



**Health, Safety  
Security & Environment**



**SCANDINAVIAN ACADEMY**  
Training and Development

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# Course: Alarm Management

Code	City	hotel	Start	End	price	Hours
193	Singapore (Singapore)	Hotel Meeting Room	2024-07-22	2024-07-26	5950 €	25

## Introduction

The ease at which Distributed Control Systems (DCS) alarms can be created has removed the incentive to limit the number of such alarms. The result, operators today are potentially faced with more alarms than they can effectively monitor. Alarm Systems Management (ASM) should therefore identify unnecessary alarms, those set at the wrong value and general overall improvement to the systems and procedures

Poor management and poor ownership of alarm systems with no agreed alarms policy inevitably leads to a situation where alarms are incorrectly set giving large numbers of irrelevant alarms which the operator, frustrated, begins to ignore or which may obscure more critical alarms. Rationalisation and de-manning of control rooms without an awareness of human factors further increases potential risks. In this 'nontechnically' based seminar you will learn how to:

- Apply concepts and procedures for improving alarm management
- Assess the performance of your system with a range of improvement techniques
- How to improve and apply Alarm Management techniques
- Evaluate your current operator readiness, state of training and ability
- Consider the opportunities for increased plant performance and safety

## Objectives

- Alarm Management will provide you with a collection of techniques, tools, standards and procedures that will improve operations and overall effectiveness
- Business Case Tools: Understand the costs of poor alarm performance or not implementing an alarm management philosophy by reviewing sample business case studies
- Best Practice Alarm Management Strategies: Quickly and effectively integrate alarm management strategies by examining successful, working solutions
- Alarm Management Performance: Understand the number of ways of measuring the performance of an alarm system and its users
- Ensuring that Emergency Response systems are in place so if/when the system does fail the response can be efficient and effective

## Training Methodology

Delegates will be encouraged to fully participate in this non-technical programme through the use of syndicate workshops and presentations, group discussions and questionnaires. A hard-copy manual (and CD), PowerPoint



slides, relevant DVD material, handouts and case-studies will be fully utilised

## Organisational Impact

The many shortcomings found in alarm systems can cause incidents where the risk to personnel is increased together with an increase in operation costs. Participants will be introduced to concepts, methods and procedures for dealing with alarm management systems

- Configured and correctly enforced, alarms need to be set at the right operating conditions
- Identify possible causes for the alarm whether it's legitimate (providing information), spurious (misleading or a nuisance) or redundant (telling the operator something he already knows)
- Such conditions will be a major tool allowing process operators to rapidly identify escalating abnormal situations and take action to recover
- Avoid abnormal situations that can quickly lead to personnel danger, environmental issues, commercial loss and a damaged reputation.

## SEMINAR OUTLINE

### • Introduction, aims and objectives of the course. Key Issues:

- Guidance document EEMUA 191
  - Basic Alarm Management philosophy, what does it include?
  - 5 Justifications for Alarm Management
  - Alarm Management, all plants need it!
- Project Plan Outline – not a one-off project!
  - Benchmark & Assessment
  - Alarm Management Philosophy
  - Alarm analysis/rationalisation
  - Implementation and execution
  - Continuous Improvement
- Functional definitions of systems
- Case Study – Milford Haven Texaco Refinery, 1994

### • Principles of an Alarm Management Programme

- Managing an improvement programme – who should be involved?
- Personal and Team targets
- Alarm proliferation
- Alarm review and control of modifications
- Increased hazards, use of alarms, control and protection
- Major commercial hazards will involve risks to people and the environment
- Strategy and / or Culture of Improvement
- Operator involvement and 'no-blame' reporting
- Integrating Alarm Management to boost Plant Production
- Case Study and DVD - Piper Alpha



- **Measuring Performance along with Human Factors**

- Alarms need people – human factor issues
- Human Factors – International Standard IEC61508
- Operator questionnaires, Improving operator procedures
- Dealing with unwanted alarms
- Logical processing of alarms
- Case Histories – some examples of loss
- Potential conflicts between various business needs
- Case Study and DVD – Bhopal, India. Union Carbide (Dow Chemicals)

- **Legislation and Self Evaluation**

- Operator Interface. “Are there problems with your existing alarm system”? Take some measurements to find out - How many alarms are there? Are you overwhelmed by alarm ‘floods’?
- Management Responsibilities – Legislation
- Physical Assessment Trees
- Learning from sample business cases studies
- Is your organisation prepared? Self Evaluating Activity and questionnaires
- The Alerting process; Communications and Warnings
- Equipping and identifying Emergency Operations/Communications Centres
- Stress Levels of Control Room Operators & Emergency Responders
- BP Case Studies – Texas 2005, Alaska 2006 & Gulf of Mexico 2010

- **Should the system catastrophically fail and a Major Incident follows:**

- Departmental Roles & Responsibilities
- Role of First responders - Emergency Response Teams
- Role of the Incident On-Scene Commander
- Shelter or Evacuation workshop
- Designing drills and exercises



**The Scandinavian Academy employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:**

- **Theoretical Lectures:**
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- **Scientific Assessment:**
  - We evaluate trainees skills before and after the course to ensure their progress.
- **Brainstorming and Interaction:**
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- **Practical Cases:**
  - We provide practical cases that align with the scientific content and the participants specific needs.
- **Examinations:**
  - Tests are conducted at the end of the program to assess knowledge retention.
- **Educational Materials:**
  - We provide both printed and digital scientific and practical materials to participants.
- **Attendance and Final Result Reports:**
  - We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- **Professionals and Experts:**
  - The programs scientific content is prepared by the best professors and trainers in various fields.
- **Professional Completion Certificate:**
  - Participants receive a professional completion certificate issued by the Scandinavian Academy for Training and Development in the Kingdom of Sweden, with the option for international authentication.
- **Program Timings:**
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.