

CONFORMITY ASSESSMENT

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Hazards tamed

Crucial for the safety and reliability of Ex areas, equipment and workers

Oil and gas refining, chemical processing, coal mining, paper and textile manufacturing, grain handling and storage, sugar refining. These are very different industrial sectors that have one thing in common. They all have hazardous areas where flammable liquids, vapours, gases or combustible dusts present a fire or explosion hazard. The use of on-site electrical equipment just adds another spark to this dangerous mix. [IECEX](#), the IEC System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres, is globally recognized to help companies tame hazards in Ex (explosive) areas.



IECEX certification covers offshore oil platforms...



their crew...



and grain storage silos

Safety in Ex areas is a must

Constant technological developments and industrial automation have increased the need for electrical and electronic equipment in hazardous or Ex areas. It is in the interest of industry, governments and workers that Ex Areas be regulated so as to be as safe as possible.

Safety in hazardous areas is non-negotiable. When equipment is not installed, maintained, inspected or repaired according to strict Ex standards by competent persons, the outcome can be devastating. What may be tolerable in non-explosive atmospheres can directly lead to explosions that not only destroy property but can cost human lives or cause severe injuries.

Providing the proof – faster and at lower cost

Ex equipment is designed for very specific and often extreme conditions. Manufacturers and suppliers of services who want to trade on the global scene have to meet the very strict requirements put in place by national regulations and legislation. Proving their adherence to those requirements can be costly and time-intensive.

IECEX has the perfect solution for all manufacturers who want to export their products to several markets: one test and one certificate that open many doors.

The IECEx is accepted in all its member countries and way beyond. It is widely recognized as the truly international system for Ex equipment, provides access to the global market and drastically reduces costs by eliminating multiple re-testing and certification.

But IECEx is not restricted to product certification. It also covers Ex-related services such as repair and overhaul and is the only international certification system that certifies persons working in Ex areas.

Proof of the right level of protection: IECEx Certified Equipment Scheme

An IECEx Certificate is like a passport for manufacturers of Ex equipment. It provides clear proof of claimed compliance with International Standards. It certifies that the equipment in question has the right level of protection and gives products access to foreign markets without the burden of repeat testing. It provides assurance that products bearing an IECEx Certificate conform to the International Standards listed on the same Certificate.

Certified professional repair: IECEx Certified Service Facilities Scheme

Equipment and machinery used by companies operating in hazardous areas have a much higher capital cost than the same equipment used elsewhere.

Take a light fitting, for instance. A typical domestic light fitting costs USD 5 to USD 10 in any shop. The same light fitting for an Ex site would cost from USD 500 to USD 1 000, a hundred times more. That is only a small piece of equipment. Imagine the costs involved for an electric motor operating in an Ex environment...

Once purchased and installed, the equipment has to last many years. This is why repairing the equipment is more cost-effective than replacing it. Then there are compatibility issues relating to replacement.

In response, the Ex repair industry emerged along with IEC 60079-19, *Explosive atmospheres - Part 19: Equipment repair, overhaul and reclamation*. The question for industry was:

"How can I be confident that an Ex Repair Workshop has:

- *The required repair facilities, specified in IEC 60079-19?*
- *The required systems in place?*
- *The required skilled personnel?"*

Industry then turned to IECEx for a solution. In 2007 the IECEx Certified Service Facility Scheme commenced. It assesses and certifies that organizations and workshops that provide repair and overhaul services to the Ex industry do so respecting the strict requirement of IEC 60079-19.

Peace of mind at a glance - IECEx Conformity Mark Licensing System

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



Competency confirmed - IECEx Certification of Personnel Competencies Scheme

While covering the assessment and certification of Ex equipment and the servicing of that equipment, one final piece was still missing, the assessment and certification of competence of those individuals that make it all happen. Early in 2010 IECEx launched the new CoPC (IECEx Certificate of Personnel Competencies Scheme), which provides companies with independent proof that a person has the qualifications and experience necessary to implement the International Ex Standards. This can be especially important for contracting staff.

The IECEx Conformity Mark Licensing System is evidence that products are covered by an IECEx Certificate of Conformity

To obtain a CoPC, a person prepares an application and submits it to an approved IECEx Certification Body. Regular re-assessment also ensures that the certified person maintains these competencies. The certificate is personal, non-

transmittable and valid across international borders.

All IECEx Certificates are available for public view on the [IECEx website](#).

About IECEx

[IECEx](#), the IEC System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres, has put in place a number of Conformity Assessment Schemes, which provide assurance that equipment and systems are manufactured and operated according to the highest International Standards of safety. The [United Nations](#), through its [UNECE](#) (United Nations Economic Commission for Europe), has formally endorsed IECEx as an internationally recognized certification system that promotes the safety of equipment in explosive areas.

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