

PSVPlus Version 6.0 - relieving the pressure of PSV design

We are currently working on an update to PSVPlus which will provide users with the ability to interface directly with the HYSYS and FLARENET applications from Aspen. Our aim is to provide engineers with an integrated design tool incorporating the relief source data, flare header hydraulics, PSV sizing and PSV data sheet generation.

We envisage one way engineers could use PSVPlus

- Create the hydraulic network topology in Aspen FLARENET naming all valves and pipes as required.
- Import available source data from HYSYS into FLARENET for individual relief scenarios.
- Import all relief valve and flowrate data from FLARENET.
- Use PSVPlus to calculate remaining source data, and size all valves to API standards – creating the project valve database.
- Export all valve sizing data and line sizes back into FLARENET.
- Run FLARENET to analyse the network and calculate back pressures on the valves, highlighting any operational problems.
- Import relevant data and run a final check on the valves for API conformity; also respecify valves if necessary.
- Repeat the PSVPlus-FLARENET cycle again if required.
- Finalise and complete PSV data sheets and update the project database.

There will be alternative ways of running the combinations –for example, the HYSYS relief data could be imported straight into PSVPlus rather than going through FLARENET. Interfacing between the three programs will be automated and simplified as much as possible to ensure an efficient man-hour-saving process for engineers.

Initially, we will provide the PSVPlus–FLARENET–HYSYS interface, with the intention of developing tie-ins to alternative simulators in the future.

We envisage that PSVPlus will dramatically reduce the man-hours spent in designing and specifying flare systems and the associated data sheets. It will also significantly improve quality assurance in eliminating the manual transfer from one package to another. PSVPlus will be network based, and so will allow several engineers to work on a project simultaneously.