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Edition 1.0 2015-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Railway applications – Radio remote control system of traction vehicles for shunting application

Applications ferroviaires – Système de radiocommande à distance des véhicules de traction pour application de manœuvre

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

RAILWAY APPLICATIONS – RADIO REMOTE CONTROL SYSTEM OF TRACTION VEHICLES FOR SHUNTING APPLICATION

FOREWORD

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International Standard IEC 62845 has been prepared by IEC technical committee 9: Electrical equipment and systems for railways.

The text of this standard is based on the following documents:

FDIS	Report on voting
9/2044/FDIS	9/2069/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

The French version of this standard has not been voted upon.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This standard has been derived from EN 50239:1999 (see also Introduction).

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The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
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- replaced by a revised edition, or
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INTRODUCTION

This International Standard is prompted to offer a minimum set of requirements for the application of remote control of traction vehicles by means of radio communication, operated by ground personnel during shunting. The minimum set of requirements is considered with reference to the following aspects:

– operational requirements of the use of radio remote control system;
– functional requirements of the radio remote control system;
– technical requirements of the radio remote control system.

This standard uses the following IEC standards for guidance:

– IEC 60571 Railway applications – Electronic equipment used on rolling stock
– IEC 62278 Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS)

This International Standard is based on EN 50239:1999. The main changes with regard to EN 50239:1999 are listed below:

a) contents related to Safety Integrity Level (SIL) are deleted, in particular Annex A with all its examples of EN 50239:1999;
b) the text of this International Standard is considering only shunting application;
c) the title is replaced by “Railway applications – Radio remote control system of traction vehicles for shunting application”.

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RAILWAY APPLICATIONS – RADIO REMOTE CONTROL SYSTEM OF TRACTION VEHICLES FOR SHUNTING APPLICATION

1 Scope

This International Standard covers the application requirements relevant to the radio remote control of a traction unit for shunting application, operated by personnel not physically located at the controls within the vehicle cab.

Specification requirements of radio means and wireless protocols, as well as specification requirements of wireless communication between elements of the train, are not covered by this standard.

This international standard is applicable to newly manufactured vehicles or as retrofit on existing vehicles.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60571:2012, *Railway applications – Electronic equipment used on rolling stock*

IEC 62278, *Railway applications – Specification and demonstration of reliability, availability, maintainability and safety (RAMS)*

IEC 62279, *Railway applications – Communication, signalling and processing systems – Software for railway control and protection systems*

IEC 62425, *Railway applications – Communication, signalling and processing systems – Safety related electronic systems for signalling*

IEC 62498-1:2010, *Railway applications – Environmental conditions for equipment – Part 1: Equipment on board rolling stock*

ISO 14118, *Safety of machinery – Prevention of unexpected start-up*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
addressing
set of rules that allows only the designated transmitter to address the corresponding receiver

3.2
anti-skid device
device which limits skidding/blocking of any wheels during braking

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