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IECEX PUBLICATION

**IEC System for Certification to Standards relating to Equipment for use
in Explosive Atmospheres (IECEX System)**

**Guidance and Instructions for Applicants to obtain a Certificate of Personnel
Competence (CoPC)**



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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Guidance and Instructions for Applicants to obtain
a Certificate of Personnel Competence (CoPC)****INTRODUCTION**

This Guide sets out the information regarding the operation of the IECEx Certification of Personnel Competence Scheme for an individual person making application for certification of their competence.

Use of this Guide is advisable for any person needing to understand the basic operation of the IECEx Certification of Personnel Competence Scheme and the rules and requirements for an individual or organization to participate.

The details in this guide are intended to guide the applicant in the preparation of an application.

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Guidance and Instructions for Applicants to obtain a Certificate of Personnel Competence (CoPC)

1 Overview

The IECEx Certification of Personnel Competence Scheme provides the means for personnel to obtain an IECEx Certificate of Personnel Competence that is intended to provide the international Ex community with confidence that such personnel maintain the ability to undertake work or provide services in accordance with the technical and quality system requirements of the IECEx Certification of Personnel Competence Scheme. Certificates of Personnel Competence are intended to be accepted in all the IECEx participating countries as equivalent to their national certification.

This guide describes the information required for an application by an individual person to an IECEx Certification Body (ExCB) in a participating country for an IECEx Certificate of Personnel Competence (CoPC) and includes an outline of the procedures for personnel to gain and maintain certification.

Also included are the requirements for evidence of experience and training, the assessment of competence and the conditions for issue of the CoPC.

In the context of this document, “explosive atmospheres” are areas in which an explosive atmosphere may be present. Unless electrical equipment situated in such areas is constructed, installed and maintained in a special way, it may provide the energy and temperature necessary to ignite the atmosphere, usually with devastating results. The special design features of electrical equipment and systems used for these “explosive atmospheres” are known as explosion-protection. They form part of the risk management strategies to ensure a safe and healthy working environment.

The IECEx Certification of Personnel Competence Scheme operates as a voluntary scheme and may need to be used within the framework of national regulations.

Countries, industries, trade unions, and employers may have specific regulations/rules and training requirements that preclude the use of this Scheme. However, certification of personnel to the Scheme is encouraged, as is the addition of regulation for specific training of personnel involved with explosive atmospheres.

Although various international and national standards and the relevant statutory/regulatory requirements lay down standard criteria for the manufacture, installation, use and maintenance of explosion-protected electrical equipment in explosive atmospheres, no such reference exists for the competence needed for work associated with such equipment for explosive atmospheres.

It is necessary that personnel working in explosive atmospheres are competent. The potential for accidents in explosive atmospheres is increased if personnel are not competent. The need for competence is included in many legal documents (legislation), but is often not clearly defined. Competence includes the ability to carry out specific tasks versus prescribed general requirements specified in regulations, standards and installation procedures.

Competence depends on knowledge, skill, experience and training. Measurement of competence is a difficult task and requires specific assessment methods which have been developed by the IECEx Certification of Personnel Competence Scheme. Competence evolves with years and may deteriorate, so continued training and assessment is necessary.

2 The need for certification

The world is ever increasing in its technical requirements and none more so than the Ex industries. As the search for oil and gas spreads around the world and the costs escalate, the methods used to extract it are becoming ever more complex. The plants that are built to extract and process the products must be built to exacting standards and must operate safely to prevent the people working in plant from harm, the site from damage and the surrounding areas from the fallout of an Ex incident. In addition the plants that are currently working are operating longer than originally designed for and hence the maintenance of these plants is critical for their continued safe operation.

The IECEx Certification of Personnel Competence Scheme is the first international scheme aimed at providing personnel with a worldwide recognized certificate. The Certificate of Personnel Competence (CoPC) may cover areas of design, selection, installation, maintenance, inspection, audit, overhaul and repair of Ex equipment based on the applicant's requirements.

This shall show that the certificate holder is capable:

- of working in the Ex industry safely,
- of conducting work on Ex equipment,
- of ensuring that the Ex equipment is operating safely in accordance with its protection techniques.

3 Competence

The CoPC is issued to the individual person whether self-employed or an employee and requires the full assessment of the persons capabilities. This shall include an assessment of the persons academic and work history, together with relevant training records including training on Ex competence.

