



IECEX 01

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IECEX PUBLICATION

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

Basic Rules

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE **ZZ**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

FOREWORD

This publication has been prepared by the IECEX Management Committee (ExMC) and approved by the IEC Conformity Assessment Board (CAB).

It cancels and replaces IECEX 01:2008, fourth edition.

This publication is directly related to

- IECEX 02, *IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEX System) – IECEX Certified Equipment Scheme covering equipment for use in explosive atmospheres – Rules of Procedure*
- IECEX 03, *IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEX System) – IECEX Certified Service Facilities Scheme covering repair and overhaul of Ex equipment – Rules of Procedure*
- IECEX 04, *IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEX Scheme) – IECEX Conformity Mark Licensing System – Regulations*
- IECEX 05, *IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEX System) – IECEX Scheme for Certification of Personnel Competencies for Explosive Atmospheres – Rules of Procedure*

This edition of IECEX 01 takes effect immediately upon publication and replaces the previous edition.

The annexes to this publication are normative.

The text of this publication is based on the following documents:

Document	Report on Voting
ExMC/537/CD	ExMC/571A/RM
CAB/847/DV	Approved at the 2010 CAB Meeting in Seattle

This fifth edition of IECEX 01:2010 includes the following changes:

- Clarification between IECEX Officers, as appointed by CAB and the IECEX Executive
- Alignment of terms of Officers with that of other IEC CA Systems
- Changes to ensure alignment with the IEC Statutes
- Updating of “Conditions for bodies and organizations domiciled in non-IEC member countries” to become members of the IECEX System

INTRODUCTION

IECEX System objective

The objective of the IECEX System is to facilitate international trade in equipment and services for use in explosive atmospheres, while maintaining the required level of safety:

- Reduced testing and certification costs to manufacturer
- Reduced time to market
- International confidence in the product assessment process
- One international database listing
- Maintaining international confidence in equipment and services covered by IECEX Certification

What is an Ex area?

Ex areas can be known by different names such as “hazardous locations”, “hazardous areas”, “explosive atmospheres”, and the like and relate to areas where flammable liquids, vapours, gases or combustible dusts are likely to occur in quantities sufficient to cause a fire or explosion.

The modern day automation of industry has meant an increased need to use equipment in Ex areas. Such equipment is termed “Ex equipment”.

Where do you commonly find Ex equipment?

Flammable gases, vapours and mists, as well as combustible dusts create potentially explosive atmospheres. Ex equipment in such areas include:

- Automotive refuelling stations or petrol stations
- Oil refineries, rigs and processing plants
- Oil and gas tankers, drilling ships and FPSO (Floating Production Storage Offloading vessels)
- Chemical processing plants
- Printing industries, paper and textiles
- Hospital operating theatres
- Aircraft refuelling and hangars
- Surface coating industries
- Underground coal mines
- Sewerage treatment plants
- Gas pipelines and distribution centers
- Grain handling and storage and processing (flour-milling industry)
- Woodworking areas
- Sugar refineries
- Light metal working, where metal dust and fine particles can appear

IECEX International Certification System

In addition to the preparation of International Standards, the IEC facilitates the operation of Conformity Assessment Systems. One such System is the IECEX System.

The IECEX System comprises the following Global Certification Schemes:

- The IECEX Certified Equipment Scheme
- The IECEX Certified Service Facilities Scheme
- The IECEX Scheme for Certification of Personnel Competencies
- The IECEX Conformity Mark Licensing System

The IECEX Certified Equipment Scheme

This IECEX Certified Equipment Scheme is an International Certification Scheme covering product that meets the requirements of International Standards, e.g. IEC International Standards prepared by IEC TC 31, *Equipment for explosive atmospheres*.

