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**INTERNATIONAL ELECTROTECHNICAL COMMISSION SCHEME
FOR CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR
USE IN EXPLOSIVE ATMOSPHERES (IECEx SCHEME)**

**Title: Report of the First Task Force Meeting on Equipment for Explosive
Environments - UNECE WP6**

To: Members of the IECEx Management Committee, ExMC

INTRODUCTION

Following on from advice given during the ExMC Meeting, Denver 2007, on the current work being carried out within the UNECE, refer items 17.2 and 17.4 of ExMC/413/RM Draft Denver Minutes, the IECEx is issuing the attached information document which contains a copy of the recently issued report of the UNECE WP6 Meeting held on, 6th November 2007, in Geneva.

This document is issued for information only.

We would like to thank our IECEx experts for their attendance and support at this meeting

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ECONOMIC COMMISSION FOR EUROPE

Working Party on Regulatory Cooperation and
Standardization Policies (WP.6)

REPORT OF THE FIRST TASK FORCE MEETING ON
EQUIPMENT FOR EXPLOSIVE ENVIRONMENTS
HELD ON 6 NOVEMBER 2007

SOURCE: WP.6 Secretariat
STATUS: Meeting Report
ACTION: For consideration at the next meeting of the Task Force

I. BACKGROUND AND PURPOSE OF THE MEETING

1. Third-party certification is legally required in many countries for equipment designed and manufactured for use in explosive environments, such as in the chemical, petroleum and mining industries. Despite the existence of international standards and an international third party certification scheme through the International Electrotechnical Commission (IEC) to address the needs of the explosive environments industry, the conformity assessment procedures are different in each country and national regulators often require the mandatory approval of such equipment by domestically recognized notified bodies. This situation makes it very difficult to develop open markets for trade in explosion protected equipment, which is against the interest of both manufacturers and end users.

2. The Task Force on Equipment for Explosive Environments of the Working Party on Regulatory cooperation and Standardization Policies of the United Nations Economic and Social Council (UNECE WP.6) seeks to address this issue and will examine the different approaches in UN member States. It aims to prepare a proposal for trans-national regulatory cooperation in the industry along the lines suggested in UNECE WP.6 Recommendation “L”, “International Model for Technical Harmonization based on good regulatory Practice for the preparation, adoption and Application of Technical Regulations via the Use of International Standards” (from document ECE/STAND/17/Rev.4 also available on http://www.unece.org/trade/wp6/major_doc.htm). This model would consist of three main components, namely:

- (a) The development of an agreed list of Common Regulatory Objectives (CROs) for the industry;
- (b) The identification of the relevant international standards that should be used;
- (c) The specification of the appropriate conformance acceptance procedures.

3. The purpose of the November 2007 meeting was to gather information on current practices and difficulties faced by regulators and industry representatives and to formulate a plan of work for the Task Force. The meeting, which was held in parallel with the annual session of the Working Party, consisted of a series of presentations from government and industry representatives followed by a discussion on policy issues. A list of participants is provided in annex to this report.

II. PRESENTATIONS

A. Overview of UNECE WP.6 Model “L”

4. Mr. Christer Arvius, Chair of the Working Party, presented an overview of UNECE WP.6 Model “L” and outlined how it could be used to address the needs of the explosive environments industry in trans-national regulatory cooperation.

B. Australian Mining Experience

5. Mr. John Waudby, Senior Inspector of Electrical Engineering, Mine Safety, New South Wales (NSW) Department of Primary Industries, presented the experience of the coal mine industry in Australia. He pointed to the movement away from approvals to a conformity assessment approach and the key role of risk assessment in this change. Third party conformity assessment is

required. He emphasised the need for an integrated approach to safety including product design, testing, installation, maintenance and ongoing inspection through the product lifecycle. Mr. Waudby outlined the step by step evolution of the NSW approach and explained that the most recent changes in legislation stated that Ex-equipment had to conform to the standards specified by the chief inspector (as opposed to specifying standards in the legislation itself). This allows them to use national and international certification schemes. Mr. Waudby said the International Trade of Electrical Equipment for use in Explosive Atmospheres (IECEx scheme) was used in Australia and indicated that they had found it dependable. He suggested that countries with existing schemes could make an easy transition to the IECEx scheme. He emphasised that countries using the IEC scheme should participate in the development work.

C. Experience of China

6. This presentation was made by Mr. Weijun Liu, Vice Chair and Chief Technical Supervisor, IECEx scheme), Certification and Accreditation Scheme of the People's Republic of China. Mr. Liu said that China had both a voluntary and compulsory approach to certification. All certification bodies must be approved by government agencies. All explosive environment products must be tested. China has a required "MA" logo system for Ex-products. Foreign Ex-products to be used in Chinese mines must apply for "MA" mark and must be tested in China. The system follows the IECEx standards/system. However, there are slight differences between the IECEx standard and the Chinese Standard.