When the application is acceptable, the ExCB shall inform the applicant where and when he will be assessed. On successful completion of the assessment the applicant will receive a CoPC. Once gained the competence of the individual shall be subject to surveillance after 18 months and re-assessment after 3 years.

Plant owners may require personnel to maintain skills that are required by laws, which may vary around the world, to ensure that the plants are operated safely and also have the responsibility to protect their operatives. The use of personnel who maintain IECEx Certificates of Personnel Competence (CoPCs) will provide the user with the necessary confidence that he acts responsibly in this area with persons having sufficient theoretical and practical technical skill.

The employer or plant owner must be aware that competence is restricted to the specific Units of Competence (and any limitations) and does not imply the person has an extended knowledge of all requirements for explosive atmospheres.

The employer of a person holding the IECEx CoPC can demonstrate to a potential user that his employee has the required competence to work safely in the Ex industry. Such an employer can be considered as a responsible employer and by adopting this stance the user can be confident in the competence of personnel used.

The CoPC is truly an international passport for the holder to allow him to take their skills either individually or as an employee to all parts of the world and to improve safety in the Ex industry.

4 Scope of certification

4.1 Unit of Competence

The applicant is to determine the Units of Competence for which he wishes to be assessed. It is important to note that a CoPC is awarded according to ISO/IEC Standards although applicants may in addition be assessed to other relevant standards.

Units of Competence are currently as follows:

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

At present the equipment standards deal only with electrical equipment. As ISO/IEC Standards become available for non-electrical equipment it is likely that additional units of competence will be added to include these requirements.

It is the responsibility of the applicant to determine which unit(s) of competence is (are) relevant (with any limitations) in accordance with their present or future job/position. The selection may be made with the assistance of the employer.

4.2 Language of CoPC

The CoPC and documentation for a CoPC is provided in English and the applicant is to advise if the CoPC is to be supplied in an additional language. Any translation requirements will need to be discussed with the ExCB.

4.3 Limitation of scope

The applicant may, in conjunction with the ExCB, request a limitation of the scope of the CoPC according to the requirements following. Unless otherwise stated, the scope of the CoPC shall include all aspects of the standards with no limitations and the applicant shall be assessed according to all the requirements of the Unit of Competence applied for.

4.3.1 Types of protection

If the nature of the work is limited to specific types of protection then they are to be nominated and shall be listed on the CoPC. The assessment shall then be limited only to the required outcomes of the Unit of Competence for these types of protection.

The types of protection permitted to be nominated are:

- “d”: flameproof enclosure
- “e”: increased safety
- “i”: intrinsic safety
- “m”: encapsulation
- “n”: type of protection “n”
- “o”: oil immersion
- “p”: pressurization
- “q”: powder filling
- “t”: protection by enclosure

4.3.2 Product types

If the nature of the work is limited to specific product types then they are to be nominated and shall be listed on the CoPC. The assessment shall then be limited only to the required outcomes of the Unit of Competence for these product types.

The product types permitted to be nominated are:

- Rotating machines
- Switchgear
- Instrumentation
- Communication equipment
- Heating equipment
- Trace heating
- Power transformers
- Gas detection

4.3.3 Groups

Where the application is not intended to extend to all Groups it may be limited to one or more of the following:

- Group I: Mines subject to firedamp
- Group II: Explosive gas atmospheres
- Group III: Explosive dust atmospheres

4.3.4 Voltages

Where the applicant does not have the appropriate qualifications and experience to work with all voltages then a limited range of voltages permitted shall be shown on the CoPC.

4.3.5 Other limitations

During the assessment process the ExCB may determine that there are other limitations that should apply to the application. In this case the ExCB shall discuss with the applicant the limitation to be applied and ensure it is clearly shown on the CoPC.

5 Evidence of qualification/experience

5.1 General qualifications not specific to explosive atmospheres

The applicant shall have a technical education relevant to the application. The applicant shall provide to the ExCB the documents demonstrating the level of technical education attained which normally consists of Engineering Diplomas, Degree Certificates, College Certificates, Trade Tests and Professional Institute Recognition. These documents may be certificates issued by an independent organization or trade association or may be a formal internal programme of training set and endorsed/countersigned by an employer. Copies of documents shall be provided in the original language with translations in the language required by the ExCB where necessary and shall include contact details of the organization that issued the document. These documents shall be reviewed by the ExCB and confirmation of their validity sought.

