

CASE STUDY



Mid-Size E&C Boosts Ability to Efficiently Complete Relief Sizing with aspenONE® Engineering



**“The PSV Sizing capability in Aspen HYSYS® was the final determining factor in HGA’s decision to adopt the aspenONE Engineering suite. We have seen immediate benefit and return on investment from Aspen HYSYS, Aspen Plus®, and Aspen Flare System Analyzer.”**

- Shaun McKay, Process Lead, HGA, Ruston, LA



Hunt, Guillot & Associates (HGA), a midsize E&C firm located in Louisiana, performs project work in engineering, pipelines and program management/emergency recovery. HGA’s engineering division experienced an expanding work volume with an increasing design complexity, which generated the need for a superior engineering environment. This resulted in HGA considering different options, including an upgrade to the aspenONE Engineering suite.

HGA’s process department performs overpressure protection analysis as a regular part of the process design workflow. An obstacle they faced was a lack of a commercial product for pressure safety device sizing. This required a more tedious work process, involving separate calculations for overpressure protection performed with additional software not utilized for the process modeling work. This coincided with an increase in project work over the past two years, since HGA services the rapidly paced unconventional gas and oil booms in North America.

The November 2013 release of PSV Sizing in Aspen HYSYS provided the compelling cause for HGA to proceed with a full upgrade to the AspenTech aspenONE Engineering suite.

### CUSTOMER PROFILE - Hunt, Guillot & Associates (HGA) - Engineering

#### CHALLENGE

Reduction in project cycle time to service more clients’ needs for design, meeting stringent process safety standards.

#### SOLUTION

Aspen HYSYS, PSV sizing in Aspen HYSYS and Aspen Flare System Analyzer

#### BENEFITS

- Used a validated, off-the-shelf PSV and Flare design tool rather than time-consuming custom calculations
- Analyzed multiple overpressure scenarios systematically
- Performed safety analysis within the process simulator and linked to Aspen Flare System Analyzer, ensuring engineering consistency
- Eliminated copying of data during PSV sizing
- Reduced time spent sizing relief valves by 50%

**The PSV sizing capabilities in Aspen HYSYS have helped HGA achieve approximately 50% time savings on the entire overpressure protection workflow.**

### TOOLS THAT SUPPORT A FORWARD-LOOKING VISION

HGA contacted AspenTech after learning of their acquisition of the PSV Plus software and its implementation within Aspen HYSYS. Being a mid-sized E&C with visionary leadership, HGA's process team quickly validated and adopted the newly introduced PSV capability, fully integrated within Aspen HYSYS. During initial evaluations, HGA compared relief sizing calculations from Aspen HYSYS with previous work and found noted consistency between the two calculation methods. Additionally, the introduction of the aspenONE Engineering Desktop package, which is extremely economical for small and medium-sized engineering organizations, made acquisition of the aspenONE suite an easy decision for HGA.

HGA's initial project need for aspenONE Engineering included the sizing of relief valves and the design of flare networks on several existing projects. Fortunately, Aspen Flare System Analyzer is an included component of the aspenONE Engineering suite, creating a streamlined import and export functionality with the Safety Analysis Environment, thus reducing manual transfer of data, and increasing time savings and data accuracy. HGA began use of the Safety Analysis Environment in Aspen HYSYS to analyze overpressure scenarios and size PSVs as soon as it was released and has been extremely pleased with the results, including improved workflow and reduction of project cycle time. The PSV sizing capabilities in Aspen HYSYS have helped HGA achieve approximately 50% time savings on the entire relief valve sizing

workflow and enabled HGA to expand their relief load calculations to new areas, such as supercritical relief load calculations, as well as being able to integrate the results into overall flare system models.

### NEXT STEPS

HGA plans to continue using safety analysis features in Aspen HYSYS and sees additional opportunities to benefit further from the automation of PSV documentation for regulatory compliance. With full access to the aspenONE Engineering suite at HGA, along with a strong capital project environment across North America, HGA is looking for even more opportunities to take advantage of the broad set of modeling capabilities that they now have at their disposal.

**"The overpressure analysis and PSV sizing capability in Aspen HYSYS is the only efficient and accurate overpressure analysis, relief load calculation and PSV sizing technology we have found usable in commercial software. We have already used PSV in Aspen HYSYS on project work and are finding that it saves us engineering time, which is important at the front end of a project."**

*- Joshua Palyo, Process Engineering, HGA, Pennsylvania*



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#### Worldwide Headquarters

Aspen Technology, Inc.  
20 Crosby Drive | Bedford, MA 01730 | United States  
phone: +1-781-221-6400 | fax: +1-781-221-6410 | [info@aspentech.com](mailto:info@aspentech.com)

#### Regional Headquarters

Houston, TX | United States  
phone: +1-281-584-1000

São Paulo | Brazil  
phone: +55-11-3443-6261

Reading | United Kingdom  
phone: +44-(0)-1189-226400

Singapore | Republic of Singapore  
phone: +65-6395-3900

Manama | Bahrain  
phone: +973-13606-400

For a complete list of offices, please visit [www.aspentech.com/locations](http://www.aspentech.com/locations)