The IECEX Certified Equipment Scheme provides both:

- a) a single International Certificate of Conformity that requires manufacturers to successfully complete:
 - testing and assessment of samples for compliance with Standards;
 - assessment and auditing of manufacturers premises;
 - on-going surveillance audits of manufacturers premises;

or

- b) a “fast-track” process for countries where regulations still require the issuing of national Ex Certificates or approval. This is achieved by way of global acceptance of IECEX equipment Test and Assessment Reports.

Certificates issued by the IECEX Certified Equipment Scheme are issued as “Electronic Certificates” and are live on the IECEX website. This enables full public access for viewing and printing. Visit the IECEX On-Line Certificate System.

The IECEX Certified Service Facilities Scheme

This IECEX Certified Service Facilities Scheme is an International Certification Scheme that covers the assessment and the on-site audit of organizations that provide a repair and overhaul service to the Ex industry.

Due to the very high capital investment made by industry in most Ex equipment it is much more economical to repair and overhaul equipment rather than to replace it with new. This also has obvious environmental benefits.

The challenge for industry is to ensure that all the very unique Ex safety features included in the design and manufacturing of Ex equipment are not compromised during the repair process.

Ex Repair and Overhaul Facilities and Workshops, certified under the IECEX Certified Service Facilities Scheme, provide industry with the assurance that repairs and overhaul to Ex equipment will be undertaken according to the strict requirements of the IECEX Scheme to the International Standard IEC 60079-19. Like the IECEX Certified Equipment Scheme, only “Electronic Certificates” are issued via the IECEX On-Line Certificate System thereby giving industry full access to both the viewing and printing of certificates.

The IECEX Scheme for Certification of Personnel Competencies

The IECEX Scheme for Certification of Personnel Competencies is an International Certification Scheme that enables a common approach for the assessment of persons for their ability to apply the relevant Ex Standards used within the IECEX System, in accordance with International Standard ISO/IEC 17024.

The IECEX Scheme for Certification of Personnel Competencies provides the international Ex industries with a qualification system that is transportable across borders.

Applications

Ex equipment manufacturers and Ex service providers and persons can apply to IECEX Certification Bodies (termed ExCBs), in any country.

Countries and certification bodies can apply to become members of the IECEX System with certification bodies able to issue IECEX Certificates once accepted according to the application procedures.

Rules of the IECEX System including Rules of Procedure are available, free of charge, from the IECEX website.

National Member Bodies of the IEC System make application for their country to participate in the IECEX System on a standard-by-standard basis. The application is made to the Executive Secretary of the IECEX System.

Certification bodies and testing laboratories wishing to be accepted into the IECEX System must reside in a participating country. Their application for acceptance is made through their National Member Body of the IECEX System for the country in which they reside.

Certification bodies and testing laboratories are accepted into the IECEX System after satisfactory assessment of their competence. Assessors are selected who will provide confidence to regulatory authorities, users, manufacturers and certification bodies. International Standards ISO/IEC 17024 and ISO/IEC 17025, ISO/IEC Guide 65 and IECEX Technical Guidance Documents are used as part of the IECEX assessment process.

More information

Further information is available from the IECEX website: www.iecex.com, (containing free copies of the IECEX Rules and Procedures), from any of the IECEX Certification Bodies or directly from the IECEX Secretariat via the coordinates shown on the IECEX website.

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

Basic Rules

1 Title

The title of the System is:

"IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres", hereinafter referred to as "the IECEX System".

2 Object

Taking into account the object of the International Electrotechnical Commission (IEC) as given in Article 2 of the IEC Statutes, the particular object of the IECEX System, operated under the authority of the IEC in conformity with the Statutes, is to provide a global framework for independent assessment and certification of equipment and services associated with explosive atmospheres.

3 Scope

The IECEX System includes assessment and certification of equipment and services covered by IEC International Standards for explosive atmospheres as are proposed by its Ex Management Committee (ExMC) and approved by the IEC Conformity Assessment Board (CAB). The IECEX System also provides for the assessment and certification of competencies of persons working in or conducting work affecting explosive atmospheres.

Schemes approved to operate under the IECEX System are listed in Annex B.