5.2 Qualifications specific to explosive atmospheres

The applicant shall provide documents demonstrating formal training undertaken on subjects and topics relevant to explosive atmospheres. These documents may be certificates issued by an independent organization or trade association or may be a formal internal programme of training set by and endorsed/countersigned by an employer. Documentation relevant to the Unit of Competence shall be provided. Copies of these documents shall be provided in original language with translations in the language required by the ExCB where necessary and shall include contact details of the organization that issued the document. These documents shall be reviewed and confirmation of their validity sought.

5.3 Work experience both hazardous and non-hazardous area

5.3.1 Not involved with explosive atmospheres

A brief resume shall be provided in a chronological order with latest experience first. The resume shall provide details of the employer, type of industry, position and responsibility. Sufficient information shall be provided to enable an evaluation of the basic underlying concepts expected of an electrical/instrument engineer, e.g. electrical safety, circuit design, motor control, circuit protection, installation techniques, etc.

Work experience may require a restriction relating to product types. In this case the resume will need to specifically identify these aspects.

5.3.2 Directly involved with explosive atmospheres

A resume shall be provided with the information in a chronological order with latest experience first.

It is important that sufficient information is provided at least identifying:

- Employer and type of industry
- Position and responsibility within these organisations
- Protection techniques used
- Standards and codes of practice used
- Working safely in hazardous areas
- Duties undertaken:
 - Hazardous area classification
 - Installation and circuit design
 - Equipment selection
 - Equipment installation

- Equipment inspection and maintenance
- Equipment testing and commissioning
- Equipment repair

The work experience may require a restriction relating to product types or other aspects. In this case the resume shall specifically identify these aspects.

5.4 Validation

Validation of the work experience may be provided by proposers/supporters who have worked in the industry and are able to verify sections of the experience stated. These would probably be employers. It is essential that verification can be provided for those areas for which the applicant wishes to be assessed. For this purpose contact details of the proposers/supporters will be needed for validation. The ExCB determines the validation methods used based on the review of the information provided.

6 Application form

6.1 Application form template

The applicant shall obtain a copy of an application form from the ExCB. The application form may be available on the internet website of the ExCB.

6.2 Personal details of the applicant

The applicant shall provide sufficient personal details to ensure that he can be correctly identified.

There shall be sufficient evidence to show that the person conducting the work is the same as identified on the CoPC.

Details to be provided are as follows:

6.2.1 Name

The family name and all given names in full are to be provided.

6.2.2 Address

This address is the address at which the person may be contacted. The applicant is to advise, if this address is to be used for correspondence.

6.2.3 Date of birth

Evidence in the form of a birth certificate or affidavit.

6.2.4 Telephone and email contact

This shall be used for all contact during the processing of the application (until the CoPC is issued). The information is used only by the ExCB, and anyone acting on behalf of the ExCB processing the application, and shall not be made available to any other party.

6.2.5 Photograph

Passport size portrait photograph which is current and at least passport quality and is to be supplied with the application form or in electronic JPG format 150*200 pixels. This is updated at each ongoing assessment.

6.2.6 Number issued by government department

e.g. passport or driving licence with photo.

6.2.7 Company address

This is normal place of work at the date of application. The applicant is to advise if this address is to be used for correspondence.

6.2.8 Declaration

The following declarations are made by all applicants for a Certificate of Personnel Competence:

- I am aware of and familiar with the requirements for the IECEx Certification of Personnel Competence Scheme. Should my application for certification be accepted, I understand that these requirements shall be fulfilled
- I declare that I will comply with existing requirements for the IECEx Certification of Personnel Competence Scheme, will not misrepresent the scope of certification and agree to pay the expenses in connection with my application
- I have no current application pending with any other ExCB
- I declare that all information provided with this application is true and correct

6.2.9 To whom shall the application be made?

Application shall be made to the ExCB of the applicant's choice but would be expected to be made with an ExCB in the country of residence. A full list of ExCBs participating in the CoPC Scheme can be found on the IECEx website at www.iecex.com.

7 Re-certification

Updated personal information is required by the ExCB at the time of each re-certification and as a minimum a new photograph is to be provided.

8 Competence assessment

The information provided with the application i.e. curriculum vitae, work history and educational certificates are assessed for compliance with the IECEx requirements specifically in relation to electrical knowledge, training and education. This may include contacting the university or college where the applicant obtained their qualification(s), or the employers, to check the authenticity of the documents. Following this review the ExCB shall advise if any additional evidence or information is required prior to the final assessment.

