

2017 ISA Water/Wastewater and Automatic Controls Symposium

August 8 to 10, 2017 • Wyndham Lake Buena Vista Resort • Orlando, Florida, USA
Presented by the ISA Water/Wastewater Industries Division – www.isawwsymposium.com
Technical co-sponsors: Florida AWWA Section, the WEF Automation and Info Tech Committee,
Florida Water Environment Association, Instrumentation Testing Association, and ISA Tampa Bay Section



August 7, 2017 – Optional Short Course

Introduction to the Management of Alarm Systems

ISA Course SP39C

Course Description

Length: 1 day

Date: Monday, August 7, 2017

CEU Credits: 0.7

Course Hours: 8:00 a.m. – 4:00 p.m., includes lunch

Price: \$650 for ISA Members, \$815 List

Description:

This course focuses on the key activities of the alarm management lifecycle provided in the ANSI/ISA18.00.02 standard, Management of Alarm Systems for the Process Industries. The activities include the alarm philosophy development, alarm rationalization, basic alarm design, advanced alarm techniques, Human Machine Interface (HMI) design for alarms, monitoring, assessment, management of change, and audit.

You will be able to:

- Develop an Alarm Management Philosophy
- Identify types of alarms
- Discuss rationalization, classification, and prioritization of alarms
- Design basic alarms
- Determine when advanced alarm techniques should be used
- Document alarms for operations
- Design reports for monitoring and assessment of alarm system performance
- Manage changes to alarm systems
- Test and audit alarm systems

You will cover:

- The Business Case for Alarm Management
- The Common Problems in Alarm Systems
- The Alarm Management Lifecycle
- Philosophy
- Identification
- Rationalization
- Basic Alarm Design
- Advanced Alarm Design
- HMI Design for Alarms
- Implementation
- Operation
- Maintenance

- Monitoring and Assessment
- Management of Change
- Audit
- Starting Points for Alarm Management
- Sustaining Alarm Management

Classroom/Laboratory Exercises:

- Alarm identification
- Alarm objective analysis
- Alarm classification
- Alarm prioritization
- Alarm monitoring

Recommended Resources:

- *Alarm Management: Seven Effective Methods for Optimum Performance*, by Bill R. Hollifield and Eddie Habibi

Includes ISA Standards:

- *ANSI/ISA18.00.02 Management of Alarm Systems for the Process Industries*

About the Instructor



Nicholas Sands is currently a Manufacturing Technology Fellow working for DuPont's Kevlar®, Nomex®, and Tyvek® businesses and the Global Alarm Management Leader for DuPont. In his 27 years with DuPont, he has been a business process control leader, site process control leader, process control consultant, and plant control engineer in several different businesses. He has worked on or led the development of several corporate standards and best practices in the areas of automation competency, safety instrumented systems, alarm management, and process safety.

Nick is an ISA (International Society of Automation) Fellow, the past ISA Vice President of Standards and Practices, a past VP of Professional Development, and a volunteer in the development of the Certified Automation Professional program. He is co-chair of the ISA18 committee on alarm management, a director of the ISA101 committee on human machine interface, a director of the ISA84 committee on safety instrumented systems, and secretary of the IEC (International Electrotechnical Commission) committee that published the alarm management standard IEC62682. He has written over 40 articles and papers on alarm management, safety instrumented systems, and professional development.

Nick is a Certified Automation Professional and a licensed engineer in the state of Delaware. His path to instrumentation and control started when he earned his BS in Chemical Engineering from Virginia Tech.

Course Schedule

DAY	Topics, Exercises, Etc.	Time
A.M.	Course Introductions Pre Instructional Survey Section 1 – Incident Section 2 – Alarm Management Drivers Section 3 – Common Alarm Problems Section 4 – Lifecycle Overview Section 5 – Alarm Philosophy Section 6 – Alarm Identification Section 7 – Alarm Rationalization	0.25 hours 0.25 hours 0.25 hours 0.25 hours 0.50 hours 1.00 hours 0.17 hours 0.83 hours
P.M.	Section 8 - Incident Section 9 – Detailed Design Section 10 – Implementation Section 11 - Operation Section 12 - Maintenance Section 13 – Monitoring and Assessment Section 14 – Management of Change Section 15 - Audit Section 16 – Getting Started Section 17 - Review Post Instructional Survey Final Course Evaluation	0.33 hours 0.50 hours 0.25 hours 0.33 hours 0.17 hours 0.50 hours 0.25 hours 0.17 hours 0.25 hours 0.50 hours 0.25 hours
		7 hours = 0.7 CEUs