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## *Economic Commission for Europe*

Steering Committee on Trade Capacity and Standards

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

#### **Thirtieth session**

Geneva, 2- 3 November 2020

Item 8 of the provisional agenda

**Recent Developments in International regulatory cooperation:**

## **Report on recent developments in the Sectoral Initiatives**

**Submitted by the Rapporteurs**

### *Summary*

This document contains the reports of the Rapporteurs for Sectoral Initiatives. The Report on Equipment for Explosive Environments in Section 1 describes work undertaken to promote and increase safety, while at the same time eliminating barriers to the free trade and use of the equipment. Section 2 contains the report on Earth-Moving Machinery aiming at reducing technical barriers to trade in the sector while preserving the safety and reliability of equipment. This document contains a status update on the initiatives. They are presented in the form received.

#### *Proposed decision:*

The Working Party adopts the report of the sectoral initiatives

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## **SECTION 1: Progress report on the sectoral initiative on Equipment for Explosive Environments<sup>1</sup>**

### **I. Project objective and key deliverables**

1. Accidents and explosions in mines and offshore facilities result in loss of life, widespread environmental damage and economic losses throughout the world.
2. The aim of the sectoral initiative on Explosive Environments Equipment (SIEEE) is to contribute to the safety of equipment used in these environments – to minimize the risk of explosions and contain their potential consequences for the workers and the surrounding areas – while at the same time eliminating barriers to the free trade and use of the equipment.
3. Specifically, the purpose of this sectoral initiative is to develop and promote a common regulatory framework – Common Regulatory Arrangements (CRAs) – for the “Equipment for Explosive Environments” sector. The framework includes not only common regulations, but also common and agreed conformity-assessment practices and market-surveillance procedures.
4. Equipment used in high-risk facilities is highly sophisticated. Checking that it conforms to international best practice and current regulations is a complex task, even for those regulatory authorities who have substantial resources and modern equipment at their disposal. The initiative works in close cooperation with the industry and with independent third-party conformity-assessment bodies, since it is in these two communities that expertise is kept up to date with technological progress.

### **II. Main achievements of the initiative prior to 2020**

5. At its twentieth session, in 2010, the Working Party revised the Common regulatory arrangements (CRAs) that it had approved in 2009. The 2010 version was published in a bound brochure thanks to support in kind from the International Electrotechnical Commission (IEC). The brochure – which can be downloaded from the ECE and on the IEC websites – was launched by the two organizations in April 2011.
6. Translations of the common regulatory arrangements (CRAs) into Arabic, Chinese, French, Portuguese, Russian and Spanish were made available by the International Electrotechnical Commission in 2013 and are available on the Working Party 6 website: <https://www.unece.org/tradewelcome/steering-committee-on-trade-capacity-and-standards/tradewp6/groups/equipment-for-explosive-environments.html>.
7. In 2018, a new version of the CRAs was finalized and approved by the Working Party on Regulatory Cooperation and Standardization Policies at its 28<sup>th</sup> session. The most important changes are the integration of the definition of Model L (that was approved by the Working Party in 2015), the extension of the recommendation to the participation of the IECEx Assessment and Testing Laboratory proficiency testing programs and supporting the market surveillance by independent certification bodies notified by regulation. This updated version was published by the end of 2019 and will be made available on the WP.6 website.
8. Market surveillance is important in this sector to ensure compliance of the equipment with regulations in force and avoid potential accidents. The SIEEE initiative has continued to work in cooperation with market surveillance authorities and with the UNECE Advisory Group for Market Surveillance (MARS Group) to develop best practice.

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<sup>1</sup> At its eighteenth session, the Working Party asked the secretariat to provide annual updates on the work of all the sectoral initiatives (ECE/TRADE/C/WP.6/2008/18, para. 63).

