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Earth-moving machinery — Fire prevention guidance

Engins de terrassement — Lignes directrices pour la prévention des incendies

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Foreword

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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 document 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).

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This document was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 2, *Safety, ergonomics and general requirements*.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Earth-moving machinery — Fire prevention guidance

1 Scope

This document provides guidance on protective measures for consideration in fire risk reduction through machine design and operation and maintenance instructions for earth-moving machinery, as defined in ISO 6165, during their intended use.

NOTE The information in this document presumes that fire hazards for the normal applications anticipated for the machine family by the machine manufacturer have been analysed. This analysis can be done as part of the ISO 12100 machine risk assessment or as a separate fire hazard risk assessment conducted in accordance with ISO 12100 or ISO 19353:2019, 5.1, 5.2, 5.3 and 5.4.

This document also provides the basic concept of fire hazards and examples of typical fuel sources and ignition sources found in earth-moving machinery and earth-moving machinery applications.

This document does not cover all specific aspects of fire prevention for battery electric powertrains (e.g. fire prevention for batteries, battery management systems) due to the evolving development of such technology. However, the guidance in this document can still be beneficial. Additional guidance can also be found in the ISO 14990 series and ISO/DIS 23285.[1)]

This document does not cover the additional risks for machines operating in potentially explosive atmospheres.

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 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100, and the following apply.

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

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

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

3.1
explosive atmosphere
atmospheres containing substances or gases at concentrations that will burn or explode if ignited

[SOURCE: ISO/TR 19591:2018, 3.112]

3.2
fire prevention
measures to prevent the outbreak of a fire and/or to limit its effects

[SOURCE: ISO 8421-1:1987, 1.21]

1) Under preparation. Stage at the time of publication: ISO/DIS 23285:2024

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