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Earth-moving machinery — Conformity assessment and certification process

Engins de terrassement — Processus d'évaluation de la conformité et de certification

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html

The committee responsible for this document is ISO/TC 127, *Earth-moving machinery*.

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Introduction

Background

ISO Technical committee, ISO/TC 127, *Earth-moving machinery*, was formed in 1968 to promote harmonization of global safety requirements for the already global earth-moving machine (EMM) industry. The goal of the committee is to pro-actively develop International Standards to address all safety risks for its machines.

EMM manufacturers use the standards to achieve a high level of safety for machines to meet the safety expectations of customers and health and safety groups. The EMM industry strives to develop machines that are recognized as *safe* machines, and allow its manufacturers to use ISO/IEC 17050, and for supplier's declarations of conformity (SDoC). Third party certification might be required by countries where manufacturers may lack the necessary expertise or testing facilities to do their own conformity assessment testing for SDoC.

Challenge

Earth-moving machines are low-production volume compared to automobiles or home appliances. The yearly sales for many models is less than 10 machines per country. Repeated conformity assessment testing causes significant time delays and added cost for customers, if third party testing and certification are required in each country.

United Nations Economic Commission for Europe (UNECE) project

To address this challenge, the EMM industry started a "model regulation project" in the UNECE's Working Party (WP) 6. The purposed of WP 6 is to facilitate global harmonization of standards, regulations and conformity assessment processes. The UNECE EMM model regulation project includes

— developing and complying with International Standards developed by ISO/TC 127,

— using the requirements of the standards as the technical requirements for national safety regulations,

— accepting conformity assessment testing completed by manufacturers for compliance to standards, and

— accepting SDoC for compliance with regulations.

With the requirement for third party certification in some countries, the EMM model regulation project allows third party certification in the short-term, with provisions to accept testing by manufacturers for the third party certification *without repeating the testing*. If third party certification is required, the project promotes the acceptance of a single third party certification by all countries, thereby avoiding unnecessary costs and time delays.

Current status

The application of International Standards and the conformity assessment process by machine manufacturers is a major element for achieving the goal of "zero injury and zero harm" on user worksites around the world.

The SDoC assessment process completed by manufacturers demonstrates compliance for the entire machine, including all of its systems, components and parts. Additional conformity assessment is not necessary for replacement parts that were already covered in the manufacturer's machine conformity assessment process.

The UNECE WP 6 Model Regulation has been well received in countries where the UNECE project team has provided training seminars.

To further facilitate the use of the EMM model regulation process, this Technical Report documents the process.

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Earth-moving machinery — Conformity assessment and certification process

1 Scope

This document presents a process for conformity assessment and certification for earth-moving machinery as defined in ISO 6165. This includes a presentation of the characteristics of standards to be used for conformity assessment of the machines, a process for testing to demonstrate compliance with those standards, and a process for third party certification where such certification is required.

The global objective for the earth-moving machinery industry is acceptance and use of supplier's declarations of conformity (SDoC) according to ISO/IEC 17050. This document includes provisions for third party certification in countries or regions where SDoC is not accepted.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6165, *Earth-moving machinery — Basic types — Identification and terms and definitions*

ISO/IEC 17050-1, *Conformity assessment — Supplier's declaration of conformity — Part 1: General requirements*

ISO/IEC 17050-2, *Conformity assessment — Supplier's declaration of conformity — Part 2: Supporting documentation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6165 and ISO/IEC 17000, and the following, apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
conformity assessment
demonstration that specified requirements relating to a product, process or system are fulfilled

[SOURCE: ISO/IEC 17000:2004, 2.1, modified — The words "person or body" and Notes 1 and 2 to entry have been omitted.]

3.2
product identification number
PIN
unique set of 17 alphanumeric characters assigned to a complete machine by the manufacturer for identification purposes

[SOURCE: ISO 10261]

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