



# Advanced Fire Incident & Accident Investigations



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## Introduction:

Many organizations fail to learn from their mistakes and near misses, some organizations even fail to learn from their fire accidents. Often, one can see the same fire accidents happening over and over again. There are many reasons why organizations do not learn to prevent the recurrence of fire accidents. When an accident occurs, it is important that it be investigated thoroughly. The results of a comprehensive fire accident report can help organizations pinpoint the cause of the accident. This information can then be used to prevent future accidents, which is the primary purpose of accident investigation. This course teaches how to lead fire investigations and root cause analyses using various techniques such as Fault Tree Analysis and Root Cause Charts. This is a 'how to' course designed to teach skills.

## Who Should Attend?

Team Leaders, Managers, Superintendents, Line Managers, General Supervisors, Foremen, Supervisors, Project Managers, Fire Officers, Senior Fire Officer, Chief Fire Officers, Senior Fire & Equipment Personnel, Fire Coordinators, Fire Executives & Industry Personnel, Fire Responders, Fire Engineers Loss Prevention Engineers, Control Center Operators and Supervisors, Emergency Personnel, Emergency Dispatchers, Security Personnel and CCTV Operators, HSE Officers, HSE Engineers & Personnel, HSE Professionals, Emergency Response Team Members, HSE Managers and Auditors, HSE Professionals, Incident Control Point (Forward Control) Team Members, Inspectors, Advisors, Auditors, Laboratory Personnel, Process Control Engineers and Technicians, Process Control Designers and Systems Engineers, Instrumentation and Control System Engineers, Plant Engineers, Maintenance Personnel, Maintenance Engineers and Supervisors, Electrical and Instrumentation Supervisors and Technicians, Procurement and Supply Chain Managers, Engineers and Maintenance Personnel, experienced and new Auditors linked to the company's HSE Management Systems (HSE-MS), HSE-MS Personnel, Personnel involved in implementing the Company's HSE-MS, Security Personnel and CCTV Operators, Staff responsible for managing hazardous wastes, Supervisors and Line Management who have assigned responsibilities within the organization's Safety Management System (SMS)

## Course Objectives:

By the end of this course, delegates will be able to:

- Meet regulatory requirements for fire incident investigations
- Develop and implement a structured program





- Designed for learning from incidents
- Why and how to define misses
- Train others to recognize and report incidents
- Initiate and conduct a fire investigation
- Establishing an effective team quickly
- Know methods for collecting different types of data, including effective interviewing skills
- Apply causal factor and root cause analysis for fire investigating process and non-process incidents
- Develop appropriate recommendations to address root causes at various levels to avoid future incidents
- Structure reports in a professional way

## Course Outline:

### Traditional Approach to Fire Accident Prevention

- Why we prevent fire accidents?

### Major Fire Accident History

### Fire Accident Theories

- Single factor theory
- Energy theory
- Multiple factor theory
- Domino theory
- Modern causation model

### Fire Accident Causation

- Unsafe acts
- Unsafe conditions (environmental)
- Unsafe personal factors

### Accident Prevention Program

- Principles of the fire accident prevention process success
- Key elements of a fire accident prevention program
- Principles of risk management for fire accident prevention program





## Accident / Incident Investigation

- Why investigate?
- What to investigate?
- Who investigates?
- When to investigate?
- Phases in the investigation process

## Root Causes Analysis

- What is RCA?
- Why do an RCA
- Where did it come from?
- RCA model
- When is an RCA done?
- Why is an RCA important?
- When not to do an RCA?

## How RCA's Work

- Key RCA roles
- NORMS-based analysis of information
- Development of corrective and preventive actions
- Review findings, assess, and implement actions
- Writing a good report and lessons to be learned

