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International regulatory cooperation:

Sectoral projects

Report on the sectoral initiative on Equipment for Explosive Environments*

Submitted by the Rapporteur

Summary

Facilities such as mines, refineries, chemical plants and mills expose their workers and the surrounding environment to high risks. To minimize these risks and contain their potential consequences, all equipment used in these environments needs to be designed, installed, maintained and repaired in such a way as to avoid the risk of explosions. The goal of the sectoral initiative on Equipment for Explosive Environments is to promote and increase safety, while at the same time eliminating barriers to the free trade and use of the equipment.

This document contains a status update on the sectoral initiative.

Proposed decision:

The Working Party adopts the report of the sectoral initiative on Equipment for Explosive Environments. It requests the secretariat to continue to report on its development and implementation. It further requests the secretariat, depending on availability of extrabudgetary resources, to assist in maintaining and developing contacts with Governments to promote the project.

* 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).

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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 – hereinafter the sectoral initiative) 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 sectoral 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 sectoral initiative prior to 2019

5. At its twentieth session, in 2010, the Working Party revised the Common regulatory objectives (CROs), now referred to as 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. The CROs were translated into Arabic, Chinese, French Portuguese, Russian and Spanish thanks to the in-kind assistance of the International Electrotechnical Commission (IEC) 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 CROs now called Common Regulatory Arrangements (CRAs) was finalized and approved by the Working Party on Regulatory Cooperation and Standardization Policies at its 28th session. The most important changes were the incorporation of the updated UNECE International Model (that had been approved by the Working Party in 2015 as part of the revision of Recommendation L), the requirement that conformity assessment should demonstrate their competence by participation in proficiency testing programs and the recommendation that market surveillance be supported by independent certification bodies. This updated version will be published by the end of 2019 and will be made available on the WP. 6 website.
8. Market surveillance is of particular important in this sector to ensure compliance of the equipment with regulations in force and avoid potential accidents. The sectoral 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 adapted to the specifics of this sector.

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. 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 developed up to 2019 by the sectoral initiative include:

- 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 (this reflects the situation in 2009);
- 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, at http://www.unece.org/fileadmin/DAM/trade/wp6/documents/2010/wp6_10_012e.pdf;
- 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 sectoral 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 best practice developed by the UNECE sectoral initiative 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 2019

12. In the current reporting period, the sectoral initiative continued its activities aimed at promoting the CRAs to regulatory authorities internationally. A meeting was organized by IECEX in cooperation with the Emirates' Conformity Assessment Scheme (ECASEX) in Dubai, United Arab Emirates. About 100 participants discussed the global alignment of the Ex-requirements and were informed about the UNECE-led initiative. A detailed report about the meeting will be provided orally at the 29th session of the Working Party on Regulatory Cooperation and Standardization Policies.

13. The initiative has also continued to work to finalize the guidelines for market surveillance authorities responsible for safety in the Ex Equipment sector. In particular, the initiative held a meeting with the Expert Working Group (WG08)

of the IECEX in May 2019 in Singapore, as part of the 2019 series of IECEX Operational Meetings. For reference, WG08 works to ensure that the International Certification operations of IECEX meet the needs of regulators. The WG08 is developing a dedicated Regulatory User Platform to enhance communication among Ex Regulators and an Informative Guide outlining the features of IECEX that are relevant to regulators in particular as regards non-compliance and market surveillance operations.

14. A meeting with the European Commission was held and the “life cycle approach” of the Common Regulatory Objectives was presented.

15. The second edition of the CROs (CRAs) will be published by the coordinator with the support of the International Electrotechnical Commission, IEC and its IECEX at the end of 2019.

IV. Responsibility for the continuation of the work

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

V. Role of the secretariat

17. 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.
