HAZARDOUS AREAS AND ATEX AWARENESS
FOR TECHNICAL AND NON-TECHNICAL STAFF

WHAT YOU WILL LEARN:

• Hazardous area terminology
• Consideration of sources of ignition
• Flammability concepts of gasses, vapours, mists and dusts
• Zoning, equipment groups and temperature class
• Equipment identification, certification and labelling/marking
• European Directives (ATEX Directives; DSEAR in the UK)
• The basic principles of explosion protection
• Basic considerations for non-electrical equipment
• Requirements for inspection and maintenance including initial and routine inspections

WHO SHOULD ATTEND:

Anyone and everyone who encounters hazardous areas at any level, according to the ATEX Directives and the DSEAR, requires at least a basic understanding of the risks and the management of those risks in order that they should not be compromised by the actions of these personnel. This course is aimed at providing a substantially non-technical introduction suitable for senior management right through to operators. This includes:

• Chemical engineers
• Control engineers
• Electrical engineers
• Electrical and instrument trades-persons
• Instrumentation engineers
• Process engineers

• Supervision and management staff
• Security and cleaning staff
• Technicians
• Trades-persons working in potentially explosive areas
**The Workshop**

This workshop is designed to provide delegates with an appreciation of the requirements of explosion protection applied to hazardous areas. It defines the terminology, promoting clarity of use in communications between technical and commercial departments within organisations and between organisations involved. The subject matter covered focuses on how the requirements of the ATEX Directives (and the DSEAR that is applied in the UK) are to be met in order to aid management, technicians and engineers in the understanding of the necessary organizational and technical measures taken to ensure safety.

**Pre-requisites**

Delegates will only require a very basic understanding of physics for the workshop to be of greatest benefit. No previous knowledge of hazardous area installations is required.

**Practical Sessions**

This is a practical, hands-on workshop enabling you to work through practical exercises which reinforce the concepts discussed.

*To gain full value from this workshop, please bring your laptop/notebook computer.*

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**The Program**

**INTRODUCTION**
- Explosion consequences
- The fire triangle
- Risk assessment concepts applied and IEC60079 Standards and Codes of Practice

**UNDERSTANDING FLAMMABILITY COMBUSTION AND EXPLOSION**
- Ignition sources
- Properties of flammable gases, vapours, mists and dusts

**ZONES AND DEFINITIONS**
- Definition of hazardous area terminology
- Classification of apparatus
- Equipment grouping and temperature rating

**PRINCIPLES OF TYPES OF PROTECTION**
- Electrical equipment protection IEC60079: Ex d, e, i, p, and n
- Others types: Ex m, o, q and s: use in combination
- Non-electrical equipment protection to EN13463: fr, d, g, c, b, p and k

**EQUIPMENT CERTIFICATION**
- Marking and identification
- Component certificates
- Equipment certificates
- Systems certification

**PLANT OWNER/USER OF EX EQUIPMENT**
- Introduction to Codes of Practice
- Equipment selection procedure
- General requirements of Installation and Inspection
- Maintenance and permits to work
- Repairs

**ATEX DIRECTIVES**
- Equipment category and grouping
- Essential safety and health requirements
- ATEX compliance marking
- Self certification and verifying conformity
- Workers directive summary

**DANGEROUS SUBSTANCES AND EXPLOSIVE ATMOSPHERES REGULATION (UK)**
- DSEAR: Application of ATEX and Chemical Agents Directive in the UK
- Summary of employers responsibilities

**SUMMARY, OPEN FORUM AND CLOSING**

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