The assessment shall be carried out in the language agreed between the applicant and the ExCB.

The method of the assessment will depend on the Unit of Competence for which the applicant has applied. This may involve both a knowledge test (examination) and a skills test (practical). Full details of the assessment requirements can be discussed with the selected ExCB.

Some Units of Competence identify differing assessment requirements for a “responsible person” and an “operative”. An applicant should understand these differences and ensure the correct level is requested in the application.

9 Issue of the Certificate of Personnel Competence (CoPC)

For personnel who meet the IECEx Certification of Personnel Competence Scheme requirements, the ExCB shall issue a Certificate of Personnel Competence (CoPC), with clear indication of any limitations. The ExCB shall maintain ownership of the CoPC.

The CoPC is issued by the ExCB via the IECEx website, on-line certificate system, together with a wallet card ID. A printed and signed copy of the CoPC is available from the issuing ExCB. The CoPC shall be approved and authorized by a responsible person in the ExCB.

Ex Competent Persons who have attained and maintain an CoPC for the services they provide are required to affix the IECEx CoPC reference adjacent to their signature on reports and stationery ensuring that there is no misrepresentation of the scope of certification.

Misuse of IECEx Certificates and IECEx Marks or Logos in publications, catalogues etc., shall be subject to corrective actions, such as suspension or withdrawal of certificates. Details of the misuse will be published and, if necessary, legal action will be taken.

The ExCB issuing the CoPC shall have additional requirements for the use of the CoPC and logo. The CoPC holder shall agree with these conditions.

The CoPC is only valid for the scope of work indicated and for a period of three years after which re-certification shall take place.

10 Suspension or cancellation

A CoPC may be suspended or cancelled by the issuing ExCB for the following:

- non-payment of outstanding fees,
- failure to comply with the surveillance requirements,
- the CoPC or the Personnel Competence Assessment Report (PCAR) has been issued in error,
- the holder requests cancellation,
- it is used in a misleading way, or
- the Ex Competent Person no longer complies with the IECEx requirements.

The ExCB is required to give due notice to the Ex Competent Person of any such suspension or cancellation and to give the reason(s).

When a CoPC is suspended or cancelled, the Ex Competent Person shall no longer describe themselves as "IECEX certified", or use the CoPC. Work or services provided prior to the suspension or cancellation of the CoPC is not affected, except that the Ex Competent Person is responsible for determining the necessary action, if any, for previous work or services provided as a result of the suspension or cancellation of the CoPC.

11 Surveillance

Surveillance of the Ex Competent Person shall be conducted 18 months after the issue or re-issue of the CoPC by the issuing ExCB to ensure that the Ex Competent Person has maintained his level of competence. The Ex Competent Person shall provide a log of work conducted during the period which shall be supported by relevant signatures from either the Ex Competent Person's employer or the relevant person in the company where the Ex Competent Person has conducted this work. The ExCB shall assess this work and decide if the Ex Competent Person has maintained his competence. If so the ExCB shall confirm the Ex

Competent Person's competence. Where the ExCB decides that competence has not been maintained e.g. through the Ex Competent Person not working in the relevant field for a significant period then the Ex Competent Person can be offered the opportunity to retake a written or practical test to demonstrate the continued competence. This test shall take the same form as the original competence tests above.

12 Re-certification

A CoPC is valid for 3 years and it is the responsibility of the EX competent person to ensure their CoPC remains valid. An application shall be made to the ExCB who issued the original CoPC at least 3 months prior to the expiry date so that re-assessment can be undertaken in time. At this time the applicant should consider whether they wish to be assessed against any additional units of competence.

For re-certification the applicant is to provide evidence of any additional qualifications attained but also records of the work and duties undertaken since the last assessment in a similar way to the information provided in 5.2. The evidence provided must be validated by the employer or somebody who contracted him for this kind of work.

The ExCB shall assess the information together with data collected during any interim surveillance visit/review that was undertaken to consider whether the original areas and levels of competence have been maintained and therefore warrants re-validation of the CoPC.

If the ExCB considers that insufficient information is available it shall inform the applicant and request additional information to support the application. If this additional information is not forthcoming or is not adequate the ExCB decides if the validation of individual competence modules is to be revoked and it shall inform the applicant of the decision. In this case no re-assessment is made.

