



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/TRADE/C/WP.6/2009/5  
7 September 2009

Original: ENGLISH

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**ECONOMIC COMMISSION FOR EUROPE**

**COMMITTEE ON TRADE**

Working Party on Regulatory Cooperation and  
Standardization Policies

Nineteenth session  
Geneva, 24-26 November 2009  
Item 6 (b) of the provisional agenda

**REGULATORY COOPERATION**

**SECTORAL PROJECTS**

**Progress report on the Sectoral Initiative on Earth-Moving Machinery**

Note by the secretariat

1. The Working Party, at its eighteenth session asked the secretariat to provide annual updates on the work of all the sectoral initiatives (ECE/TRADE/C/WP.6/2008/18, para. 63). Accordingly, this report contains concise information on the status of the Initiative, and describes the main activities that they have been completed and are under way. The information is organized on the basis of a template prepared by the secretariat. The progress report is submitted to the Working Party for noting.

2. The document includes two annexes: the first contains the proposed revision to the CROs for Earth-Moving Machinery and the second the terms of reference of the Sectoral Initiative. The annexes of the document are for discussion and eventual approval by the Working Party.

## **I. PROJECT OBJECTIVE AND KEY DELIVERABLES**

3. Cranes, bulldozers and other earth-moving machinery must have a high level of safety in order to protect workers from potential hazards. For this reason, both industry and Governments have been actively involved in developing and implementing best practice and international standards, especially in the context of the Technical Committee 127 of the International Organization for Standardization (ISO/TC 127).

4. ISO standards have long been used as a common denominator to minimize safety risks. However, because no mutual recognition agreements (MRA), exist for conformity assessment procedures, the market remains segmented. Consequently, repeated testing and certification, which are especially costly and lengthy in this sector, unnecessarily elevate prices and distort competition.

5. The Sectoral Initiative was set up in 2003 to develop a proposal for Common Regulatory Objectives (CROs) based on the UNECE Recommendation L (ECE/TRADE/378). In November 2004, a proposal for CROs applicable to earth-moving machinery safety was submitted to the Working Party. The Working Party endorsed the proposal and invited Governments to join this project (see report TRADE/WP.6/2004/15, paras 62-68).

## **II. CURRENT STATUS OF PROJECT**

6. Since 2004, an international team has been promoting the general principles of the project in China, Russia, India and some South American countries, both by fostering the adoption of the ISO/TC 127 standards as national standards and by recommending the use of the technical requirements in the ISO/TC 127 standards as the basis for future regulations. Since most countries generally adopt the ISO/TC 127 standards as their national standards the first part of the Model is broadly acceptable.

7. However, the compliance clause in the current CROs only contains one option: the supplier declaration of conformity (SDoC). This does not meet the requirements of some of the developing countries, where there is not sufficient trust in the business sector for SDoC to be a suitable tool. SIEMM has therefore been working on a revision of the CROs.

8. The proposed revised CROs, which are reproduced as annex I to the present document, allow for manufacturers to avail themselves of the services of external certifiers. It is important that the manufacturer and an accredited third-party for conformity assessment have a stable framework for cooperation. Conformity assessment testing that has already been done by the manufacturer can then 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 in the long run the SDoC becomes the alternative of choice.

## **III. PROJECT MEETINGS AND/OR CONFERENCE CALLS HELD IN 2009**

9. The Earth-Moving Machinery Task Force held a conference call on 28 January 2009 and one meeting, on 28 May 2009, in Stockholm. On that occasion, the Convener gave an update of the activities of the Task Force.

#### **IV. PROGRESS IN 2009 AND DELIVERABLES FOR THE ANNUAL SESSION**

10. The main deliverable for the nineteenth session of the Working Party is the first draft of the CROs, reproduced as annex I of this document. The Working Party is expected to discuss and formally endorse the text or provide feedback to the Sectoral Initiative so that the text can be finalized.

11. Furthermore, since the terms of reference of the Sectoral Initiative have not been formally adopted by the Working Party up to now, the Working Party is expected to discuss the proposal set out in annex II for eventual adoption.

#### **V. RESPONSIBILITY FOR THE CONTINUATION OF THE WORK**

12. The Earth-Moving Machinery Project Task Force consists of the following people:

- (a) Jean Mimer (Sweden)
- (b) Dan Roley (USA) – Convener
- (c) Kenza Tanaka (Japan)

#### **VI. ROLE OF THE SECRETARIAT**

13. The Task Force expects the secretariat to keep the website updated and to assist the Convener in maintaining and developing contacts with Governments to promote the project.

## Annex I

### SECTORAL INITIATIVE ON EARTH-MOVING MACHINERY SAFETY

#### Common Regulatory Objectives (CROs) Revised Proposal

#### I. INTRODUCTION

1. The earth-moving machine industry has been a global industry for many years and ISO standards have been developed to address safety risks in compliance with widely shared technical requirements.

2. ISO/TC 127 was formed in 1968 with an objective to develop a complete set of standards to address the safety and commercial needs for Earth-Moving Machines. Over 100 standards for earth-moving machines have been published and new standards are continually being developed to address new technology and new types of Earth-Moving Machines.

3. Many national and regional regulations already use the technical requirements contained in the ISO/TC 127 standards to address the safety risks for Earth-Moving Machines. A good example is in the EU, where the EN 474 standard was developed to enable manufacturers to show that Earth-Moving Machines comply with the EU Machine Safety Directive (2006/42/EC). EN 474 addresses all significant risks for earth-moving machines and the technical requirements to minimize the risks are coming from 40 of the ISO/TC 127 standards.

