**Alarm Management**

PAS defines alarm management for the industry, improving safety and profitability of processing and power plants worldwide.

**Challenge**

Alarm Management is a key element of managing the operational risk of every facility. However, poorly performing alarm systems – plagued by alarm floods, inaccurate alarms, and suppressed alarms – diminish situation awareness and continue to negatively impact plant production and safety.

**Solution**

An effective alarm system optimization strategy, one that leverages a proven methodology enabled by software automation, addresses these challenges making operators more effective during abnormal situations.

PAS is the pioneer in this field and has defined industry best practices for effective alarm management in “The Alarm Management Handbook.” PAS leadership and extensive experience have produced the industry’s most widely accepted alarm management software, PlantState Integrity™.

For more than 20 years, PAS has helped processing and power plants around the world optimize their alarm systems using a proven, comprehensive, seven-step methodology comprising these steps:

1. Alarm Philosophy
2. Data Collection and Benchmarking
3. Bad-Actor Alarm Resolution
4. Alarm Documentation and Rationalization
5. Alarm Audit and Enforcement
6. Real-Time Alarm Management
7. Alarm System Control and Maintenance

PAS alarm management software and services enable effective implementation of this methodology, which can be found in “The Alarm Management Handbook.”

**Key Benefits:**

- Improves operator detection and response to abnormal situations
- Avoids upset conditions that may impact production
- Enables immediate, significant reduction of nuisance alarms
- Facilitates regulatory compliance
**Improved Operator Situation Awareness through PlantState Integrity**

PlantState Integrity (PSI) is comprehensive software that provides a critical view of the performance of the alarm system, control loops, operational boundaries, and independent protection layers in all process industries. PSI provides actionable information for plant personnel to improve operator situation awareness to mitigate abnormal situations, improving plant safety, reliability, and profitability.

The PSI modules include:

- **Alarm & Event Analysis:** Captures and analyzes alarms, events, operator interventions, system logs, and parameter changes. The new Alarm Mechanic feature calculates settings to reduce nuisance alarms.
- **Documentation & Rationalization:** Facilitates sessions to engineer alarms and capture the information on setpoints, priorities, severities, causes, consequences, and corrective actions in a master alarm database. Flexible Query Builder supports operational excellence and Industrie 4.0 applications.
- **Audit & Enforce:** Enables real-time notification and captures changes, audit reporting, and configurable enforcement of alarm setting changes.
- **Alert Director:** Provides notifications in real time based on configurable triggers.
- **Dynamic Alarming:** Modifies engineered alarms based on current operating state, temporarily disables nuisance alarms, and generates reports to facilitate corrective actions.
- **inBound™:** Stores and dynamically monitors operational boundary limits for real-time exceedance notification and cost.
- **IPL Assurance™:** Monitors and reports the status of all independent protection layers and analyzes IPL activation occurrences.
- **ControlWizard:** Monitors and identifies poorly performing loops to determine corrective actions; executes tuning changes, control strategy modifications, and hardware issues resolution.
- **TuneWizard:** Tunes control loop performance to an optimal state.

**Integrity Integration**

PlantState Integrity integrates with the PAS Integrity™ platform, which captures, stores, and manages the changes among all automation systems in a plant. With this integration, users can launch and display automation system data from PlantState Integrity based on specific context displaying control maps, LoopSheets, and defect finders. This integration also enables OT/ICS cybersecurity, inventory management, configuration management, patch management, compliance management, and backup and recovery.

To learn more about PlantState Integrity, please email info@pas.com.

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**About PAS**

PAS, the OT Integrity company, delivers software solutions that prevent, detect, & remediate cyber threats; reduce process safety risks and optimize profitability; and enable trusted data for decision-making. PAS helps industrial organizations Ensure OT Integrity including 13 of the top 15 refining, 13 of the top 15 chemical, 4 of the top 5 pulp and paper, 3 of the top 5 mining, and 7 of the top 20 power generation companies.

For more information, visit www.pas.com.