



Electrical Equipment In Hazardous Training

Description

Course Description

Hazardous locations (also described as hazardous zones) are locations where explosive hazards may exist due to flammable gases, vapors or dusts.

Safe methods of selection, installation and maintenance of electrical and instrumentation equipment, suitable for use in such zones, are described in this course which utilises the current British and Euro-norm Standards applicable throughout the European Union

Course Objective

Upon completion of this course and a successful assessment, the student should be capable of selecting, installing and maintaining electrical and instrumentation equipment in potentially hazardous areas.

Course Outlines

Day One:

- Area classification concepts & Principles.
- Fire triangle & Source of ignitions
- General principles, Gas grouping, Upper and Lower explosive limits
- Design philosophy for electrical apparatus for explosive atmospheres
- General requirements for explosion protected apparatus
- Related Standards IEC 60079-All parts
- ATEX New Directive
- Standards references
- Questions and Answers workshop

Day Two:

- Apparatus using protection concept flameproof enclosure 'd'
- Flameproof Exed related standards
- Apparatus using protection concept pressurization 'p' and related standards.
- Increased Safety EExe increased safety protection concepts and standards
- Questions and Answers workshop

Day Three:

- Eexn non-sparking protection concepts and standards
- EExi intrinsically safe protection concepts and standards
- Hybrid methods of protection
- Installation requirements
- Questions and Answers workshop

Day Four:

- Earthing and bonding.
- Electro-static charges.
- Marking and selection of explosion protected apparatus
- European certification and marking of Ex equipment
- Inspection and maintenance standards "Scope of IEC 60079-17"
- Questions and Answers workshop

Day Five:

- Fault detection, finding & testings.
- Outline of methods for hazard and risk analysis
- Knowledge assessment of candidate understanding
- Competence Results
- Group final discussion.