

IECEX-AFSEC seminar in Africa

Raising awareness on risks and liabilities in the Ex sector

Observation of safe practices in hazardous areas is a must. When equipment is not installed, maintained, inspected or repaired by competent persons and according to strict Ex standards, the results can be devastating. What may be acceptable in non-explosive atmospheres can, in a different environment, lead directly to explosions that not only destroy property but can cost human lives or cause severe injuries.

Need to raise awareness

Africa has oil and gas in abundance and its mining sector is thriving, but the extraction of these resources is sometimes carried out under conditions that do not meet the strictest safety requirements. Recognizing the need to raise awareness on Ex risks and liabilities on the continent, AFSEC (African Electrotechnical Standardization Commission) approached the IEC with the request to organize an event addressing issues pertaining to safety in explosive atmospheres.

The first international seminar for the Ex sector, jointly organized by IECEX

(IEC System for Certification to Standards relating to Equipment for Use in Explosive Atmospheres) and AFSEC, took place in Abidjan, Côte d'Ivoire, on 28-30 November 2012.

Regional cooperation

The event was organized in collaboration with several African organizations: AFREC (African Energy Commission of the African Union), UPDEA (Union of Producers, Transporters and Distributors of Electric Power in Africa), and CODINORM (the Côte d'Ivoire national standardization body) and in partnership with two Ivoirian electrical utilities: CIE (Compagnie Ivoirienne d'électricité) and CIPREL (Compagnie Ivoirienne de production d'électricité).

The seminar brought together 40 delegates from 9 countries – Cameroon, Côte d'Ivoire, Democratic Republic of Congo, Ghana, Kenya, Mali, South Africa, Tunisia and Zimbabwe – with 14 participants attending the session in English and 26 the session in French. They represented the oil, gas and electricity industry sectors, hospitals, NSBs (National Standardization Bodies),

telecommunications organizations, ministries – mines, oil and energy, and industry – as well as Côte d'Ivoire's BNETD (Bureau National d'Etudes Techniques et de Développement) and LBTP (Laboratoire du Bâtiment et des Travaux Publics) and the multinational group ABB.

Official opening

The official part of the seminar was on 29 November – preceding visits to the CIE and CIPREL facilities – in the presence of the Chief of Staff of the Ministry of State for Industry, the Director General of CIE, the Director of CODINORM, a representative of the Director of CIPREL and the President of AFSEC. In their speeches, all thanked the IEC and AFSEC for organizing this event, the first of its kind in Africa.

From theory to practice

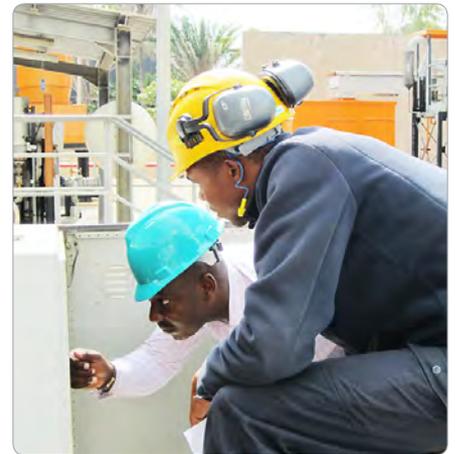
The seminar was conducted by two IECEX experts, Peter Thurnherr and Thierry Houeix, who shared their experience and knowledge, answered questions and provided advice, information and background material.



On the first day, participants familiarized themselves with the structure and content of three IEC International Standards



Site inspections at the CIE...



...and CIPREL facilities

The seminar encompassed both theoretical and practical approaches. The first day was entirely devoted to theory. Participants were able to familiarize themselves with the structure and content of three IEC International Standards prepared by IEC TC 31: Equipment for explosive atmospheres. These publications are essential for anyone using equipment and installations in a potentially hazardous environment.

The three IEC International Standards to come under scrutiny during the seminar were:

- Ex area classification, basic and general requirements, types of protection for gaseous atmospheres (IEC 60079-10-1, *Explosive atmospheres - Part 10-1: Classification of areas - Explosive gas atmospheres*)
- Ex area electrical installation design, selection and erection (IEC 60079-14, *Explosive atmospheres - Part 14: Electrical installations design, selection and erection*)
- Ex area inspection and maintenance (IEC 60079-17, *Explosive atmospheres - Part 17: Electrical installations inspection and maintenance*)

This first theoretical stage was followed the next day by on-site sessions at CIE and CIPREL power stations. Participants

had to use and apply the knowledge acquired on the first day to a series of practical exercises prepared by the course instructors. This gave the delegates the opportunity to go through the steps involved in Ex site inspections. The reports and findings resulting from the site inspections were presented and discussed on the last day of the seminar.

Safety applied

Throughout the seminar, participants showed great interest in the presentations and practical exercises and engaged in animated discussions with the instructors. They agreed that the seminar was highly

informative and that it made them aware of the risks and liabilities their companies or governmental agencies could face in case of an accident.

The comment made by one of the participants is revealing: "In fact it is not for my company that I must ensure safety of the equipment but for myself and my family, to make sure that when I leave for work in the morning I will come home in the evening."

Both organizers and participants felt it was a step in the right direction, raising awareness of IEC standardization work, of IECEX and of safety in explosive atmospheres.

About the speakers

Thierry Houeix

Thierry Houeix is a Certification Officer at INERIS, the French National Institute for Industrial Environment and Risks, and an expert in IEC TC 31: Equipment for explosive atmospheres. Houeix, an IECEX Lead Assessor, is also one of the founding member experts behind the IECEX CoPC (Certification of Personnel Competence) Scheme.

Peter Thurnherr

Peter Thurnherr has many years' experience in the design and production of electrical apparatus for use in gas and dust explosive atmospheres. He heads up the Swiss company thuba Ltd., which has been manufacturing explosion-proof electrical apparatus since 1955. He is Chairman of the Swiss TC 31 mirror committee and a member of several IEC TC 31 working groups and maintenance teams.