

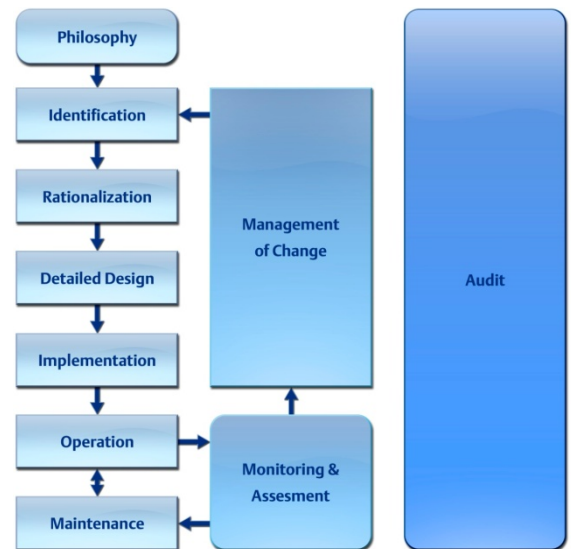
Title: Introduction to Alarm Management Practices & Principles for DeltaV Users



Course Description:

With the release of the ISA-18.2 standard “Management of Alarm Systems for the Process Industries” and increased attention from major incidents, companies are being driven by regulators (OSHA) and insurance companies to adopt “good engineering practices” for alarm management. The purpose of this training seminar is to educate key personnel about alarm management practices and principles and show them how their roles & responsibilities could be affected by complying with ISA-18.2.

The seminar focuses on how to create an effective, sustainable alarm management program for DeltaV systems that delivers quantifiable benefits and complies with industry standards and guidelines. It also prepares participants to support a facility alarm management program including tasks such as creating an alarm philosophy document, alarm rationalization, analyzing alarm system performance, alarm system maintenance and resolution of alarm management issues. The seminar includes a discussion of how to leverage the DeltaV alarm management tools (DeltaV Analyze, Alarm Help, and SILAlarm™) as part of an alarm management continuous improvement program.



What You Will Learn by Attending:

- Considerations for creating an effective and useful alarm philosophy document for a DeltaV system
- How to rationalize alarms to ensure every alarm is needed and properly prioritized / designed
- How to treat system / instrument diagnostic alarms (e.g. PV BAD alarms), alerts, and safety-critical alarms
- Techniques for improving the operator’s response through improved HMI design, the use of alarm shelving (manual suppression), alarm response procedures and Alarm Help
- How to suppress alarms from the operator by design when they are not relevant (e.g. when equipment is out-of-service)
- Considerations for creating an effective alarm system testing and operator training program
- Using DeltaV Analyze to measure alarm system performance, generate reports, and identify poorly performing alarms (nuisance alarms, bad actors, alarm floods)
- Implementing an effective and useful management of change process
- Alarm system maintenance

Who Should Attend:

- Process engineers
- Operators and their supervisors
- Control system engineers
- Safety, risk management, and environmental personnel
- Maintenance technicians & engineers



Syllabus:

Alarm Management Drivers

- Incidents and lessons learned
- Costs and benefits
- Standards and guidelines
- Regulatory impact

Alarm Management Principles

- What is an alarm (supposed to be)
- Operator response timeline

The ISA-18.2 Alarm Management Lifecycle

- Overview & where to start

Common Alarm Management Issues

- Nuisance alarms (chattering, stale, bad actors)
- Alarm overload, alarm floods
- Alarms with the wrong priority

Alarm Philosophy

- Purpose and benefits
- Required and recommended content
- Key decisions / recommendations for DeltaV users

Identification & Rationalization

- Criteria for determining valid alarms
- Alarm prioritization, classification and setpoint determination
- Documenting cause, consequence, corrective action to create alarm response procedures / populate Alarm Help
- Recording results in a master alarm database (MADB) such as SILAlarm

Length: 1 Day

What the Course Includes:

- Course notes,
- Two (2) weeks of online access to SILAlarm after the class

Instructor Bio:

Todd Stauffer, PE, is responsible for marketing and business development of exida's alarm management products and services (training, consulting, engineering tools). He is the product manager for SILAlarm and has led its development working closely with the Emerson Process Management team. Todd is an editor and voting member of the ISA-18.2 standards committee on alarm management and currently is the co-chair of ISA-18.2's Working Group 3 chartered with writing the Basic Alarm Design technical report. He is an instructor for ISA's training class "Introduction to the Management of Alarm Systems". Todd has published and presented numerous papers on alarm management.

Detailed Design

- Use of common (group) alarms
- Applications of deadband (hysteresis) and on/off delay
- Treatment of diagnostic alarms
- Treatment of safety-critical alarms
- HMI design practices
- Alarm suppression (static & dynamic), state-based alarming
- First-out alarming

Implementation, Operation & Maintenance

- Testing of alarms
- Operator training
- Use of alarm shelving
- Alarm response procedures / Alarm Help
- Alarm system maintenance

Alarm System Performance Monitoring & Assessment with DeltaV Analyze

- Analyzing key performance indicators
- Identification of bad actors
- Typical reports

Management of Change

- Establishing an effective MOC methodology

Audit

- Capturing operator feedback

Creating an Effective Alarm Management Process

- Continuous Improvement with SILAlarm / AlarmHelp / DeltaV Analyze