9. The work resulted in detailed guidelines for market surveillance authorities responsible for equipment used in Explosive Environments (Hazardous Locations) which were made available on the Working Party 6 website [http://www.unece.org/fileadmin/DAM/trade/wp6/SectoralInitiatives/EquipmentForExplosiveEnvironment/SIEEE\\_Guidelines\\_ENG.pdf](http://www.unece.org/fileadmin/DAM/trade/wp6/SectoralInitiatives/EquipmentForExplosiveEnvironment/SIEEE_Guidelines_ENG.pdf)). The guidelines are in the process of being updated, and when finalized, they will be included in the 2019 edition of the CRAs as Annex E.
10. Additional reference materials prepared previously by the sectoral initiative are:
- (a) a compilation of the legal framework in force in this sector on the world main markets in the sector Explosive Environments, available as an annex II to document ECE/TRADE/C/WP.6/2009/6, and posted on the website: [http://www.unece.org/fileadmin/DAM/trade/wp6/documents/2009/wp6\\_09\\_006E.pdf](http://www.unece.org/fileadmin/DAM/trade/wp6/documents/2009/wp6_09_006E.pdf);
  - (b) a project proposal for organizing capacity-building events worldwide to raise awareness by regulators of the high risks and challenges that are inherent to the sector, and highlighting best practice in industry, standardization and certification bodies. The project proposal is available as an annex to ECE/TRADE/C/WP.6/2010/12, available at [http://www.unece.org/fileadmin/DAM/trade/wp6/documents/2010/wp6\\_10\\_012e.pdf](http://www.unece.org/fileadmin/DAM/trade/wp6/documents/2010/wp6_10_012e.pdf); and
  - (c) an update of the questionnaire, about the regulations and procedures about the equipment in explosive environments of various countries undertaken by the project team in 2013 and is also available at <http://www.unece.org/tradewelcome/steering-committee-on-trade-capacity-and-standards/tradewp6/groups/equipment-for-explosive-environments.html>.
11. Since the initiative was first established, it has worked in close cooperation with the IEC System for Certification to Standards Relating to Equipment for use in Explosive Atmospheres (IECEX) to promote the ECE regulatory framework to regulators all around the world. UNECE and IECEX co-organized international conferences/workshops in Dubai, United Arab Emirates, in 2012, in Kuala Lumpur, Malaysia, in 2014, in Fortaleza, Brazil, in 2013 in Gdansk Poland in 2015 in Shanghai, China in 2017, in Split, Croatia, in 2018 and in Jakarta Indonesia in 2018. At each of these events, the Coordinator of the Sectoral Initiative or the UNECE Secretariat presented the Common Regulatory Framework for the Ex Equipment industry to local regulators as the basis for global rules for this sector.

### **III. Meetings and awareness-raising activities in 2020**

12. The sectoral initiative continued activities to promote the CRAs to regulatory authorities internationally. One important aim is the cooperation with the IECEX Scheme of IEC. Typically, an annual meeting takes place to discuss the further steps. Unfortunately caused by Covid-19 all meetings were postponed.
13. The initiative has continued to work in cooperation with market surveillance authorities. A meeting between SIEEE and the WG08 could not take place but further activities are in planning for the next year.
14. An “Informative guideline for national officials for regulation” explaining the benefit of the IECEX-Scheme and an invitation to communicate and exchange the information with the IECEX-Scheme was finalized. A dedicated Regulatory User Platform for communication among Ex Regulators will be set up by the Coordinator of the Initiative to facilitate information exchange. A special e-mail contact was installed (Officials-contact@iecex.com).
15. A discussion with the European Commission about further activities showed the interest of the European Commission in considering the “life cycle approach” of the Common Regulatory Arrangements.

16. A proficiency testing of electrical equipment for explosive environment took place in 2020 with the participation of ca. 80 test-institutes. The tests were organized by the PTB under the umbrella of the IECEX-Scheme. The test programme includes 2 different type of protection and 2 different products. The first program covered the safety of batteries and the second program covered the safety of enclosures with respect to the IP-Code. A planned workshop to discuss the results was postponed to 2021.

#### **IV. Responsibility for the continuation of the work**

17. The current Coordinator of the sectoral initiative is Frank Lienesch.

#### **V. Role of the secretariat**

18. The initiative invites the Working Party to request the secretariat to continue supporting the work of the initiative by servicing its meetings and keeping the website up to date. If extrabudgetary resources are available, the secretariat could assist the Coordinator in maintaining and developing contacts with the counterparts of the initiative in national Governments and regional groups.

### **SECTION 2: Report on the sectoral initiative on Earth-Moving Machinery<sup>2</sup>**

#### **I. Project objective and key deliverables**

19. To protect workers from potential hazards, machinery such as excavators, wheel loaders and other earth-moving machinery (EMM) need to respect strict safety requirements. Both industry and governments have been developing and applying best practice and international standards, especially in the context of the Technical Committee 127 on “Earth-moving machinery” of the International Organization for Standardization (ISO/TC 127).

