



Hazardous Area Competency Training

PART OF THE EUTEX INTERNATIONAL GROUP



EUTEX International Group of Companies



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GLOBAL ELECTRICAL SOLUTIONS



 **ATEC**
Train. Inspect. Certify.

Personal Competence

There are many standards, regulations and recommended practices used around the globe which attempt to define the requirements for equipment used in potentially explosive atmospheres.

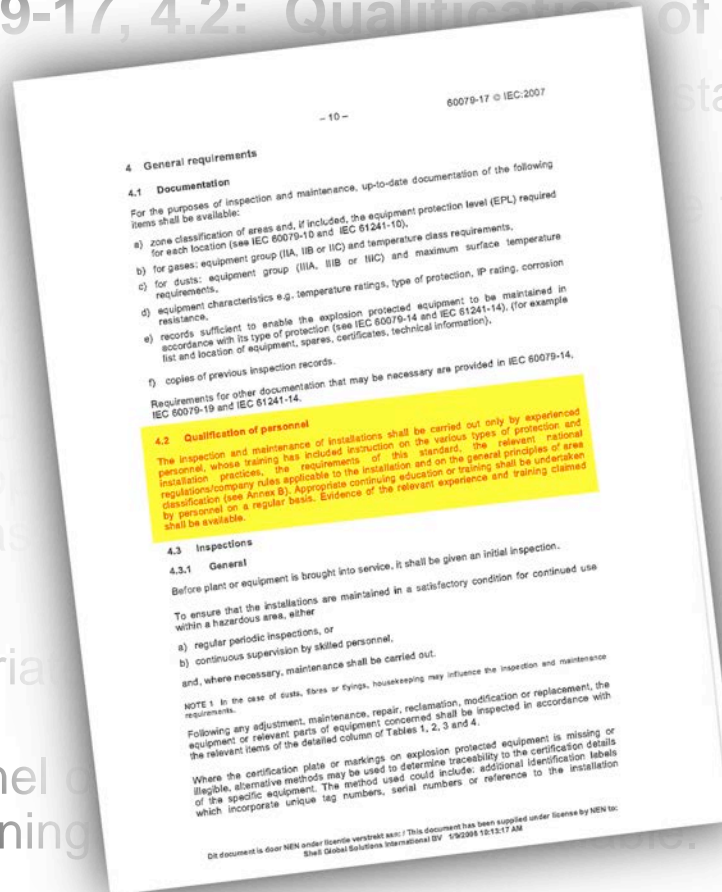
The underlying assumption is that the equipment is selected, installed and maintained by personnel who are familiar with the potential hazards and the methods of protection utilized.



Personnel Qualification Requirements

IEC 60079-17, 4.2: Qualification of personnel

- The installation and maintenance of installations **shall** be carried out only by personnel whose training has included installation practices, the relevant national rules applicable to the general principles of the installation and the relevant experience and training.



Personal Competence

A Company can accept the responsibility of deeming its own personnel as competent however it would face the consequences if there was an incident.

or

It can prove competence through a scheme such as the IECEx Certification of Personnel Competence scheme.



Personal Competence

The fact that there continues to be injuries and deaths related to equipment used in potentially explosive atmospheres is a direct indication that not all personnel involved with selecting, installing and maintaining the equipment truly understand how to maintain the protection afforded by the Ex equipment.



History teaches important lessons:

Offshore



DEEPWATER HORIZON

April 20, 2010, 11 personnel killed

Onshore



SHELL BUKOM

September 2011, No Serious Injuries – considerable plant and reputation damage.

Personal Competence

Historically, only installation personnel were sent for 'Ex' training, but the requirements as detailed in the IEC 60079-14 standard now consider that those personnel who have an influence on the plant design and operation also need training specific to Ex equipment selection, installation and maintenance.

Since 2007, the IEC 60079-14 standard, and most national standards based on the IEC 60079-14 standard, have the following statement:



