



IEC SYSTEM FOR CERTIFICATION  
TO STANDARDS RELATING TO EQUIPMENT  
FOR USE IN EXPLOSIVE ATMOSPHERES



# IECEX System CoPC Scheme



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The Current  
Status

Whenever there is discussion on Personnel Competence we find the people are:

- ◆ *Guaranteed to respond*
- ◆ *Passionate*
- ◆ *Fearful*
- ◆ *Concerned*

- Equipment must be used correctly.
- Persons must know what they are doing.
- Personnel Competence Scheme supports other certification schemes.
- IECEx Certificate of Personnel Competence (CoPC) creates a Global scheme.
- Recognizes that both knowledge and skills are needed.



# The IECEx and CoPC Origins



IEC prepares international standards

Operate in three areas of Conformity  
Assessment

- ◆ IECEE System - electrotechnical equipment.
- ◆ IECQ System - electronic components materials and processes.
- ◆ IECEx System –
  - *Equipment Certification*
  - *Conformity Assessment Mark*
  - *Service Facility Certification*
  - *Personnel Certification*

Competence is the combination of:

- ◆ *Knowledge*
- ◆ *Skills*

Evidence of Competence

- ◆ *Qualifications*
- ◆ *Experience*
- ◆ *Recent and relevant training*

Competence assessments require objective evidence that is:

- *Valid.*
- *Direct.*
- *Authentic.*
- *Current.*
- *Sufficient.*

Four functions of competence, which are:

- *Task Skills*
- *Task management skills*
- *Contingency management skills*
- *Job/role environmental skills*