20. In all major markets, ISO standards are used as the basis for national standards. However, more and more countries are adding regulatory requirements, as well as requirements for repeated testing and lengthy conformity-assessment procedures, which inflate prices with no gain in safety and quality of the traded equipment.

21. In 2003, the Working Party set up a sectoral initiative to reduce technical barriers to trade in this sector while preserving safety and reliability of equipment traded internationally. In 2004, it approved the first version of the Common Regulatory Objectives (CROs) for the safety requirements of earth-moving machinery, and a revised version in 2009. In 2010, the project initiated a model certificate of conformity that, if broadly adopted, would make data exchange easier between the producers, machine users, third-party certifiers and the authorities of exporting and importing countries.

22. In 2011, “risk management” was recognized as an important consideration for EMM safety and was evaluated as addition to the EMM project. Market surveillance had not been considered in the project and risk management is a new area that is also important for EMM.

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<sup>2</sup> At its eighteenth session, the Working Party asked the secretariat to provide annual updates on the work of all the sectoral initiatives (ECE/TRADE/C/WP.6/2008/18, para. 63).

## II. Main achievements of the Initiative until 2019

23. Since 2004, an international team has been promoting the general principles of the project in China, India, the Republic of Korea, the Russian Federation, South Africa and some countries of South America. It has been doing so both by promoting the adoption of the ISO/TC 127 standards as national standards and by recommending that countries use standards as the basis for technical regulations. Since most countries generally adopt the ISO/TC 127 standards as their national standards, the CROs were broadly considered as acceptable.

24. The compliance clause in the CROs (2004) allowed for conformity assessment only by using a supplier declaration of conformity. This, however, failed to meet the requirements of some of the developing countries, where the declaration is not considered a suitable tool for this sector.

25. The CROs were therefore revised and now allow for manufacturers to avail themselves of the services of external certifiers. This encourages the manufacturer and the third party to work within a stable framework; and testing that has already been done by the manufacturer can be used by the third party, within specific guidelines. The end goal of the process should be to build capacity at the manufacturer's premises, so that ultimately the declaration becomes the alternative of choice.

26. A revised version of the CROs – approved by the Working Party at its annual session in 2009 (see ECE/TRADE/C/WP.6/2009/19, para. 36) – is available as an annex to ECE/TRADE/C/WP.6/2010/11.

27. In 2010, the EMM project initiated a model certificate of conformity to respond to requests that manufacturers receive for compliance and certification in many areas. A common certificate could benefit customers, government officials and manufacturers.

28. In 2015 the project encountered a new regulatory and certification challenge for replacement parts for EMM. Countries are requiring repeated testing and certification for replacement parts that have already been validated as a part of the machine development process. The EMM model regulation project has been expanded to address this challenge.

29. The main output of the EMM project in 2016 was contribution to the development of the ISO/TC 127 Technical Report (ISO TR 19948 Earth-moving machinery – Conformity assessment and certification process), which was published. The document presents best practices for standards, regulations, conformity assessment and certification of earth-moving machines. It can be used by countries who plan new standards, regulations, conformity assessment and certification processes for earth-moving machines. A global conformity assessment certificate is included in ISO TR 19948.

## III. Activities in 2020 and deliverables for the annual session

30. The Earth-Moving Machinery Task Force exchanged information informally by e-mail and by discussions at standards meetings throughout 2020.

31. The next area of interest of standards and regulations for earth-moving machines is the Gulf Region. The team plans to continue to promote the adoption of the standards, regulations and conformity assessment processes developed in this project.

32. The international project team is continuing to monitor the need for standards and regulations and is prepared to provide training seminars to assist with the implementation of new standards and regulations.

33. The project team is supporting and promoting ISO standards for advanced automation, including: Autonomous Machine System Safety, Collision Warning and Avoidance Systems, Functional Safety of Controls, Computer Data Exchange.

#### **IV. Responsibility for the continuation of the work**

34. The Earth-Moving Machinery Project Task Force consists of the following persons:

- Dan Roley – Convener,
- Chuck Crowell (United States of America),
- Minpei Shoda (Japan),
- Stefan Nilsson (Sweden).

#### **V. Role of the secretariat**

35. The Task Force invites the Working Party to request the secretariat to keep the website updated and to assist the Convener in maintaining and developing contacts with Governments to promote the project, depending upon availability of resources.

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