

PROCESS SAFETY SUITE (PSS)

Product Information Note

The Honeywell Process Safety Suite (PSS) is a comprehensive solution that fully automates the process safety lifecycle. Its powerful and versatile tools enable industrial organizations to reduce man-hours for safety-related tasks, drive consistency through best engineering practices, and enhance functional safety throughout the process safety lifecycle.

Safety in the process industries has improved significantly in recent decades with layers of protection reducing risk, but incidents still happen, costing billions of dollars annually not to mention loss of life, environmental impact, and so on. The typical causes of process safety incidents include:

- Operating with bypassed or degraded critical safeguards
- Unawareness of scenarios with higher risk of occurrence as resulting degraded safeguards
- Difficulty visualizing in real-time process safety gaps, and prioritizing where and how to focus on managing operational risk

Process industry organizations have an urgent need to reduce incidents while maximizing production by providing comprehensive, real-time risk assessment and actionable recommendations to mitigate potential issues—helping operations management teams to better visualize and manage risk.

In particular, operating companies must understand the status of their critical safeguarding assets and then act appropriately. Key information in the process safety lifecycle is often handled through manual and disconnected steps. This can result in inefficient operations, compliance issues, increased risk, and reduced profits.

The traditional approach to process safety has been proven inefficient for most industrial operations and is neither consolidated nor synchronized. Unit information switches back and forth many times, and manual data entry, revision control, and normal human behavior creates havoc and leads to systematic errors.

Honeywell Process Safety Suite (PSS) fully automates the process safety lifecycle, helping to reduce errors and lower safety-related costs in design, analysis and realization phases. In operations, PSS continuously monitors the process for hazard conditions and provides safety alerts in a timely fashion. ISA/IEC-61511 compliance is simplified and displayed in an easy-to-understand format.



Honeywell Operations Safety Advisor (OSA) makes hidden risks visible and provides actionable suggestions to control it. And Process Safety Suite makes it easy by centralizing and synchronizing information throughout the safety lifecycle. Information is entered just once and never retyped, eliminating errors and inconsistencies, and making projects run smoother and faster.

FEATURES & BENEFITS

- Allows for concurrent software users
- Supports simultaneous project activities
- Provides an enterprise-wide solution
- Performs action tracking
- Enables real-time risk visualization
- Optimizes competency management
- Includes reliable version control
- Assists with status reporting
- Provides multiple installation options
- Offers varying support packages
- Includes numerous training courses



Honeywell Process Safety Suite is designed to identify performance gaps over the full process safety lifecycle.

With the comprehensive PSS approach, plant owners/operators can:

- Monitor risk to improve performance
- Streamline work to enhance functional safety
- Utilize tools to optimize Safety Instrumented Function (SIF) programming and commissioning
- Take steps to ensure reliable operations and maintenance

Honeywell Process Safety Suite seamlessly connect the entire process safety lifecycle within a single, integrated solution. The system compares important datasets—Hazard and Operability Studies (HAZOP), Layers of Protection Analysis (LOPA) and Safety Integrity Levels (SILs)—along with information from plant historians and Computerized Maintenance Management Systems (CMMS) and analyzes what should happen versus what does happen, looking for any gaps over the full process safety lifecycle.

Honeywell Process Safety Suite was specifically developed to automate data flow throughout the process safety lifecycle. All data are consolidated in a single model without the need for manual transfer from step to step. This solution simplifies a host of daily operational and maintenance activities, including:

- Device/function testing
- Bypass/override support
- Incident investigations
- Turnaround extensions
- Safety audits and Functional Safety Assessments (FSAs)
- Management of Change (MOC)

Robust Safety Software

For plants that are already up and running, Honeywell Process Safety Suite software employs the latest techniques to help Process Hazard Analysis (PHA) revalidation teams move smoothly through their work of identifying issues using data from their own unit’s performance. In addition, the software improves the speed and accuracy of numerous technical activities needed to properly analyze risk during revalidations.

The PSS solution utilizes a comprehensive, three-pronged approach to automate the process safety lifecycle:

Monitor:

- Employ data from plant historians to validate designs or flag issues
- View an up-to-date dashboard answering the question, “What does my process safety risk look like today?”
- Utilize displays for various levels of the organization, from the unit to the corporate level

Synchronize:

- When revalidating a PHA, data can be imported from whatever system is currently in use
- As part of PHA and LOPA, perform a comparison of “risk reduction intended” vs. “risk reduction achieved” so gaps can be better prioritized and addressed promptly while optimizing budget

Deploy:

- With the PSS solution, the safety lifecycle can be entered at any point
- Once data is entered, it doesn’t need to be transcribed from system to system
- Engineers can use templates and reuse previous designs to save time

Powerful Data Models

Honeywell Operations Safety Advisor (OSA) is a new Software as a Service (SaaS) operational risk management solution that provides industrial customers with a real-time assessment of plant process safety and operating risks. This innovative solution can help prevent extremely rare, catastrophic incidents as well as reduce much more common, minor incidents that lead to production losses.