13 Appeals

Appeals can be initiated by the applicant or Ex Competent Person where the ExCB has considered that the application, review or re-assessment has not demonstrated an acceptable level of competence or retaining the competence in one or more modules.

In the first instance any complaint or appeal should be directed to the ExCB and if it cannot be resolved then it may be referred to the IECEX 05 complaints and appeals process.

14 Typical examples of Units of Competence to be gained

Depending on the position/job/function of the applicant different Units of Competence will need to be gained.

The following is an example of a typical list of positions found in the Ex industry associated with the recommended Units of Competence, but it shall remain the responsibility of the applicant to determine the required Units of Competence in accordance with his actual position/job/function.

Position/job/function	Suggested Unit of Competence
Plant Manager	Unit Ex 001 Apply basic principles of protection in explosive atmospheres
Safety Manager	Unit Ex 001 Apply basic principles of protection in explosive atmospheres Unit Ex 002 Perform classification of hazardous areas
Site Supervisor (Elec. or Inst.)	Unit Ex 001 Apply basic principles of protection in explosive atmospheres Unit Ex 003 Install explosion-protected equipment and wiring systems Unit Ex 004 Maintain equipment in explosive atmospheres Unit Ex 008 Perform detailed inspection of electrical installations in or associated with explosive atmospheres
Technician (Elec. or Inst.)	Unit Ex 001 Apply basic principles of protection in explosive atmospheres Unit Ex 003 Install explosion-protected equipment and wiring systems Unit Ex 004 Maintain equipment in explosive atmospheres Unit Ex 007 Perform visual and close inspection of electrical installations in or associated with explosive atmospheres

15 Units of Competence description

The following information is an extract from the Specification for Units of Competence Assessment Outcomes Operational Document OD 504. It is provided here to give a quick reference for the Units of Competence. If further detail is required then OD 504 should be consulted.

Unit Ex 001 – Apply basic principles of protection in explosive atmospheres

Scope

This Unit of Competence covers the explosion-protection aspects of plant and machinery operation or maintenance. It requires the ability to visually identify any damage or deterioration of explosion-protected equipment, monitor equipment and plant in relation to changes in the explosion hazard and to follow procedures to limit the risk of an explosion.

This Unit of Competence is based on various parts of IEC 60079 series and any other relevant ISO/IEC Standards that apply to this Unit of Competence.

Prerequisites

There is no minimum level of technical education applicable for this Unit of Competence.

Competence in this unit shall be assessed in combination with, or after gaining other competence required by a given industry or enterprise for plant or machinery operation or installations, maintenance or service functions.

Unit Ex 002 – Perform classification of hazardous areas

Scope

This Unit of Competence covers knowledge and skills to classify areas where explosive materials may exist. It requires the ability to gather and analyse data relative to explosion hazards, determine the extent of risk and establish and document zones.

This Unit of Competence is based on IEC 60079-10-1 and IEC 61241-10 and any other relevant standard that apply to this Unit of Competence.

Prerequisites

Competence in this unit requires a degree, diploma or equivalent in a technical subject.

The area classification should be carried out by those who understand the relevance and significance of properties of flammable materials and those who are familiar with the process and the equipment along with safety, electrical, mechanical and other qualified engineering personnel.

Unit Ex 003 – Install explosion-protected equipment and wiring systems

Scope

This Unit of Competence covers the explosion-protection aspects for installing explosion-protected and associated equipment and wiring systems. It requires the ability to match equipment with that specified for a given location, work safely, and to installation standards and complete the necessary installation documentation.

This Unit of Competence is based on IEC 60079-14 and any other relevant standard that apply to this Unit of Competence.

For installation all types of protection must be understood.

Prerequisites

The applicant shall have the level of technical education (or equivalent) attained, relevant to the application, through documents such as College Certificates and Vocational qualifications etc.

For an operative a minimum 3 years experience in industrial electrical installation practice.

For a responsible person a minimum 3 years experience in Ex industrial electrical installation practice relevant to the scope of the Unit of Competence being applied for taking into account the scope limitations.

Competence in this unit shall be assessed either concurrently with or after Unit Ex 001.

