Alarm Philosophy Development





"... document that establishes the basic definitions, principles, and processes to design, implement, and maintain an alarm system."

– ANSI/ISA-18.2-2016

Alarm Philosophy Overview

The alarm philosophy serves as the framework to establish the criteria, definitions, principles, and responsibilities for all of the alarm management lifecycle stages. This is achieved by specifying items including the methods for alarm identification, rationalization, monitoring, management of change and audit to be followed.

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
- IEC 62682, Management of Alarm Systems for the Process Industries

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

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.

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

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