## A. Standards references

IEC 60079-14 Ed 4, Clause 4.4

IEC 60079-19 Ed 2, Clause 4.4

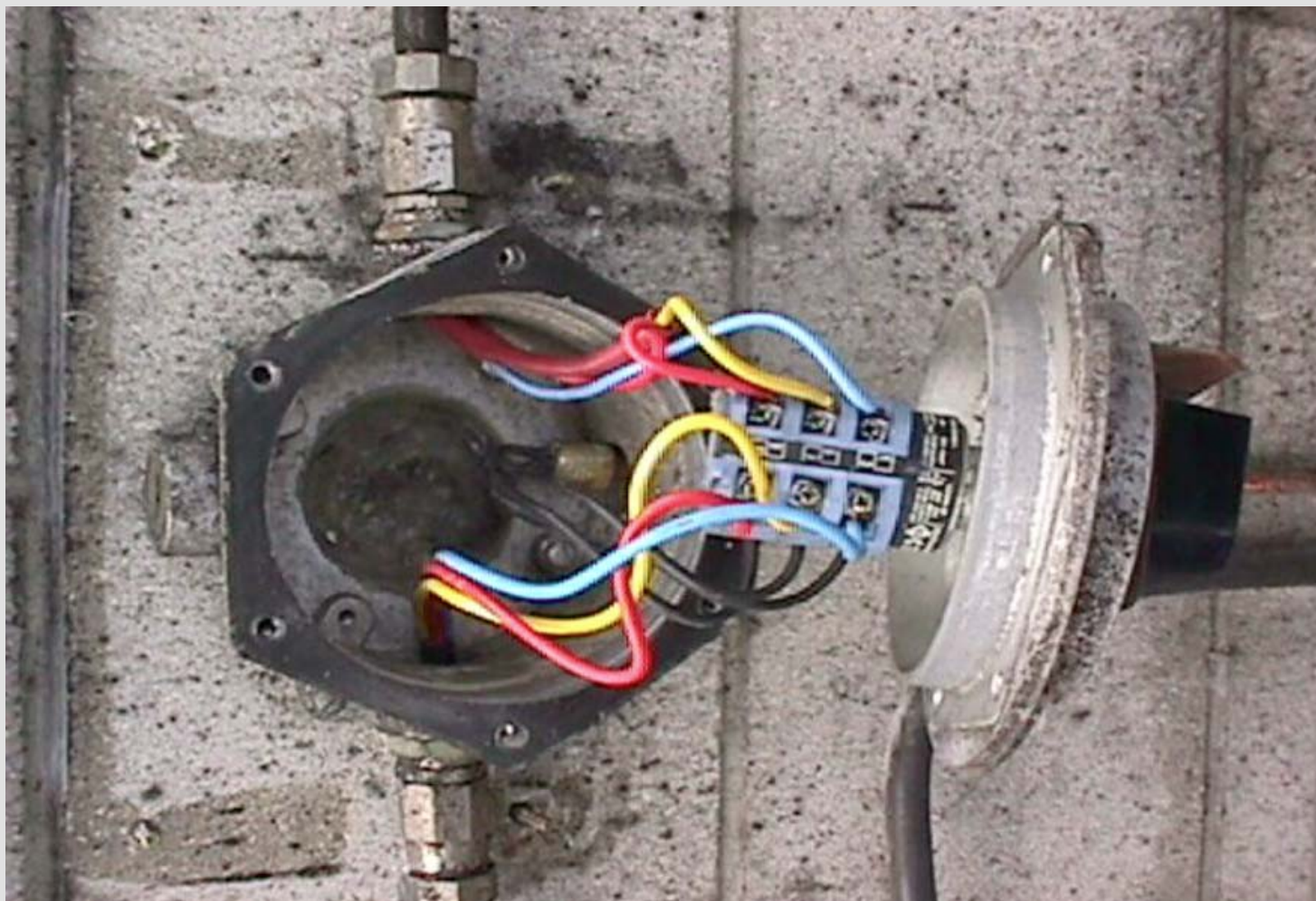
## B. Owner/Operator Responsibility

Responsible for plant safety

Use qualified persons



# An Example of Lack of Competence?



Owner or operator must demonstrate persons are 'competent'.

- How?
  - ◆ *Deem their own personnel as competent*
  - ◆ *Use a Company or National Scheme*
  - ◆ *Use IECEx CoPC Scheme*

IECEX CoPC has developed:

**IECEX05** - Scheme Rules based on:  
ISO/IEC17024; Guide 27; Guide 28 & Guide 65

Operational Documents for:

*OD501 - Assessment Procedures for ExCBs;*

*OD502 - Application for Personnel Competence;*

*OD503 - ExCB Procedures for issuing and maintaining  
certificates*

*OD504 - Specification for Units of Competence  
Assessment Outcomes.*

## The key details included in the rules are:

- **Governing of the IECEx System**
- **Principles of the IECEx CoPC Scheme**
- **Contents and format of Certificates and Assessment reports**
- **Procedures for assessment of Ex Personnel Competence**
- **Surveillance and re-certification**
- **Suspension or withdrawal**
- **Confidentiality Compliance with rules**
- **Appeals**
- **Withdrawal**
- **Suspension Complaints**
- **Typical Forms for application**
- **Participating countries**
- **Certification procedure**
- **Acceptance of certification bodies**



# Philosophy of the IECEx CoPC



Consistent approach.

Assesses the individual – not an organization.

Independence of training.

Removal of conflict [training/assessment]

Different type of work is by  
“Units of Competence”

Each IECEx Unit of Competence comprises:

- ◆ *Scope*
- ◆ *Pre-requisites*
- ◆ *Elements and performance criteria*
- ◆ *Scope Limitations*

## Ten IECEx “Units of Competence”

- 1 Apply basic principles of protection in explosive atmospheres.*
- 2 Perform classification of hazardous areas*
- 3 Install explosion-protected equipment and wiring systems*
- 4 Maintain equipment in explosive atmospheres*
- 5 Overhaul and repair of explosion-protected equipment*
- 6 Test electrical installations in or associated with explosive atmospheres*

## Ten IECEx “Units of Competence”

- 7 *Perform visual & close inspection of electrical installations in or associated with explosive atmospheres*
- 8 *Perform detailed inspection of electrical installations in or associated with explosive atmospheres*
- 9 *Design electrical installations in or associated with explosive atmospheres*
- 10 *Perform audit inspection of electrical installations in or associated with explosive atmospheres*