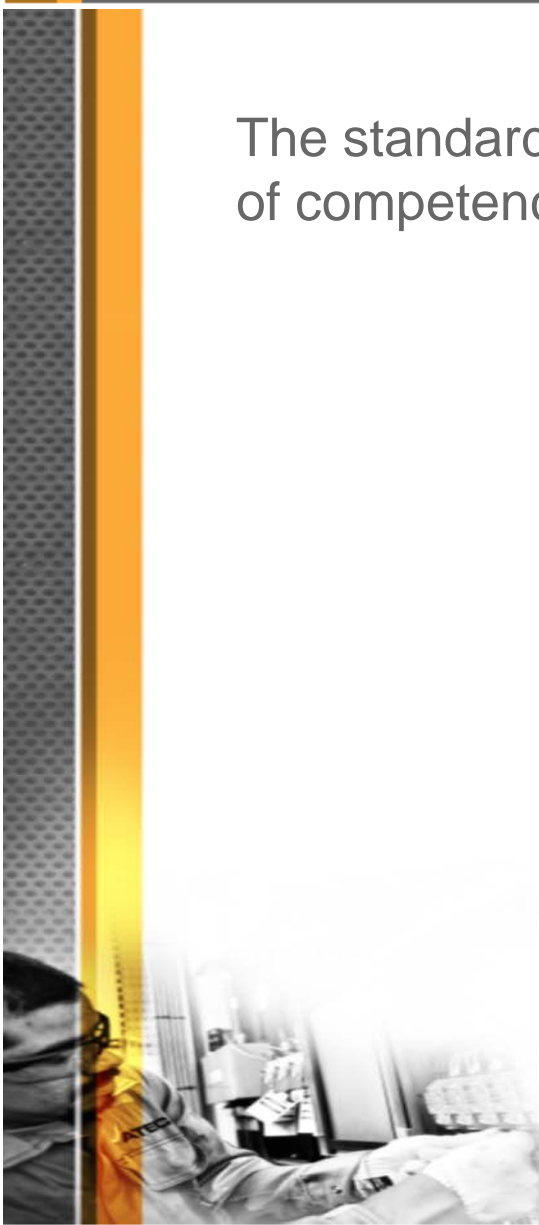
Personal Competence

The design of the installation, the selection of equipment and the erection covered by this standard shall be carried out only by persons whose training has included instruction on the various types of protection and installation practices, relevant rules and regulations and on the general principles of area classification.



Personal Competence

The standard goes further to define the following roles in need of competency to include:



Personal Competence

Responsible persons

Those who are responsible for the processes involved in the design, selection, installation and/or maintenance of Ex equipment (typically managers operatives and/or designers)

Operatives

Persons involved in selection and installation of Ex equipment

Designers

Persons involved in facility or process design

Persons involved in selection of Ex equipment



IECEX CoPC Scheme

The IECEX CoPC scheme provides a method to assess competency within all of the roles mentioned within IEC 60079-14

Namely;



IECEx COPC Assessments



- Unit Ex 001 – Apply basic principles of protection in explosive atmospheres
- Unit Ex 002 – Perform classification of hazardous areas
- Unit Ex 003 – Install explosion-protected equipment and wiring systems
- Unit Ex 004 – Maintain equipment in explosive atmospheres
- Unit Ex 005 – Overhaul and repair of explosion-protected equipment



IECEx COPC Assessments



- Unit Ex 006 – Test electrical installations in or associated with explosive atmospheres
- Unit Ex 007 – Perform visual and close inspection of electrical installations in explosive atmospheres
- Unit Ex 008 – Perform detailed inspection of electrical installations in explosive atmospheres
- Unit Ex 009 – Design electrical installations in or associated with explosive atmospheres
- Unit Ex 010 – Perform audit of electrical installations in or associated with explosive atmospheres



IECEEx CoPC - Training Gap

Until now IECEEx was an assessment only scheme but IECEEx and industry have identified a gap that needs to be filled.



Recognised Training Provider Program

The RTPP provides an opportunity for “Ex training bodies” to benchmark their current operations to aspects of the IECEx System such as the personnel requirements of the IECEx Certified Service Facilities Scheme.



Recognised Training Provider Program

It is acknowledged that “the market” expects that an IECEx recognised training provider (IECEx RTP) will provide sound training that covers the selection, design, inspection, installation, maintenance, repair, overhaul and reclamation of explosion proof equipment and can provide a pathway to the IECEx Scheme for Certification of Personnel Competence.



Recognised Training Provider Program

Only RTP in Singapore



Atec Training Offer



IECEx Basic Principles Course

- A 2 day course covering the basic principle of safe operation within potentially explosive atmospheres.
- The course is followed by a study break, then a TUV R led, series of written & multiple choice knowledge validation tests.
- On successful completion candidates will be awarded IECEx COPC **competence Ex 001**

Note Module 001 must be attained before further modules can be awarded

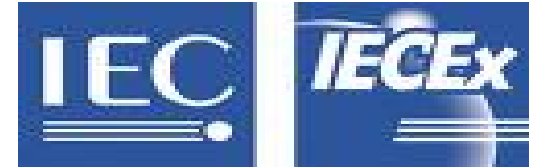
Atec Training Offer



IECEx Area Classification course

- A 2 day course which examines the properties of gases, their extents and how various factors can alter their combustibility within potentially explosive atmospheres.
- The course is followed by a study break, then a TUVR led, series of written & multiple choice knowledge validation tests.
- On successful completion candidates will be awarded IECEx COPC **competence Ex 002**

Atec Training Offer



IECEx Installation & Maintenance Course

- A 2 day course covering the principles of equipment protection and installation techniques within potentially explosive atmospheres.
- The course is followed by a study break, then a TUV R led, series of practical, written and multiple choice knowledge validation tests
- On successful completion Candidate will be awarded IECEx COPC competence **Ex 003 & 004**

Atec Training Offer

IECEX Inspection Course



- A course covering the principles of equipment protection and installation techniques and the specific requirements pertaining to Visual, Close and Detailed Inspection within potentially explosive atmospheres. The course is followed by
- The course is followed by a study break then a TUV R led, series of practical, written and multiple choice knowledge validation tests
- On successful completion Candidate will be awarded IECEX COPC competencies **Ex 007 & 008**



Atec Training Offer

IECEX Designer Course



- A course covering the principles of equipment protection which provides a forum to discuss selection of Ex equipment based on area classification parameters & define proper installation and system methodology
- The course is followed by a study break then a TUV R led, series of practical, written and multiple choice knowledge validation tests
- On successful completion Candidate will be awarded IECEX COPC competencies **Ex 007 & 008**



Questions ?

