PRODUCT SHEET

Octave Tempo Boundary Analytics

Displays a plant's current state relative to the operating limits to improve safety and compliance

Key Benefits

1. Aggregates, validates and displays safe operating limits in real-time
2. Presents safe operating limits in context within control system display
3. Provides visibility into operational and safety risks
4. Allows operators to instantly determine a plant's current state relative to its safe operating limits
5. Provides visibility into violations of safe operating limits
6. Delivers notifications based on limit exceedance

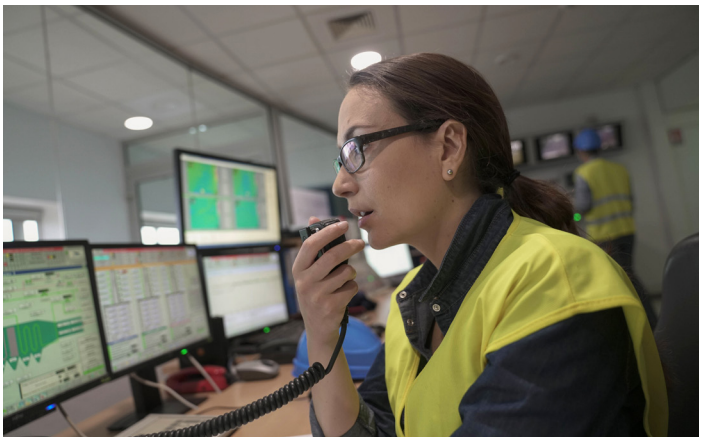
Challenge

Plant personnel often lack clear visibility into boundaries and alarms that are designed to ensure compliance with production and safe operating limits. These limits are typically maintained in different databases and automation systems and managed by different teams within a plant. This makes it difficult to understand the relationships between the operating boundaries of a facility.

Maintaining accurate change management across multiple databases and keeping systems up-to-date and synchronized is a challenge within most organizations. Inadvertent mistakes when updating boundary settings, especially for dynamically changing safe operating limits, can lead to undesirable consequences, including failure of protection layers and shutdowns.

These operational and safety boundaries include:

- Normal and optimal operating zones
- Process alarms
- Safety instrumented trip points
- Mechanical design limits
- Environmental excursion limits

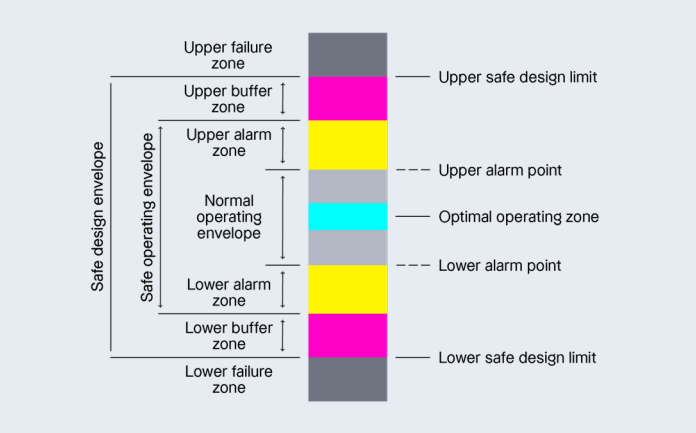


Solution

Octave Tempo Boundary Analytics (formerly PAS InBound) validates and displays physical, design and safe operating limits. Limits can be manually entered, calculated or imported from other systems providing maximum flexibility and consistency. Tempo Boundary Analytics enables a boundary hierarchy that automatically detects and reports deviations, such as an alarm setting, that is higher than a safety instrumented system trip point. This provides additional assurance that modifications to configuration parameters such as alarm limits and instrument ranges remain within the safe operating envelope of the plant.

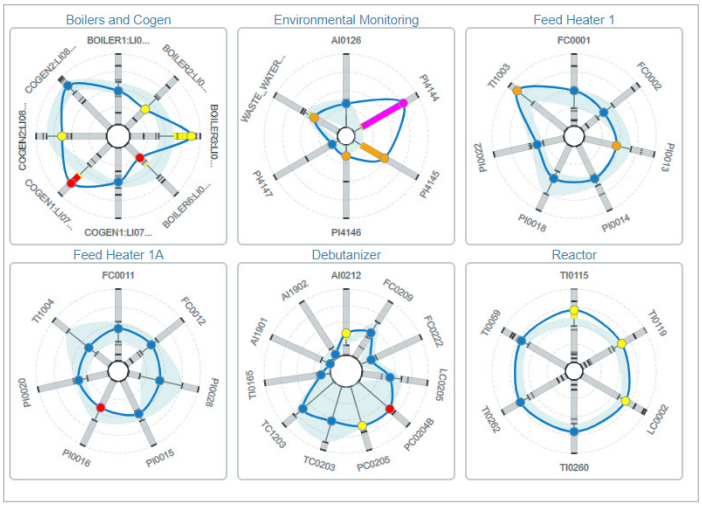
Tempo Boundary Analytics displays both the safe operating limits and the current operating state graphically for improved pattern recognition. This allows operators to quickly and confidently determine the plant's current state relative to its operational boundaries, allowing for pre-emptive corrective actions.

Tempo Boundary Analytics monitors the process in real-time and generates excursion events whenever the process crosses over a boundary which can trigger further alerts to impacted parties. Additionally, the events are historized and made available to a host of analytics platforms providing valuable insights into operations.



Operating limits, presented in context

In the radial display, operations staff can choose a context to setup a quick visual synopsis of the current state of the process; for instance, operational status of equipment like a feed heater, reactor, etc. The light-blue band represents the region where the process is within defined boundaries. Points shown in color represent the excursions outside the defined boundaries. The excursions are depicted in different colors depending on the severity. The faceplate display shows current boundary and excursion information in greater detail. The horizontal bars indicate safe operating limits that are stationary for fixed limits and movable for variable ones.



Comprehensive operations risk management

Tempo Boundary Analytics is part of Octave Tempo Control System Effectiveness (formerly PAS PlantState Integrity), which provides a single platform to deliver unique insights into process safety risk. The solution uses a single data capture layer to monitor the performance of control loops, operational limits and independent protection layers (IPL). By combining these metrics into a single pane of glass along with exception-based reporting, Tempo Control System Effectiveness provides actionable insights to ensure companies operate their facilities effectively while improving safety and environmental performance. To learn more about Tempo Boundary Analytics or Tempo Control System Effectiveness, please visit octave.com

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property, and assets– for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency, and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.