



Alarm Philosophy Development Overview



“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

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 plan 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
 - ◆ PHMSA CRM Rules, 49 CFR Parts 192 and 195 Pipeline Safety: Control Room Management/ Human Factors
 - ◆ API RP 1167, Alarm Management
 - ◆ YA-711, Principles for Alarm System Design, Norwegian Petroleum Directorate
 - ◆ IMCA, International Guidelines for The Safe Operation of Dynamically Positioned Offshore Supply Vessels
 - ◆ 21 USC § 351, Adulterated Drugs and Devices
 - ◆ NUREG 0700, Human-System Interface Design Review Guidelines

Alarm Philosophy Document Contents

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 and 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 and 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 and reporting
 - 5.1. Alarm system performance monitoring
 - 5.2. Alarm history preservation
6. Management of change and audit
 - 6.1. Management of change
 - 6.2. Audit

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 512-863-3653.