IECEx International Certification:
The way to safety compliance in hazardous areas

**IEC System for Certification to Standards Relating
to Equipment for Use in Explosive Atmospheres**

IECEx
International Certification

The way to safety compliance in hazardous areas

The increasing application of industrial automation in hazardous areas has improved the efficiency and safety of installations. On the other hand it may also have increased the risk of fire or explosion hazards.

These hazardous areas include places where flammable liquids, vapours, gases or combustible dusts could present a fire or explosion hazard. They are also called "Hazardous Locations," "Explosive Atmospheres" or "Ex Areas".

Equipment, especially electrical, and their use in these areas are covered by a wide range of IEC Standards and are generally highly regulated.

It is in the interest of industry and governments to ensure that Ex Areas and the personnel working in them are as safe as possible for those personnel, the community and the environment.

The IECEx System is supported by three Conformity Assessment Schemes, which, over the years, have established a high level of confidence in those manufacturing, operating and maintaining equipment, installations and systems in compliance with IEC International Standards:

→ Ex equipment – IECEx certification provides assurance that the strictest safety requirements of IEC International Standards, as referenced in many national or regional compliance programmes, are met, e.g. ATEX.

→ Repair/overhaul: Assesses and certifies that organizations and workshops that provide Ex equipment selection, design, installation, inspection, maintenance, repair, overhaul and reclamation services to the Ex industry do so respecting the strict requirements of IEC International Standards IEC 60079-14, IEC 60079-17 and IEC 60079-19.

→ Personnel: The IECEx Certification of Personnel Competence provides assurance to those engaging or dealing with IECEx-certified persons that their knowledge and competence has been independently verified.

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Fact

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IECEx certifies the skills, knowledge and competence of persons working in Ex areas

Improved safety, instant verification, UN endorsement

The use of the IECEx Conformity Assessment System and its Schemes provides clear advantages for industry and governments:

Improved safety

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confidence that equipment, installations and systems are manufactured, operated and maintained in compliance with IEC International Standards; confidence that persons working in Ex areas are well protected from Ex hazards

Instant verification

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possibility to verify all issued IECEx Certificates instantly on **www.iecex.com** or on the **IECEx app** for tablets and smart phones (iOS and Android)

UN endorsement

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the United Nations, via UNECE, has endorsed IECEx as the internationally-recognized certification system for promoting the safety of equipment, services and personnel associated with devices, systems and installations used in explosive areas

Cost savings

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reduced need for additional testing and certification resulting in faster access to new markets

Some of the industries covered by the range of IEC Standards and the IECEx System include:

→ Oil + Gas refineries, off-shore platform rigs and processing plants

→ Automotive refueling stations or petrol/gas stations

→ Chemical processing plants

→ Coal mining

→ Printing industries, paper and textiles

→ Aviation, refueling and hangars

→ Gas pipelines and distribution centres

→ Grain handling and storage

→ Woodworking areas

→ Sugar refineries

→ Metal surface grinding, especially aluminum dusts and particles

→ Surface coating industries

→ Waste treatment, sewerage plants

The IECEx System comprises the following Schemes for which all Certificates, Reports, supporting documentation and Certification Body details, as well as rules, operational documents, procedures and a list of the IECEx Certification Bodies are available online at **www.iecex.com**.

IECEx Certified Equipment Scheme provides assurance that products listed on a IECEx Certificate of Conformity follow the International Standards listed on that IECEx Certificate.

This Scheme provides:

→ IECEx ExTR (Test Report)

→ IECEx QAR (Quality Assessment Report)

→ IECEx CoC (Certificate of Conformity)

To obtain this type of IECEx Certificate, the product manufacturer prepares an application and submits it to the relevant IECEx ExCB. Samples of the equipment will be tested by a laboratory appointed by the ExCB. A factory inspection will also be organized to assess manufacturing capabilities to manufacture products identical to the product tested. Ongoing periodic audits (factory inspections) ensure that the stringent standards are being maintained by the manufacturer over time.

You can find further information about the IECEx System and its Schemes, as well as rules, operational documents, procedures, certificates and a list of the IECEx Certification Bodies on **www.iecex.com**.

IECEx Certified Service Facility Scheme assesses and certifies that organizations and workshops that provide Ex equipment selection, design, installation, inspection, maintenance, repair, overhaul and reclamation services to the Ex industry do so respecting the strict requirements of IEC International Standards IEC 60079-14, IEC 60079-17 and IEC 60079-19.

This ensures that unique Ex safety features are not compromised during the selection, design, installation, inspection, maintenance, repair, overhaul or reclamation processes. The Scheme includes on-site audits prior to issuing the IECEx Certificate and ongoing periodic audits to ensure repair and overhaul processes continue to comply with requirements and provides:

→ IECEx FAR (Facility Assessment Report)

→ IECEx Certified Service Facility Certificate

IECEx Conformity Mark Licensing System

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This international Mark Licensing System provides immediate evidence that products bearing this Conformity Mark, illustrated below, are covered by an IECEx Certificate of Conformity.

IECEx Certification of Personnel Competence Scheme provides independent verification that a person holding an IECEx CoPC (Certificate of Personnel Competence) has the ability to apply his/her skills, knowledge, qualifications and experience to work safely in accordance with relevant International Ex Standards. This can be especially important for contracting staff.

This Scheme provides:

→ IECEx PCAR (Personnel Competence Assessment Report)

→ IECEx CoPC (Certificate of Personnel Competence)

To obtain an IECEx Certificate of Personnel Competence, a person prepares an application and submits it to an approved IECEx Certification Body.

The person will undergo knowledge tests and an assessment of qualifications and experience before receiving an IECEx Certificate. Regular re-assessment ensures that the certified person maintains his/her competencies and currency of knowledge with the relevant Standards as updated from time to time.

The IECEx CoPC is personal, non-transferable and valid across international borders. As well as the certificate itself, the person obtains an identification card with photo, providing instant proof of certification.

As with all IECEx Certificates, this is valid across international borders.

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IECEx certification provides a "security blanket" for those operating plants in Ex areas

Participate in IECEx

Help connect Ex industries globally

IECEx connects Ex industries globally and to do so effectively, invites countries to become members of the System. Member countries have the opportunity to network amongst each other, and the right, but not the obligation, to participate in decisions and matters dealing with the IECEx System and Schemes.

Industry participants are free to utilize only one or the full range of IECEx Certification Schemes – please note that a manufacturer holding an IECEx Equipment Certificate of Conformity is not obliged to also hold an IECEx Conformity Mark License, however there may be advantages in the market for doing so. Similarly, an IECEx Certified Service Facility is not obliged to employ holders of an IECEx Certificate of Personnel Competence but the advantages of doing so are obvious.
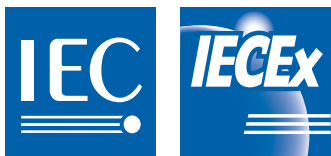
Fact

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↗ Increased security and safety in all types of Ex areas through IECEx-certified equipment

→ **Fact**

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IECEx certification helps build confidence
in the safety of Ex equipment

IEC System for Certification to Standards
Relating to Equipment for Use
in Explosive Atmospheres

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