D. Russian Experience

7. Mr. Serguei Mokrousov, Russian Federal Service for Environment, Industry and Nuclear Supervision, said that there was no mutual acceptance of standards in Russia and that all equipment must pass national certification of conformance procedures. International standards are used but these are modified to meet national requirements. He said that accreditation of foreign assessment bodies was possible in principle.

E. ATEX Directive 94/9: ATEX Directive 94/9/EC

8. Mr. Fabrizio Sacchetti, European Commission Enterprise and Industry Directorate General (DG), explained the "Equipment intended for use in potentially Explosive Atmospheres" (ATEX) principle of integrated explosion safety, where all risks should be assessed and prevented in the design phase. The ATEX Directive covers the requirements for the first placing on the market and putting into service of a product. Other national and the European Union (EU) legislation intended to ensure the safety of workers applies in relation to the use of the product. Installations or plants are not regulated as such by the ATEX Directive but are subject to EU workplace Directives or national legislation. Harmonised standards are developed by the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC) on a mandate from the European Commission (EC) to support the legal requirements set out in the ATEX Directive. Application of the harmonised standards is voluntary, but confers a presumption of conformity with the relevant essential health and safety requirements covered by such standards. He explained the classification of equipment in different groups and categories according to intended use (mines or other places) and the level of risk (explosive atmosphere present continuously, likely to occur or unlikely to occur). He then introduced the different conformity assessment procedures provided for by the ATEX Directive and the role of Notified Bodies in this regard. He referred to the conditions for the designation of Notified Bodies by the EU

Member States and mentioned that, absent any provision to the contrary in the ATEX Directive, EU ATEX Notified Bodies can subcontract work outside the EU but they remain responsible and must sign off the work as well as keep a register of any subcontracting to allow effective monitoring by the responsible Member State. He also explained the meaning of the CE marking and the EU approach to market surveillance.

F. United States System for Hazardous (Classified) Location

9. Mr. Uwe Klausmeyer of the Physikalisch-Technische Bundesanstalt, Berlin Germany, gave an overview of the system in the United States of America (USA). There are three regulations in the USA, one for mining, one for surface industries and one for offshore, each presenting different requirements. Mr. Klausmeyer also presented information on Brazil.

G. IECEX Scheme

10. Mr. Chris Agius, IECEx Secretary, presented an overview of the IECEx structure. He said that IECEx International Standard approach to testing and certification in the Ex field focussed on Ex protection integrity. He described the process through which IECEx Certification Bodies are assessed and how the assessment and certification of Ex products and services is working. IECEx members certify a manufacturer's capability to consistently produce the product in compliance with the standard. He said that there was a uniform approach by all IECEx bodies and that they must accept each others test and assessment results. It is a voluntary scheme developed and run by industry and government representatives.

11. Mr. Agius further outlined the new Program which provides for the assessment and certification of Service Facilities involved in Repair and Overhaul of Ex equipment and that the IECEx Scheme is now developing a proposed extension to provide a single system for assessing and certifying Personnel involved in Ex-installations.

III. DISCUSSION

12. Participants discussed the relationship between IECEx and the ATEX Directive. It was noted that ATEX is a regulatory framework while IECEx is a voluntary certification scheme. Several European Notified Bodies are members of IECEx, which means that such bodies can have effective cooperation with other members of the IECEx.

13. The representative of IECEx informed that they are compiling a comparison document between ATEX and IECEx and this would be made available to the Task Force. The EC representative welcomed this and suggested that it would be useful if similar studies could be undertaken with respect to the legislation of other countries as well. Participants agreed that such information would be very valuable for the Task Force's further work.

14. The Chair emphasised that a trans-national approach was needed involving several countries/regions and that the Task Force should not focus on a particular country or region only. This is precisely the purpose of the international model "L" developed by the Working Party. He said that discussions with all interested regulators are needed (e.g. in Russia, China, US, etc as well as EU).

IV. NEXT STEPS

15. Members found that the discussions and sharing of information had been most useful.

16. It was agreed that a comparison table would be prepared by the Chair detailing the different approaches and situations in various countries. The questions prepared for the current meeting would be sent out to regulators for this purpose. Information already received would be used to do an initial population of the table before distribution. Work on the table should be completed by end January 2008 and participants were asked to cooperate in providing responses to the questionnaire.

17. The Task Force agreed on the approach of preparing a Model based on UNECE WP.6 Recommendation “L”. The above mentioned table would be used to commence this work.

18. It was agreed that a follow up meeting of the Task Force would be held in 2008, possibly at the START team meeting in May 2008.

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Annex

LIST OF PARTICIPANTS

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