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Earth-moving machinery — Electrical safety of machines utilizing electric drives and related components and systems

Part 2: Particular requirements for externally-powered machines

AS ISO 14990.2:2022

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Australasian Institute of Mining & Metallurgy
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Better Regulation Division — Safework NSW
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Engineers Australia
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Preface

This Standard was prepared by the Standards Australia Committee ME-063, Earthmoving Equipment.

The objective of this document is to specify the particular safety requirements for the electrical equipment and its components incorporated in externally-powered (mains-connected, including machines powered by external dedicated generators), electrically-driven earth-moving machines (EMMs).

This document is applicable to those machines using on-board voltages in the range of 50 V–36 kV AC r.m.s. at any frequency and 75 V–36 kV DC — including any repetition rate of pulsating DC — intended for outdoor use. Voltages occurring within devices are not considered to be on-board voltages and are thus not within its scope.

This document is intended to be used in conjunction with AS 14990.1:2022, which gives general requirements for EMMs regardless of how they are powered. Requirements specific to self-powered machines are given in AS ISO 14990.3:2022. However, it is possible for an EMM to be both self-powered and externally-powered (e.g. a battery-powered machine having a built-in charger with power supply function), in which case AS ISO 14990.3:2022 is also applicable.

This document is the adoption with national modifications of ISO 14990-2:2019, *Earth-moving machinery — Electrical safety of machines utilizing electric drives and related components and systems — Part 2: Particular requirements for externally-powered machines*.

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