## Scope limitations:

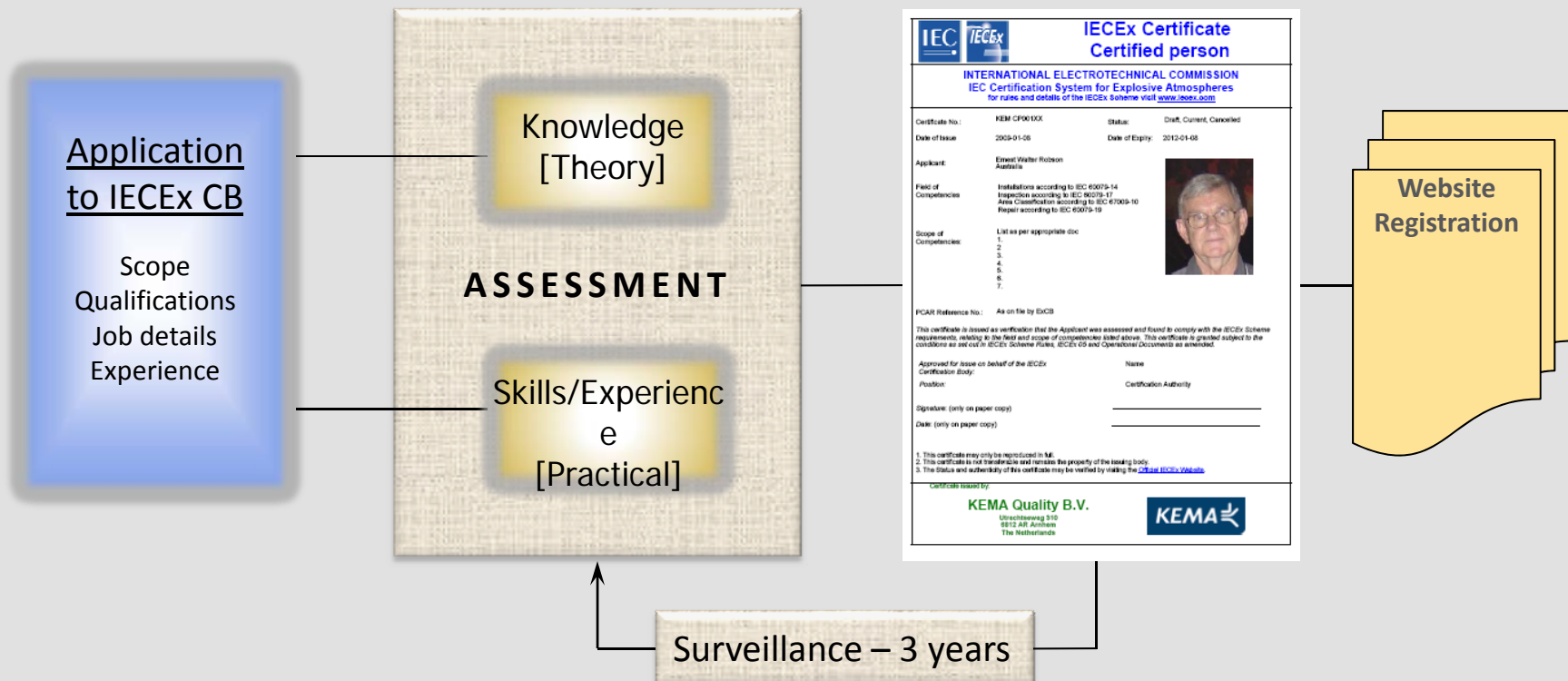
- *Type of explosion protection*
- *Product type*
- *Groups*
- *Voltages*
- *Other* – which may be related to specific National requirements

## Validity

- *Surveillance*
- *Re-assessment every 3 years.*

- *Application Form*
- *A Certificate of Personnel Competence [CoPC]*
- *A Personnel Competence Assessment Report [PCAR]*
- *An Identification Card (credit card size)*

Details of the Certificate, ID Card and PCAR can be verified on-line at [www.iecex.com](http://www.iecex.com)



- Recognizes Hazardous Area requirements
- Areas (units) of Competence
- Global Scheme with Regional requirement allowance
- Assists in maintaining plant integrity and function
- Independent of training
- Sets the Competence benchmark for use in any regulatory framework
- Endorsement by United Nations, via the UNECE, as the best practice model for verification of compliance with International Standards.

Thank you for the opportunity to present  
this information on Competence

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