

White Paper

Alarm Philosophy Development



The alarm philosophy serves as the framework to establish the criteria, definitions and principles for the alarm lifecycle stages by specifying items including the methods for alarm identification, rationalization, classification, prioritization, monitoring, management of change, and audit to be followed.
- ANSI/ISA-18.2-2009

Alarm Philosophy Overview

The alarm philosophy covers all elements, including design principles, key performance indicators, roles and responsibilities, alarm presentation standards, alarm priority assignment, alarm system maintenance, management of change, auditing, and escalation policies.

Alarm Philosophy Document (APD)

Creating an APD to outline the approach to these elements is the first step in a successful alarm management project. An effective APD is customized to the specific plant situation and establishes rules for improving and managing the alarm system, and also acts as a long-term reference to guide strategies for sustained improvement.

With the APD in place, alarm system design and/or improvement can proceed with maximum benefits to the facility. These may include:

- Reduced costs
- Improved safety
- Improved process reliability
- Facilitated adherence to industry guidelines and regulations
- ANSI/ISA-18.2-2009, Management of Alarm Systems for the Process Industries
- EEMUA 191, Alarm Systems: A Guide to Design, Management and Procurement
- API RP1167, Alarm Management
- YA-711, Principles for Alarm system Design, Norwegian Petroleum Directorate
- NUREG 0700, Human-System Interface Design Review Guidelines

Alarm Philosophy Document Development

TiPS provides an alarm philosophy document workshop. The end result of the workshop is the development of a customized APD. For more information, call 512-863-5392

Alarm Philosophy Document Overview

1. General
 - 1.1. Purpose of alarm system
 - 1.2. Definitions
 - 1.3. Related site procedures
 - 1.4. References
 - 1.5. Roles and responsibilities
2. Identification & rationalization
 - 2.1. Identification methods
 - 2.2. Alarm class definition
 - 2.3. Highly managed alarms
 - 2.4. Rationalization process
 - 2.5. Prioritization method
 - 2.6. Alarm set point determination
 - 2.7. Alarm documentation
3. Detailed design
 - 3.1. Alarm design principles
 - 3.2. Special alarm design considerations
 - 3.3. Approved advanced alarm management techniques
 - 3.4. HMI design guidance
4. Implementation, operation & maintenance
 - 4.1. Implementation guidance
 - 4.2. Alarm response procedures
 - 4.3. Training
 - 4.4. Testing of alarms
 - 4.5. Alarm system maintenance
5. Monitoring & reporting
 - 5.1. Alarm system performance monitoring
 - 5.2. Alarm history preservation
6. Management of Change & Audit
 - 6.1. Management of change
 - 6.2. Audit