Today, important information in the process safety lifecycle is typically handled through many manual and disconnected steps.

The Honeywell PSS solution helps to reduce errors, lower costs, continuously monitor operations for hazard conditions and provide safety alerts in a timely fashion—and in an easy-to-understand way—that will engage key stakeholders.

A core element of the Process Safety Suite, Honeywell Forge Operations Safety Advisor (OSA), provides an easy-to-understand picture of process safety risk as it stands today with visibility at the site, division and enterprise levels. Forge OSA collects information from process operations and maintenance, then compares it with the risk analyses in HAZOP and LOPAs to show how the plant is operating. This involves a comparison with the ideal “Digital Twin for Safety” as laid out by the customer’s assessment teams.

Honeywell Process Safety Suite utilizes an inherited data model, linking risk rankings down to tagged devices and making it easier to support daily operations and maintenance activities. Interfaces with operating data such as process historians and maintenance management systems provide the insight required to make better business decisions regarding testing, planned outages, safety system performance, and future capital project spend. Previously invisible risk become identifiable by analyzing deviations in operations compared to original design assumptions.



Honeywell Operations Safety Advisor (OSA) provides a real-time assessment of safety and operating risks.

All this is displayed on a risk matrix in near-real time, making it easy for all to understand. And like all Forge-based tools, OSA provides usable insights and recommends prioritized actions to fix the causes of performance issues.

With Honeywell Forge Operations Safety Advisor (OSA), plant operating companies can:

- Monitor on-time testing
- Identify upcoming tests impacting safety
- Collect and classify failures
- Track demands (monitor trip counts vs. assumed from LOPA, classify when spurious, identify when to ignore due to test, and assign initiating cause from PHA)
- Track bypassing (time in bypass and number of times in bypass)

- Improve financial returns
- Monitor dashboard safety performance
- Analyze across the organization
- Reduce time for mining process safety data to support daily activities
- Maintain an evergreen PHA
- Streamline MOC efforts while impacting process safety
- Support functional safety assessments and safety audits
- Simplify incident investigations
- Support bypass management
- Identify safety bad actors
- Evaluate future capital spend
- Facilitate testing requirements

Other Key Components

Process Safety Analyzer

Honeywell DynAMo Process Safety Analyzer (PSA) is advanced software solution that automates tracking, analysis and reporting on the operation of shutdown systems and safety elements - like emergency shutdown (ESD) valves. It is intended to help users promptly detect issues like slow-closing of ESDs and continuously ensure process safety.

With the Process Safety Analyzer, industrial organizations can prove to authorities and other entities that continuous validation is performed on essential process safety components. They can also promptly detect issues for faster action when necessary and capture reports to prove proper operation.

Safety Workbench

Honeywell Safety Workbench consolidates all the Process Safety Suite tools, synchronizes the information for seamless transfer and revision control, and represents the single source of truth for process and functional safety data. This solution can be used in conjunction with the other PSS components to keep data evergreen and monitor performance to minimize risk moving forward.

When users have an issue with a safety system, they can clearly see the effect on their risk profile, making it easier to manage risks and demonstrate adherence to company policies.

Driven by a patented data model, Safety Workbench enables seamless transfer from one process safety activity to the next. The application enables users to start anywhere in the lifecycle and grow as they go.

Benefits to Customers

Honeywell Process Safety Suite delivers solutions to assist customers in automating and managing all aspects of today's critical process safety lifecycle. These solutions help prove compliance with regulations and standards and provide a status of overall risk. They also help identify areas where problems may occur.

End-users can realize significant benefits from the PSS solution:

- Reduce engineering cost, project delays and human errors
- Drive greater consistency, consolidation and safety transparency
- Ensure compliance, bad actor identification and risk elimination

The PSS solutions enable customers to use their operating history in addition to their testing to minimize risk and optimize spending. With these robust applications, they can employ a single data system to manage all process safety risk management analysis and information throughout the life of a process safety project—and for the next 30+ years.

Complete Technical Support

Honeywell Process Safety Suite comes with worldwide, premium support services. These services encompass the total safety lifecycle and are designed to help customers improve and extend the usage of their solutions and the benefits they deliver, ultimately maintaining and safeguarding their advanced applications.

Honeywell provides a complete portfolio of service offerings to extend the life of plant assets and ensure a cost-effective path forward to the latest application technology.

For More Information

Learn more about how Honeywell Process Safety Suite improves performance, visit

<https://hwl.co/ProcessSafetySuite>

or contact your Honeywell account manager, distributor or system integrator.

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