



PS Pressure Protection Manager™

Systematic approach helps mitigate risk and improve process safety

Incidents related to inadequate pressure relief system design come at an enormous cost – not only to your business, but also potentially to workers and nearby communities. A properly designed pressure relief system will help mitigate risk, ensure process safety and improve reliability. OSHA's new National Emphasis Program (NEP) makes it even more critical that your plant complies with existing safety standards and maintains process safety data that is current and readily available.

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 and modifications, Siemens can help.

Patented equipment-based approach

Process Safety Pressure Protection Manager (PS PPM) is the cornerstone of Siemens' patented equipment-based methodology. As one of the world's leading providers of pressure relief systems technology, Siemens offers a thorough, systematic and efficient platform for managing the pressure relief system data to enable design, analysis and documentation of new and existing systems. Unlike traditional approaches, PS PPM captures the critical relationship between overpressure contingencies, process equipment and specific relief devices. It also helps enable an operator's local technical team and global network of experts to collaborate on how to ensure a safer plant design.

PS PPM features

- Relational database architecture for integration with other engineering and plant information and asset management systems
- Systematic identification of potential overpressure scenarios associated with each piece of equipment or with an identified equipment system
- Calculation of required relief rates, including two-phase relief scenarios based upon both the American Petroleum Institute (API) and Design Institute for Emergency Relief Systems (DIERS) methodologies
- Computations can be based on either built-in thermodynamic engines (capable of calculating stream properties) or external simulators
- Calculation of relief device inlet and outlet piping pressure losses
- Evaluation of overall vapor disposal systems (relief headers, knockout drums, flare tips, etc.)
- Smart client technology allows the option to work within your corporate network and from a disconnected environment
- Connectivity to third-party hydraulic solvers to determine backpressure profiles of the disposal system
- Discussion tool provides greater flexibility and control over content and format

Comprehensive workflow

From compliance to third-party audits, debottlenecking studies to major capital projects, PS PPM offers an all inclusive workflow and information management infrastructure that allows operating facilities to develop and maintain comprehensive models of their pressure relief and vapor disposal systems.

Instant accuracy

The PS PPM process is a proven application for the design, analysis and documentation of new or existing pressure relief systems. The software provides a central database for immediate access to up-to-date PSM-related information as well as hypothetical, planned or alternate mode-of-operation case studies.

Improve productivity

Operating facility management can expect an increase in employee productivity due to elimination of redundant data entries and easier access for PSM users. Additional features allow systems of equipment or relief devices to be conceptually grouped. PS PPM is built on a .Net platform to allow for an easy check-in/check-out and data synchronization system. This helps ensure that all users on a unit, site or corporate level can access the latest information with access rights easily customizable to fit the needs of the operating facility.

Customized scenarios

Anchoring Siemens' best practice for pressure relief systems, PPM® and PS PPM™ are the cornerstone of our patented, equipment-based methodology. The software helps document, verify, quantify and manage individual pieces of equipment in a process facility.

The real power of PS PPM lies in its ability to offer common or customized overpressure scenarios for each piece of equipment. Built-in calculation methods enable users to calculate relief rates quickly. PS PPM helps:

- Ensure the most thorough and accurate pressure relief system analysis
- Assure that personnel can find the specific pressure relief system data when needed
- Enforce quality and consistency of calculations based upon Recognized and Generally Accepted Good Engineering Practices (RAGAGEP)
- Reduce cost of pressure relief system analyses
- Maintain pressure relief information in an accessible, viable format
- Encourage PSM to be an evergreen process
- Allows multiple users to access current, archived and alternate mode-of-operation case studies

Enterprise platform delivers scalability and improved security

Building on many years of successful PPM application and Siemens process safety experience, PS PPM 1.0 delivers new features, enhancements and functionalities for greater speed, scalability, ease-of-use, reporting and analysis. Highlights include:


- Highly scalable platform – configurable at corporate level or site level
- New audit trails for key fields drive greater productivity and security
- A single database helps ensure data remains accurate, up-to-date and available

- New user-friendly interface pre-populates data, offers contextual help and more
- Enhanced reporting capabilities (by unit, site or corporate) for improved analysis and concern mitigation tracking
- Supervisory approval process and enhanced role and resource-based security updates for greater transparency and flexibility

PS PPM is at the frontier of creating a user-friendly process safety management system for ultimately reducing resource requirements and increasing the availability of crucial data. Not only does this help to ensure continued high levels of relief system safety and protection, it also reduces the risk of non-compliance, downtime and lost production.

Additional PS PPM Features

- Customizable pipe fittings, pipe schedules and chemical components
- Upgraded commenting tool
- Elevated stream modules
- Calculation of relief device capacities (pressure safety valves, rupture disks and/or conservation vents), including two-phase releases based on API or DIERS methodologies



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