4. During the Construction Equipment Joint Technical Liaison (JTLM) meeting in 2003 between the industry associations from Europe (CECE), the USA (AEM) and Japan (CEMA), it was decided to elaborate a CRO ("Common Regulatory Objective", as proposed by the mechanism of the UNECE "International Model") for Earth-Moving Machines within UNECE WP.6. It was also decided to establish a Working group to develop the proposal for the CRO on Earth-Moving Machines based on the ISO/TC 127 standards and an ISO version of EN 474, ISO 20474. The following were nominated as members of the JTLM working group:

- (a) Jan Mimer, Volvo, representing CECE and the EU
- (b) Dan Roley, Caterpillar, representing AEM and the USA
- (c) Kenzo Tanaka, Komatsu, representing CEMA and Japan

5. In November 2004, the first CROs for this sector were endorsed by the Working Party at its fourteenth session. The CROs incorporated the principal elements defined in the UNECE Recommendation L (ECE/TRADE/378), and the new ISO/TC 127 general safety standard (ISO 20474). The CROs covered safety for Earth-Moving Machines, but does not cover environmental noise, engine emissions and roading requirements, that are covered under general regulations that apply to many types of mobile machines.

6. In 2008 a need was recognized to improve the compliance clause to address the requirement for third party certification in developing countries where a trust of manufacturers for SDoC has not been achieved yet. The EMM CRO is being updated in 2009 to improve the compliance clause.

## **II. SCOPE STATEMENT**

7. This CRO applies to the design and construction of Earth-Moving Machines (machines as described in ISO 6165) and establishes essential Health and Safety requirements concerning the prevention of hazards to which workers can be exposed to while at work. This CRO specifies the general safety requirements for Earth-Moving Machines and deals with all significant hazards pertinent to Earth-Moving Machines, when used as intended and under the conditions foreseen by the manufacturer. This CRO specifies the appropriate technical measures to eliminate or reduce risks arising from the significant hazards and hazardous situations for Earth-Moving Machines.

## **III. MACHINE REQUIREMENTS**

8. Earth-Moving Machines must be constructed so that they can be used, adjusted, and maintained without putting persons at risk when these operations are carried out under the conditions foreseen by the manufacturer. Measures must be taken to minimize any risk of accident throughout the foreseeable lifetime of the machines, including the phases of assembly and dismantling.

9. The specific requirements to address all of the safety risks for Earth-Moving Machinery are covered in a single ISO/TC 127 general safety standard, ISO 20474:2008 Earth-Moving Machinery – Safety – General Requirements. ISO 20474 references over 40 other ISO standards for Earth-Moving Machines and provides general performance requirements to address the safety risks.

10. Machines that comply with the ISO 20474 standard for Earth-Moving Machines are presumed to comply with all of the safety requirements for Earth-Moving Machines. ISO 20474 defines performance criteria that lead to safe levels for the risks. Other solutions that provide equal to or better safety levels are acceptable, to allow for new technology or alternate options for addressing the safety risks.

## **IV. COMPLIANCE CLAUSE**

11. Compliance with this CRO shall be by Suppliers Declaration of Conformity (SDoC), as it is currently being done in the USA, the EU and Japan. In some countries where manufacturers are not prepared to do SDoC or are not trusted yet to do SDoC, the assistance of a third party may be necessary for conformity assessment. For these countries, the manufacturer can work with a Third-Party for Conformity Assessment. Conformity assessment testing that has already been done by the manufacturer can be used if the manufacturer has the following:

- (a) A quality plan that is at least equivalent to ISO 9000;
- (b) A documented conformity assessment process;
- (c) A conformity assessment group to manage the conformity assessment;
- (d) Access to conformity assessment facilities (internal or external).

## **V. MARKET SURVEILLANCE AND PROTECTION CLAUSE**

12. Countries having agreed to the CRO are responsible for market surveillance within their territory. If a country finds machines claiming conformity with a CRO that do not actually conform to the requirements, the country may withdraw such a machine from its market.

## **Annex II**

### **SECTORAL INITIATIVE ON EARTH-MOVING MACHINERY SAFETY**

#### **Terms of Reference**

#### **I. OBJECTIVES OF THE SECTORAL INITIATIVE ON “EARTH-MOVING MACHINERY”**

1. The specific purpose of the Sectoral Initiative is to develop common regulatory objectives (CROs) for the regulation of placing Earth-Moving Machinery on the market. The CROs shall include verification of the technical requirements to address safety risks of Earth-Moving Machinery and the related conformity assessment procedures. The aim is to eliminate barriers to trade of products in this sector.
2. Earth-Moving Machinery must have a high level of safety in order to protect workers and the environment from safety risks.
3. The Sectoral Initiative will work closely with the Ad Hoc Team of Specialists on Standardization And Regulatory Techniques (START) Team. The START Team will provide assistance and guidance on policy matters for its work according to the “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”. (Recommendation L ECE/TRADE/376)

#### **II. COMPOSITION OF THE SECTORAL INITIATIVE: MEMBERSHIP AND PARTICIPATION IN ITS MEETINGS**

4. The Sectoral Initiative offers a platform for regulators of the participating countries to give them the possibility to discuss their concerns and approaches with experts of the producing industries and the different users of Earth-Moving Machinery.
5. It reaches out to experts and representatives not only from countries in the UNECE region but also from other interested United Nations Member States. It works with international organizations, as well as representatives of the private sector and non-governmental organizations (NGOs), particularly the International Standardization Organization.
6. The UNECE secretariat will provide, within available resources, the necessary support and guidance to the Task Force and its teams.

#### **III. REPORTING**

7. The Sectoral Initiative shall report to the Working Party on Technical Harmonization and Standardization Policies (WP.6) and frequently inform the START Team of its work.
8. The terms of reference and duration of work of the Sectoral Initiative will be reviewed regularly by the Working Party in accordance with UNECE rules and procedures, and will be submitted for decision to WP.6.

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