

IECEX in China

Chinese Testing Laboratory promotes the system at major event

China has seen huge economic changes in the past three decades. The state began to reform its economy at the end of the 1970s, shifting from a state-planned to a market economy. This move gave many industry sectors free rein to develop and grow, locally and internationally. Chinese industry is now a major player in the global market. China is also the country that has the world's largest population.

Such rapid development has brought with it the necessity for increased energy resources. Although China is today the largest producer of renewable energy from wind and the sun, it still relies heavily on fossil fuels such as oil and gas to meet industry energy needs. And as demand exceeds local production, China has to import oil from other parts of the globe.

Ex equipment standardized and certified

The increasing importance of the Chinese petroleum sector brought with it the need for new facilities and highly specialized devices and equipment that could be used in hazardous or Ex (explosive) environments. This is where standardization, IEC International Standards in particular, and Conformity Assessment play a crucial role.

IECEX in China

China is a member of IECEX, the IEC System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres, through an ExCB (Ex Certification Body), CQM (China Quality Mark Certification Group Co. Ltd.) and an ExTL (Ex Testing Laboratory), PCEC, the supervision and test centre of Ex-products for China's petroleum and chemical industry. PCEC has been an IECEX-accredited Testing Laboratory since 2005.

Promoting IECEX

To help promote and expand IECEX activities in China, PCEC



CIPPE 2011 exhibition hall



Explosion-proof camera housing (Credits: Pelco).

participated in the International Forum on Petroleum & Petrochemical Equipment Industry Development, an event held in March, in conjunction with EXPEC, the China International Explosion Protection Electric Technology & Equipment Exhibition, and CIPPE, China International Petroleum & Petrochemical Technology and Equipment Exhibition.

The Forum was the ideal platform for PCEC to present the IECEX System and its Certified Equipment Scheme to a high level audience composed of senior officials from China's oil and petrochemical industry and international companies and organizations. PCEC introduced IECEX, the certification process and highlighted the differences with the Chinese national Ex approval system. Many senior



Example of an Ex environment: an oil rig

managing officers and directors from oil and petrochemical companies' Health and Safety Departments expressed great interest in the system.

EXPEC and CIPPE

EXPEC and CIPPE are events that have brought together major players in the Chinese and international Ex industry for

the past eight years. The exhibition is one of the top petroleum exhibitions in the world, attended in 2011 by 1 500 exhibitors from 45 countries, coming not only from China, but also from the US (United States), Canada, the United Kingdom, France, Germany, Russia and Singapore among others. They showcased the latest oil and gas technology, products and equipment for some 40 000 visitors.

The IECEx Certified Equipment Scheme

From the smallest to the largest piece of equipment used by the Ex industry, all can be tested and certified by IECEx. 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. It provides assurance that products bearing an IECEx Certificate conform to the International Standards listed on the same Certificate.

IEC TC 31 and IECEx

The IEC has a TC (Technical Committee) that prepares standards for equipment used where there is a hazard due to the possible presence of explosive atmospheres of gases, vapours, mists or combustible dusts. IEC TC 31:

Equipment for explosive atmospheres has developed the IEC 60079 series of International Standards that address many of the issues facing manufacturers of Ex equipment in terms of safety and protection.

To complement the use of its International Standards, the IEC offers a CA (Conformity Assessment) System, IECEx, that tests and certifies Ex devices and equipment, as well as the skills of the persons working in such an environment.