HSE 2020

BTS
Training & Consultancy

Contact us

Website: https://btsconsultant.com/

Email: info@btsconsultant.com

UAE office Tel: +971 26446633

Egypt Office Tel: +2 0502308081

Principles of Fire & Explosion Hazard Management

Duration: 5 Days

Introduction:

An understanding of the principles of fires and explosions are critical to identifying how a fire will start and spread, the former of which is known as primary fire hazards, each of which has the ability to initiate or start a fire, or exacerbate a fire. These elements will be required when completing a fire risk assessment. Explosion and fire are interlinked in that on many occasions; fire occurs after an explosion, it is therefore essential that those involved with fire safety and risk management have a basic knowledge of the causes and properties of explosion, particularly in relation to processes involving gases and dusts which will be thoroughly covered in this course

Who Should Attend?

Team Leaders, Managers, Line Managers, Supervisors, Team Leaders, Project Managers, Control Center Operators and Supervisors, Emergency Dispatchers, Security Personnel and CCTV Operators, HSE Officers, HSE Personnel, HSE Professionals, Emergency Response Team Members, HSE Managers and Auditors, Health & Safety and Environmental Professionals, Coordinators, Specialists and other full-time safety practitioners, Fire Officers, Loss Control Managers, Security Directors and Managers, Security Supervisors, Facilities Directors and Managers, HR and Administrative Managers with responsibility for security, Project Managers, Safety Inspectors, Plant Managers and Supervisors, Incident Control Point (Forward Control) Team Members, Supervisors, Advisors, Auditors, Laboratory Personnel, Emergency Personnel, Maintenance Personnel, Procurement and Supply Chain Managers, Engineers

Course Objectives:

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

- Understand the properties of flammable and explosive materials and the mechanisms by which they ignite
- Outline the behavior of structural materials, buildings and contents in a fire
- Identify the main principles and practices of fire and explosion prevention and protection
- Outline the contribution to mechanical and systems failures to major accidents
- Explain the processes involved in the identification of hazards and the assessment of risk from fire
- Describe common fire detection and alarm systems and procedures
- Learn the factors to be considered when selecting fixed and portable fire-fighting equipment for the various types of fire

- Outline the factors to be considered in the provision and maintenance of means of escape
- Explain the purpose of, and essential requirements for, emergency evacuation procedures

Course Outline:

Properties of Flammable and Explosive Materials

- Properties of solids, liquids and gases
- The fire triangle
- Ignition sources
- Mechanisms of explosion and fire spread
- Stages of combustion
- Mechanisms of vapor cloud explosions and control of vapor phase explosions

Dust Explosions and Behaviours of Structure and Materials in Fire

- Dust explosions
- Behavior of buildings in fire
- Levels of fire resistance
- Behaviors of common materials in a fire
- Examples of fire incidents

Fire and Explosion Prevention and Protection

- Structural protection
- Compartmentalization
- Segregation of flammable, combustible and incompatible materials
- Key features of plant design and process control
- Hazardous area zoning
- Exclusion of ignition sources
- Methods of explosion relief
- Mechanical and systems failures to major accidents

Workplace Fire Risk Assessment

- Fire hazards and the assessment of risk
- The 5 steps to fire risk assessment
- Fire detection and alarm systems
- Principal components of alarm systems
- Fixed and portable firefighting equipment

Means of Escape

- Provision and maintenance of means of escape
- General requirements – travel distance, stairs and passageways
- Emergency evacuation procedures
- Fire wardens and their role
- Personal emergency evacuation plans