

# Lighting up Ex areas

IECEX certifies new generation of LED-based lighting solutions

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**In less than 20 years, the LED (light-emitting diode) technology has emerged as an increasingly popular light source. LED-based lighting solutions, first used in commercial and industrial environment, can now be found in all kinds of environments and applications. The new generation of LED lights is more efficient, less costly, lasts longer and can be fitted in any kind of lamp or luminaire available on the market.**

## LEDs light hazardous areas

The Ex (explosive) industry sector has also recognized the benefits of LED-based lighting solutions. LEDs, as a solid state technology, eliminate the risks linked to the hot filaments in incandescent bulbs, and lend themselves to higher degrees of protection. More and more manufacturers now offer LED lighting equipment that has the required level of protection to be operated in hazardous areas. In addition to protection levels, fixed and portable lights used in high-risk environments, harsh conditions, potentially explosive atmospheres need to be powerful enough to make even the smallest obstacle or obstruction visible. High-power LEDs offer a superior quality of light, an invaluable feature in hazardous locations.

## From rescue operations...

Take the example of firemen going through the rubble of a house or factory during or after a fire or an explosion. They need powerful portable torches to find their way in the dark, among the debris. The LED technology has many advantages for this type of equipment. Robustness, excellent colour rendition improving night vision, instant switch-on, long life cycle provide



*Refinery and oil storage at night*

added safety when entering dark areas and reduced maintenance.

## ...to night shifts

Or take offshore oil platforms, refineries, shipyards, gas and oil tankers that operate 24 hours a day. Night-shift crews need powerful and reliable lighting to be able to work when it is dark. Lighting fixtures, as any other piece of equipment or device used in hazardous areas, have to be explosion-proof. 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. Lifebuoys and lifejackets are also equipped with powerful and explosion-proof LED lights.

## The highest level of protection

Manufacturers offering high-specification LED lighting for hazardous areas 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.

To do so, they can rely on IECEx, the IEC System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres, to have their products tested and certified.

## Confidence and security

Testing, assessment and/or certification conducted within the IECEx are accepted in all its member countries and way beyond. The System is widely recognized as the truly international system for Ex equipment and has been endorsed by the United Nations, through UNECE (UN

## CONFORMITY ASSESSMENT



A rescue team pulls a woman from earthquake debris in Haiti in January 2010

Economic Commission for Europe) as the internationally recognized certification system for promoting the

safety of equipment, services and personnel associated with explosive areas.

For manufacturers of Ex equipment, having IECEx certification is a kind of “security blanket” that proves their products have the highest possible level of protection and meet all specific requirements.

IECEx certification also provides access to the global market and drastically reduces costs by eliminating multiple re-testing and certification.



Explosion-proof headlamp (Photo: Larson Electronics)