

# LEDs show the way

IECEX-certified lighting fixtures for hazardous areas



Offshore platform at night

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**Offshore oil platforms, refineries, shipyards, gas and oil tankers operate 24 hours a day. Most human activities may go at a reduced pace at night but the tanker will continue to trace its route across the ocean, the rig will continue to drill or pump oil, and refineries never stop refining crude oil. Night-shift crews need powerful and reliable lighting to be able to work when it is dark. Lighting fixtures, as with any other piece of equipment or device used in hazardous areas, have to be explosion-proof.**

## Benefits of using LEDs

A growing trend for lighting fixtures designed for explosive environments is to replace conventional incandescent light bulbs, HDL (high-intensity discharge) or fluorescent lighting with LEDs. The benefits of using LEDs are numerous. Low voltage and low-operating temperatures make them safer to use in combustible atmospheres, excellent colour rendition improves night vision, instant switch-on provides added safety when entering dark areas. Because they last much longer than traditional lighting, they also reduce

drastically the need for maintenance. And, last but not least, they consume much less energy than all the other types of light fixture.

## Offshore lighting

LEDs can be used for all types of offshore lighting: from floodlights to exit signs, from berth and bunk lighting to linear lighting mounted on walls or floors for interior areas.

The risk factor is high for those working in harsh and extreme conditions. In case of an accident, their survival often depends on being detected as quickly as possible. Hence the importance of having safety kit they can rely on at all times. That is why lifebuoys and lifejackets are also equipped with powerful and explosion-proof LED lights.

## Tested and certified

Companies which offer high-specification LED lighting for hazardous areas, as well as the more conventional incandescent light bulbs, HDL or fluorescent lighting, have had their products tested and certified by IECEx, the IEC System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres.

Manufacturers have to meet the very strict requirements specified in the IEC 60079 series of International

Standards on explosive atmospheres as well as those put in place by national or regional regulations and legislation. Proving their adherence to those requirements can be costly and time-intensive.

Testing, assessment and/or certification conducted within 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.

## Highly skilled staff needed to operate Ex equipment

To cover all safety aspects in Ex environments and to complement the Certified Equipment Scheme, IECEx has developed the IECEx Certification of Personnel Competence Scheme to assess and certify individuals working in potentially hazardous areas.

The IECEx CoPC (Certificate of Personnel Competence) provides independent proof that the certificate holder has the required qualifications and experience for working on electrical equipment located in hazardous areas and can implement IEC International Standards covering explosive atmospheres.



Intrinsically-safe hand lamp  
(Photo: Ecom Instruments)



LED Fixture for oil rigs, chemical plants and marine vessels  
(Photo: Larson Electronics)