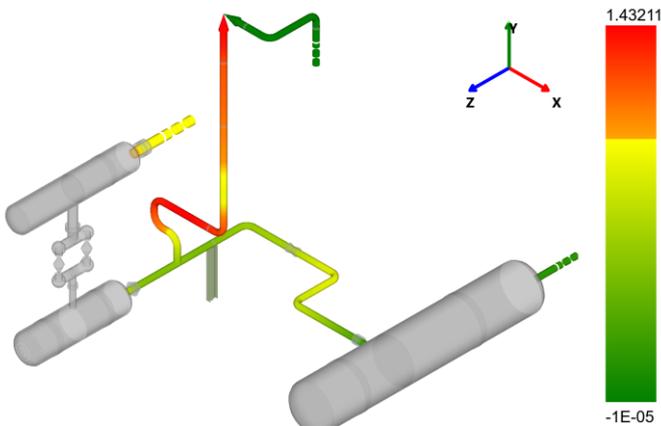
We advise (for the sake of calculation efficiency) to convert the comprehensive (solid element) compressor model to a “MATRIX50” element, and include that in the PulsimSuite generated model. An example of this is shown in the picture.



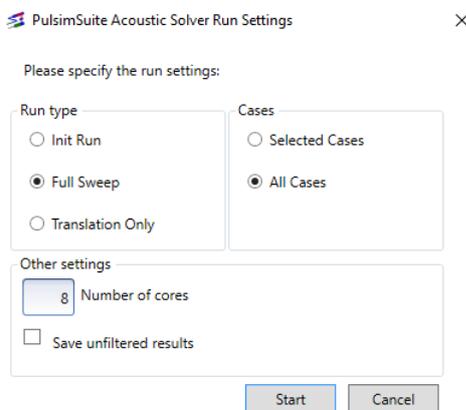
You can now generate a report in Word (with texts) or Excel (tables with captions only), and you can select exactly which result to report and which to exclude from the report. This picture shows how you can simply indicate what to report by ticking the appropriate boxes.

The units that will be used in the report are the units that you have selected in the PulsimSuite User Interface, on your 3D canvas.

* For modern processors, e.g. Intel or AMD, from 2012 onward.

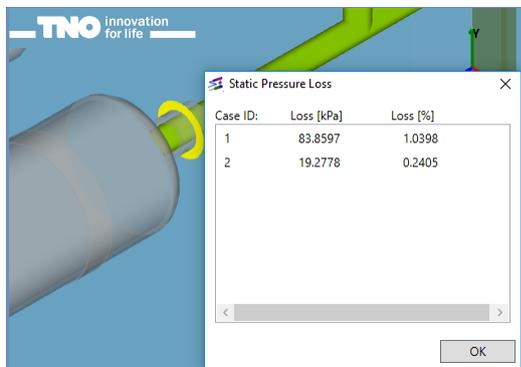


From the View menu, you can now select Copy Canvas or Save Canvas, to create a convenient picture of the system as you see it on the screen, with a white background. In case you are making a picture of a result view, the color scale is included in the picture. Pinned values of results, labels, and comments will also be visible in the picture.

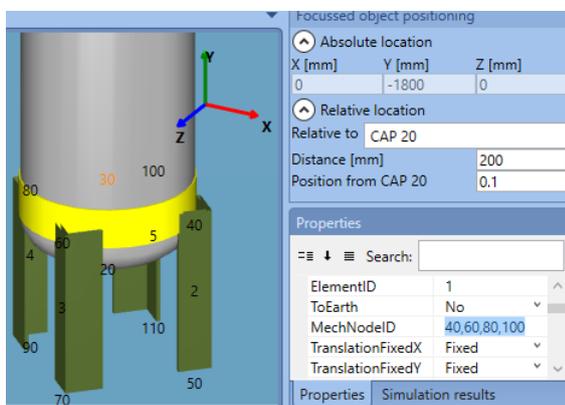


The acoustic solver has become much faster, and it now has the option to take advantage of the multiple core technology of modern processors. When pressing the **Start** button, you will be prompted to select the amount of cores to use during the simulations. The different **Run cases** will still be run in serial order, but each single case (or “sweep”) is run on the amount of cores you specify. So if you select 4 cores, each run case will be roughly 4 times faster.

To save disk space, the raw (unfiltered) simulation results are now by default removed after simulation, but you can opt to save them.



The **Static Pressure Loss** and the **Set OR** functions for orifices have been improved. You do not have to hover at exactly the pipe location of the OR to know the correct pressure loss, but you can simply select the OR (by clicking on the OR disk we have increased in size), and then right-click anywhere on the system for the menu of the OR static pressure loss.



One SUP can now be connected to more than one MN. As you can see in the picture here, the MechNodeID property of the SUP can now be a list of MN numbers, separated by commas.

Similarly, the MRA Group of a mechanical run case can also be a list of group numbers, separated by commas. In this way it has become possible to sensibly divide large mechanical models into groups, with some overlap at the boundaries.