



Pressure Relief Systems Management

Help ensure compliance and improve safety

As global refineries and petrochemical plants continue to increase capacity to keep pace with worldwide demands, operators must keep a watchful eye on process safety – in particular, pressure relief systems management. These systems are a small part of a facility but serve as the final layer of protection when other control mechanisms have failed.

Pressure relief incidents come at an enormous cost – not only to your business, but to workers and nearby communities. OSHA's new National Emphasis Program (NEP) makes it even more critical that your plant complies with existing safety standards.

Whether it's to prepare you for an NEP audit, to verify and document that a process is adequately protected against overpressure or to help you evaluate your facility for future expansions or modifications, Siemens can help.

Global expertise

With more than 2,000 baseline studies conducted worldwide, we offer expertise and powerful software to analyze, design, document and manage your relief systems. And because experience has shown us what to look for, we perform plant-wide audits quickly and efficiently, with minimal disruption to your operations.

Services include:

- Equipment-based pressure relief analysis (determining the existing adequacy of pressure safety valves, rupture disks, goosenecks and vents)
- Flare/vent system analysis (hydraulics, network equipment analysis)
- Pressure relief valve and flare design verification
- Quantitative risk analysis on flare systems
- Atmospheric relief valve tie-in/mitigation
- Relief device dispersion
- Flare radiation and dispersion
- Concern for and PHA resolution of relief/flare related issues
- Transfer of data from EPC into PPM database
- Gap closure for relief device documentation
- Create H&MB of process unit using simulation software (PRO II, HYSYS, etc.)
- Dynamic simulations of column systems and flare systems

Proven methodology

Typical compliance audits that focus on individual valves and systems may miss a critical fault in a vital piece of equipment and aren't likely to address all the scenarios through which an overpressure incident may unfold.

Siemens consultants use a patented approach to examine the critical relationships between individual equipment and relief devices, calculating the required relief rates and relief capacity, and documenting deviations from industry standards and practices. With a comprehensive view of your pressure relief system, we then subject each of those processes to critical scenarios to uncover potential non-conformance issues.

Based on your requirements, Siemens also can develop prioritized action plans, including risk assessments, backup calculations and order-of-magnitude cost estimates, if modifications are required.

Benefits throughout the life cycle

Siemens' approach is anchored by Pressure Protection Manager® (PPM®), one of the industry's leading pressure relief system software and the corporate standard for many of the world's top refiners. Easy to update and keep evergreen, PPM provides you with a centralized data repository of equipment specifications and the reasoning behind each of them, which creates a solid foundation for future management.

Not only does this approach help to ensure continued high levels of safety and protection, it also reduces the risk of non-compliance, downtime and lost production.



For more information about this and other professional consulting services, contact us at 1 (800) 658-8809 or +1 (713) 570-2900 or info.ogm@siemens.com.

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