Unit Ex 004 – Maintain equipment in explosive atmospheres

Scope

This Unit of Competence covers the explosion-protection aspects for maintaining explosion-protected and associated equipment and wiring systems including plant maintenance schemes. It requires the ability to develop and manage maintenance programmes incorporating strategies for inspections, repair/overhaul/replacement of components and recording of maintenance outcomes. This includes the ability to follow a maintenance program, work safely, carry out maintenance to standards and manufacturer's instructions and complete the necessary maintenance documentation.

This Unit of Competence is based on IEC 60079-17 and any other relevant standards that apply to this Unit of Competence.

Prerequisites

The applicant shall have the level of technical education (or equivalent) attained, relevant to the application, through documents such as College Certificates and Trade Credentials etc.

For an operative a minimum 3 years experience in industrial maintenance practice.

For a responsible person a minimum 3 years experience in Ex maintenance practice relevant to the scope of the Unit of Competence being applied for taking into account the scope limitations.

NOTE 1 This experience can include time spent under general supervision.

Competence in this unit shall be assessed either concurrently with or after Unit Ex 001.

Unit Ex 005 – Overhaul and repair of explosion-protected equipment

Scope

This Unit of Competence covers the explosion-protection aspects of overhauling and repairing explosion-protected equipment both at a craftsperson (operative) level and as the responsible person for verifying compliance after such overhaul and/or repair. For the operative it requires

the ability to identify and select authorized components, follow repair specifications to effect the overhaul/repair of equipment and complete repair documentation. For the responsible person it requires the ability to establish and document the level of work required, arranging for the overhaul/repair to be carried out, verify compliance of overhauled/repared equipment and complete the necessary documentation.

This Unit of Competence is based on IEC 60079-19 and any other relevant standards that may apply.

Prerequisites

The applicant shall have the level of technical education (or equivalent) attained, relevant to the application, through documents such as College Certificates and Trade Credentials etc.

For an operative a minimum 3 years experience in the overhaul and repair of general electrical, electronic and/or mechanical equipment relevant to the scope of the Unit of Competence being applied for taking into account the scope limitations.

For a responsible person a minimum 3 years experience in the servicing of Ex electrical, electronic and/or mechanical equipment relevant to the scope of the Unit of Competence being applied for taking into account the scope limitations.

Competence in this unit shall be assessed either concurrently with or after Unit Ex 001.

Unit Ex 006 – Test electrical installations in or associated with explosive atmospheres

Scope

This Unit of Competence covers testing electrical installations for explosive atmospheres. It requires the ability to select, prepare and use appropriate testing devices, work safely and to standards and to interpret and record test results.

This Unit of Competence is based on IEC 60079-14 and any other relevant standards that may apply.

Prerequisites

The applicant shall have the level of technical education (or equivalent) attained, relevant to the application, through documents such as College Certificates and Trade Credentials etc.

A minimum 3 years experience in industrial electrical installation practice is required.

Competence in this unit shall be assessed either concurrently with or after Unit Ex 001.

Unit Ex 007 – Perform visual and close inspection of electrical installations in or associated with explosive atmospheres

Scope

This Unit of Competence covers evaluating the completeness of a hazardous area verification dossier and compliance of the explosion-protected aspects of the electrical installations within the constraints of a visual inspection. It requires the ability to work safely in a hazardous area, evaluate a verification dossier, identify explosion-protected equipment with their certification and specified location, visually inspect an installation for compliance and report and act on inspection results.

This Unit of Competence is based on IEC 60079-14 and IEC 60079-17 and any other relevant standards that may apply.

Prerequisites

The applicant shall have the level of technical education (or equivalent) attained, relevant to the application, through documents such as College Certificates and Trade Credentials etc.

For an operative a minimum 3 years experience in industrial electrical installation practice.

For a responsible person a minimum 3 years experience in Ex electrical installation practice relevant to the scope of the Unit of Competence being applied for taking into account the scope limitations.

Competence in this unit shall be assessed either concurrently with or after units Ex 003 or Ex 004. Alternatively, competence in general electrical inspection will satisfy the prerequisite.

Unit Ex 008 – Perform detailed inspection of electrical installations in or associated with explosive atmospheres

Scope

This Unit of Competence covers the explosion-protection aspects of conducting initial, periodic and sample audit inspections of explosion-protected equipment and installations. It requires the ability to audit a verification dossier, work safely in a hazardous area, inspect against standards and report and act on inspection results.

This Unit of Competence is based on IEC 60079-14 and IEC 60079-17 and any other relevant standards that may apply.

