CERTIFICATION OF PERSONNEL COMPETENCIES

IECEx CoPC
Now operating - Latest Update
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Reactions to competence

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

- Guaranteed to respond
- Passionate
- Fearful
- Concerned
What is Competency

The concept of competency focuses on what is expected of an employee in the workplace rather than the learning process.

It embodies the ability to transfer and apply skills and knowledge to new situations and environments.
In most countries legislation or regulations identify that the owner is responsible and accountable for the safety of the design, installation and maintenance of electrical equipment within their plant.

This is usually achieved through Occupational Health & Safety legislation in most countries.
How is Competency identified?

- An owner or occupier can accept the responsibility of deeming his own personnel as competent however they would face the consequences if there was an incident.

- They could rely on their personnel being considered competent through a company or National scheme.

- In the future there will be a new path through the IECEx Certification of Personnel Competence scheme.
What is Competency

- Competency comprises:
  - knowledge
What is Competency

- Competency comprises:
  - knowledge and
  - Skills
Why is Competence required?

- 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.
What is Competency

- Application of that knowledge and skill to the standards of performance required in the workplace.
- Competency includes all aspects of work performance and not only specific skills.
Elements of Competency

- Competency involves three elements.
  - Qualifications
    (Off the Job)
  - Experience
    (On the Job)
  - Recent and Relevant Training
    (Off and On the Job)
What is Competence?

Competence assessments require objective evidence that is:

- Valid.
- Direct.
- Authentic.
- Current.
- Sufficient.
The Scheme has been established to provide a consistent approach to the assessment of the Competence of personnel.

It assesses the individual – not an organization.

Independent of training to remove conflict so not concerned with how the knowledge and skills are obtained.
Why is Competence Required?

Standards references

IEC 60079-14 Ed 4, Clause 4.4
IEC 60079-19 Ed 2, Clause 4.4

Owner/Operator Responsibility

Responsible for plant safety
Use qualified persons
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.
Key details included:

- Suspension or withdrawal
- Compliance with rules
- Appeals
- Withdrawal
- Suspension
- Complaints
- Typical Forms for application
- Governing of the IECEx Scheme for Competency

- Principles of the IECEx Certification of Personnel Competencies Scheme
- Confidentiality
- Participating countries
- IECEx instruments
- Certification procedure
- Acceptance of certification bodies
- Complaints
The different types of work are covered by “Units of Competency”

- A unit of competency is the competency required for a useful work function and which resides with an individual. It must include the ability to apply both the theory and the practical skills.
- This should not be confused with a job description which may comprise a number of units of competency.
Units of competence

Different type of work is by “Units of Competence”

Each IECEx Unit of Competence comprises:

- Scope
- Pre-requisites
- Elements and performance criteria
- Scope Limitations
The ten “Units of Competency” are:

- Apply basic principles of protection in explosive atmospheres
- Perform classification of hazardous areas
- Install explosion-protected equipment and wiring systems
- Maintain equipment in explosive atmospheres
- Overhaul and repair of explosion-protected equipment
- Test electrical installations in or associated with explosive atmospheres
- Perform visual & close inspection of electrical installations in or associated with explosive atmospheres
- Perform detailed inspection of electrical installations in or associated with explosive atmospheres
- Design electrical installations in or associated with explosive atmospheres
- Perform audit inspection of electrical installations in or associated with explosive atmospheres
Units of competence

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 for CoPC

An applicant is expected to provide:

- Evidence of education and training:
  - Work experience in both non-hazardous and hazardous areas
  - Validation of the information

- Personal details sufficient to uniquely identify the individual

- Scope of Competence being requested

- Declaration
Instruments of the CoPC Scheme

- 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
IECEx CoPC Process

Application to IECEx CB
  - Scope
  - Qualifications
  - Job details
  - Experience

Assessment
  - Knowledge [Theory]
  - Skills/Experience [Practical]

Surveillance – 3 years

Website Registration

IECEx Certificate
Certified person

International Electrotechnical Commission
IEC Certification System for Explosive Atmospheres

Certificate No.:
Name:
Address:
Issue Date:
Expiry Date:

Scope of Competence:
- "as appropriate" for surveillance

IECEx Reference No.:

Certificate holder is authorized to do surveillance in accordance with the IECEx Scheme, provided that the holder is registered in the IECEx scheme and meets the requirements of the IECEx Surveillance procedure.

IECEx Certificate Authority

IECEx Surveillance Procedure

KEMA Quality B.V.

26 October 2011
Industrializing Country Workshop 2011
In addition to the Rules and Operational Documents:

- A simple language Guidance Document IECEx05A has been released and is intended for use by any person seeking a CoPC or any organization requiring to verify they are using Competent persons. It is also very useful for organizations wanting to use competent persons.

- A databank of assessment questions and tests for use by the ExCBs conducting assessment is under development.
Summary

- 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.
Key areas for ExCBs

- Compliance with ISO/IEC17024.
- Certification Committee
- Appointment of Assessors.
- Development of Questions.
- Facilities for Practical Skills assessment.
- Verification of acceptance of evidence.
- Use of additional Regional or National Standards.
- Separation of Training.
At the September meeting of the IECEx System management Committee is was agreed to seek approval from CAB for the formation of a new Certification Committee for the CoPC Scheme.

This new Certification Committee [ExPCC] is established "To maintain and enhance the policies and procedures relating to the operation of the CoPC Scheme within IECEx System. This includes the responsibility for the Scheme Rules, Operational Documents and Guide as well as any other documentation relevant to the scheme."
The main reasons for establishing this new committee:

- To satisfy many of the requirements of ISO/IEC 17024 in the role of a certification committee. These requirements were in ISO/IEC 17024:2004, Clauses 4.2.3, 4.3.2, 4.3.3, 4.3.4, 6.4.2.

- To formalize the management and operation of CoPC Scheme.

- Have the ability to create WGs in order to facilitate significant areas of work that are ongoing. e.g. Question Bank

- To better control the functioning of the CoPC Scheme ensuring active involvement of all participating ExCBs

- Participating ExCBs are encouraged to have a supplementary Certification Committee particularly with aspects of technical input and feedback / review details for submission to CoPC-CC
Standards for hazardous locations require the use of special equipment to avoid ignition of the atmosphere.

If that special equipment is NOT installed correctly it may no longer provide the explosion protection integrity and therefore cause the installation to be unsafe.

The use of Competent persons ensures that equipment will be used correctly and the explosion protection integrity for the life of the equipment will be maintained.

Competent persons are able to identify faults which could become potential sources of ignition.
IECEx CoPC opens the way for a global scheme to provide consistency in the assessment of competent persons. It is structured to provide separation from any training schemes and therefore gives the highest level of integrity of assessment.

This Scheme recognizes that the knowledge and skills could be obtained by any means such as tertiary education, internal company training, external private training, on the job mentoring, etc.

The IECEx CoPC is the ideal Scheme to benchmark competency requirements for use within any framework providing essential support for the overall package of compliance requirements for hazardous areas.
Questions?

Thank you for the opportunity to present this information on Competence

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www.iecex.com