

**Raudteealased rakendused. Konstruksiooninõuded
astmetele, käsipuudele ja seonduvatele personali
juurdepääsuteedele. Osa 2: Kaubavagunid**

**Railway applications - Design requirements for steps,
handrails and associated access for staff - Part 2:
Freight wagons**

EESTI STANDARDI EESSÕNA

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English Version

**Railway applications - Design requirements for steps, handrails
and associated access for staff - Part 2: Freight wagons**

Applications ferroviaires - Exigences pour la conception des
marchepieds, mains courantes et accès du personnel -
Partie 2: Wagons

Bahnanwendungen - Konstruktionsanforderungen an Tritte,
Handgriffe und zugehörige Zugänge für das Personal - Teil
2: Güterwagen

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Foreword

This document (EN 16116-2:2013) has been prepared by Technical Committee CEN/TC 256 "Railway applications", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2014, and conflicting national standards shall be withdrawn at the latest by March 2014.

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This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2008/57/EC.

For relationship with EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

This European Standard is part of the series EN 16116, *Railway applications – Design requirements for steps, handrails and associated access for staff*, which consists of the following parts:

- *Part 1: Passenger vehicles, luggage vans and locomotives;*
- *Part 2: Freight wagons.*

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Introduction

To achieve an undisturbed, reliable and safe operation of freight trains it is essential to define common requirements for safe access and egress for rolling stock of interoperable trains with respect to e.g. structural requirements, operating characteristics, way of operation, maintenance as well as their handling.

Coupling of freight wagons by means of screw couplings is usually done by personnel.

The design of freight wagons needs to be suitable to meet these functions without exposing staff to undue risk.

Freight wagons require sufficient space for their coupling and uncoupling by staff without any rigid features impeding accessibility to the screw coupler. Also there is a need for provision of suitable footsteps and handrails for personnel, to allow temporary travel outside the vehicle during shunting as well as to access the vehicle.

If wagons according to TSI-FW are equipped with steps and handholds, these needs apply to all designs of vehicle.

To achieve an undisturbed, reliable and safe operation it is therefore essential to harmonise the functional requirements and characteristic dimensions and assess and permanently ensure their suitability for interoperable traffic.

1 Scope

This European Standard specifies the minimum requirements for ergonomic and structural integrity of steps and handrails used together to give staff access to freight wagons. It does not cover ladders, top platforms and top gangways.

It defines in particular the required spaces necessary for handling of screw couplings with side buffers, for shunter handrails, for shunter's stand, for steps and handrails.

This European Standard also defines their dimensions, positions, limits for durability and functionality.

It also defines the general requirements for the access to tail lights for freight wagons.

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.

EN 10025-2, *Hot rolled products of structural steels — Part 2: Technical delivery conditions for non-alloy structural steels*

EN 12561-7, *Railway applications — Tank wagons — Part 7: Platforms and ladders*

EN 15085 (all parts), *Railway applications — Welding of railway vehicles and components*

EN 15273-2, *Railway applications — Gauges — Part 2: Rolling stock gauge*

3 Terms and definitions

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

3.1

clearance

defined free space which is needed to ensure space for the correct functioning of, and safety when handling, devices

3.2

step

footstep with defined properties solely for staff use

3.3

shunter

shunting staff who couples and uncouples vehicles or directs movements

3.4

shunter's step

specific step used for the shunter's stand

3.5

handrail

handrail with defined properties solely for staff use