Prerequisites

The applicant shall have the level of technical education (or equivalent) attained, relevant to the application, through documents such as College Certificates and Trade Credentials etc.

For an operative a minimum 3 years experience in general electrical installation practice.

For a responsible person a minimum 3 years experience in hazardous area installation practice.

Competence in this unit shall be assessed either concurrently with or after competence in Units Ex 003 or Ex 004. Alternatively, competence in general electrical inspection will satisfy the prerequisite.

Unit Ex 009 – Design electrical installations in or associated with explosive atmospheres

Scope

This Unit of Competence covers the explosion-protection aspects of designing electrical power, control and instrumentation systems and installations. It requires the ability to establish design briefs and to pursue economical and effective explosion-protection design solutions.

This Unit of Competence is based on IEC 60079-14 and any other relevant standards that may apply.

Prerequisites

The applicant shall have the level of technical education (or equivalent) attained, relevant to the application, through documents such as Degree, Diploma and College Certificates etc.

A minimum 3 years experience in general electrical installation design or supervised hazardous area installation design.

Competence in this unit shall be assessed either concurrently with or after Unit Ex 001.

Unit Ex 010 – Perform audit inspection of electrical installations in or associated with explosive atmospheres

Scope

This Unit of Competence covers the explosion-protection aspects of conducting an audit of an electrical installation. It requires the ability to verify whether an installation complies with the relevant hazardous area standards for that installation and includes the verification of design and certification documentation (verification dossier), maintenance, overhaul and repair, work safety, inspection against standards and reporting of audit results.

This Unit of Competence is based on IEC 60079-14 and IEC 60079-17 and any other relevant standards that may apply.

Prerequisites



The applicant shall have the level of technical education (or equivalent) attained, relevant to the application, through documents such as Degree, Diploma, College Certificates, Trade Credentials etc.

A minimum 3 years experience in general electrical installation or inspection practice, a minimum of 2 years experience in hazardous area electrical installation inspection practice.

Competence in this unit shall be assessed either concurrently with or after Unit Ex 003 or Ex 004 or Ex 009.

Annex A

Example of a CoPC

	<h2 style="margin: 0;">IECEX Certificate Personnel Competence</h2>	
INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres <small>for rules and details of the IECEx Certification of Personnel Competence (CoPC) Scheme visit www.iecex.com</small>		
Certificate No.:	IECEX CP SAI10.0002	Issue No.:1
Status:	Current	Date of Original Issue: 2010-11-20 Date of Expiry: 2013-07-21
Applicant:	Name goes here	
Scope of Competence: Ex 001 - Basic principles - (Units according to IECEx OD 504)	Based on various parts of IEC 60079 series Ex 003 - Installation - Based on IEC 60079-14 Ex 008 - Detailed Inspection - Based on IEC 60079-17	
		<div style="border: 2px dashed gray; padding: 10px; width: 150px; margin: 0 auto;"> <p style="margin: 0;">Photo</p> <p style="margin: 0; font-size: small;">format: ".jpg" size: 150 x 200 pixels</p> </div>
<p>For Detailed Information on Scope Application in accordance with IECEx OD 502 click on PCAR Number below:</p> <p>PCAR Reference No.: AU/SAI/PCAR10.0001/00</p> <p><i>This certificate is issued as verification that the Applicant was assessed and found to comply with the IECEx CoPC Scheme requirements, relating to the scope of Competence and referenced Standards listed above. This certificate is granted subject to the conditions as set out in IECEx CoPC Scheme Rules, IECEx 05 as amended.</i></p> <p>Approved for Issue on behalf of the IECEx Certification Body:</p> <p>Position:</p> <p>Signature: _____</p> <p>Date: _____</p> <p>1. This certificate and schedule may only be reproduced in full. 2. This certificate is not transferable and remains the property of the Issuing body. 3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.</p>		
Certificate Issued by:		
ExCB name ExCB address		
The ExCB name, address and logo goes here		

Annex B

Example of a wallet card ID

The following is an example of the wallet size ID Card showing a front and back view.



For full details of

- Certificate (IECEX CP SIR10.0001)
- PCAR (AU/SAI/PCAR09.0001/00)
- Units of Competencies
- Any Limitations

Visit www.iecex.com

EXAMPLE ONLY

If lost please notify:
IECEX Secretariat
286 Sussex Street
Sydney NSW, Australia
Ph +61 2 8206 6940
Chris.agius@iecex.com

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