

ICS 45.120; 93.100

English Version

**Railway applications - Infrastructure - Rail mounted  
railway maintenance and inspection machines and  
associated equipment - Explanation of machine type and  
compliance, including acceptance processes**

Applications ferroviaires - Infrastructure - Machines  
ferroviaires de maintenance et d'inspection -  
Explication du type de machine et de leur conformité, y  
compris les processus d'autorisation

Bahnanwendungen - Infrastruktur -  
Schienengebundene Instandhaltungs- und  
Inspektionsmaschinen - Erläuterung des  
Maschinentyps und der Konformität, einschließlich der  
Zulassungsverfahren

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## European foreword

This document (CEN/TR 17498:2020) has been prepared by Technical Committee CEN/TC 256 "Railway applications", the secretariat of which is held by DIN.

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## Introduction

This document is intended as an explanatory guide to machines that are fitted with rail wheels. It is written to clarify the complex variety of machines that are used for the construction, maintenance, inspection, repair and renewal of railway infrastructure. It is intended to be used as an introduction to, and application guide for, the suite of standards for rail mounted maintenance and infrastructure inspection machines. It is an aid to clarify which standard to use for a particular machine. This document does not introduce any new requirements.

Machines are designed and intended for a specific working purpose and their ability to operate as a railway vehicle is considered as an additional function.

There are various standards which apply to the machines in scope of this document:

- EN 13977;
- EN 14033 series;
- EN 15746 series;
- EN 15955.

## 1 Scope

This document covers machines fitted with rail wheels that are used for the construction, maintenance, inspection, repair and renewal of railway infrastructure. It is also applicable to machines used for emergency rescue purposes on railway infrastructure.

NOTE Inspection of the infrastructure includes measurement.

This document explains the different modes of operation, classification of machines and which standard covers the technical requirements. There is also guidance on the compliance process provided to explain the design review process of different legislation, how these can be combined into one process (to avoid duplication) and achieve a common understanding of what the design review is achieving.

## 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.

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

EN 13977, *Railway applications — Track — Safety requirements for portable machines and trolleys for construction and maintenance*

EN 14033-1:2017, *Railway applications — Track — Railbound construction and maintenance machines — Part 1: Technical requirements for running*

EN 14033-2, *Railway applications — Track — Railbound construction and maintenance machines — Part 2: Technical requirements for travelling and working*

EN 14033-3, *Railway applications — Track — Railbound construction and maintenance machines — Part 3: General safety requirements*

EN 14033-4, *Railway applications — Track — Railbound construction and maintenance machines — Part 4: Technical requirements for running, travelling and working on urban rail*

EN 15746-1:—<sup>1</sup>, *Railway applications — Track — Road-rail machines and associated equipment — Part 1: Technical requirements for travelling and working*

EN 15746-2:—<sup>2</sup>, *Railway applications — Track — Road-rail machines and associated equipment — Part 2: General safety requirements*

EN 15746-3:—<sup>3</sup>, *Railway applications — Track — Road-rail machines and associated equipment — Part 3: Technical requirements for running*

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<sup>1</sup> Under preparation. Stage at the time of publication: FprEN 15746-1.

<sup>2</sup> Under preparation. Stage at the time of publication: FprEN 15746-2.

<sup>3</sup> Under preparation. Stage at the time of publication: FprEN 15746-3.

EN 15746-4:—<sup>4</sup>, *Railway applications — Track — Road-rail machines and associated equipment — Part 4: Technical requirements for running, travelling and working on urban rail*

EN 15955:—<sup>5</sup>, *Railway applications — Infrastructure — Demountable machines, trailers and associated equipment — General safety and technical requirements for travelling and working*

EN 16704-1, *Railway applications — Track — Safety protection on the track during work — Part 1: Railway risks and common principles for protection of fixed and mobile work sites*

### 3 Terms and definitions

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

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

- ISO Online browsing platform: available at <https://www.iso.org/obp/ui>
- IEC Electropedia: available at <http://www.electropedia.org/>

#### 3.1

##### **rail mounted railway maintenance and infrastructure inspection machine**

generic term for the collection of all machines which have wheels suitable for running on rails and are intended for the construction, maintenance, inspection, repair and renewal of railway infrastructure. It is also applicable to machines used for emergency rescue purposes on railway infrastructure

#### 3.2

##### **railbound construction and maintenance machine**

collective term for on-track machines and infrastructure inspection machines

#### 3.3

##### **on-track machine**

##### **OTM**

machine specially designed for construction and maintenance of the track and infrastructure, running on its own rail wheels and designed and intended to operate signalling systems

Note 1 to entry: Signalling systems are defined in CCS TSI Index 77 and/or defined by the urban rail manager.

#### 3.4

##### **infrastructure inspection machine**

self-propelled or a hauled machine used to monitor the condition of the infrastructure, running on its own rail wheels, and designed and intended to operate signalling systems

Note 1 to entry: These machines are also referred to in the Loc&Pas TSI as infrastructure inspection vehicles.

Note 2 to entry: These machines are also referred to in EN 13848-2 as Track Recording Vehicles.

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<sup>4</sup> Under preparation. Stage at the time of publication: FprEN 15746-4.

<sup>5</sup> Under preparation. Stage at the time of publication: prEN 15955.