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Järnvägar – Tankvagnar – Del 7: Plattformer och stegar

Railway applications – Tank wagons – Part 7: Platforms and ladders

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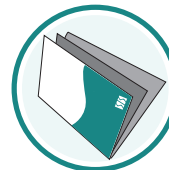
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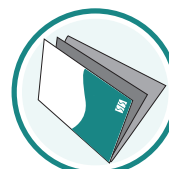
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Denna standard ersätter SS-EN 12561-7:2004, utgåva 1.

The European Standard EN 12561-7:2011 has the status of a Swedish Standard. This document contains the official version of EN 12561-7:2011.

This standard supersedes the Swedish Standard SS-EN 12561-7:2004, edition 1.

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Denna standard är framtagen av kommittén för Järnvägar, SIS/TK 254.

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EUROPEAN STANDARD

EN 12561-7

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2011

ICS 45.060.20

Supersedes EN 12561-7:2004

English Version

Railway applications - Tank wagons - Part 7: Platforms and ladders

Applications ferroviaires - Wagons citernes - Partie 7: Plateformes et échelles

Bahnanwendungen - Kesselwagen - Teil 7: Arbeitsbühnen und Leitern

This European Standard was approved by CEN on 3 June 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Foreword

This document (EN 12561-7:2011) 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 December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12561-7:2004.

This European Standard *Railway applications — Tank wagons* consists of the following parts:

- *Part 1: Identification plates for tank wagons for the carriage of dangerous goods;*
- *Part 2: Bottom emptying devices for liquid products including vapour return;*
- *Part 3: Bottom filling and emptying devices for gases liquefied under pressure;*
- *Part 4: Devices for top filling and emptying of liquid products;*
- *Part 5: Devices for vapour return while filling or emptying of liquid products;*
- *Part 6: Manholes;*
- *Part 7: Platforms and ladders;*
- *Part 8: Heating connections.*

The changes made during this revision are editorial because of the change of the title of part 1 and the necessary updates of references.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard applies to ladders, platforms and walkways on tank wagons fitted with top devices. It does not apply to crossing gangways nor to steps in so far as they are covered by UIC leaflets. This European Standard defines the important dimensions for manufacturers and operators of such tank wagons and takes into consideration the relevant and applicable construction and safety guidelines.

This European Standard applies to new tank wagons built after the 1st January 2010.

In consideration of the smaller loading gauge within the UK, this European Standard does not apply to wagons operating exclusively therein.

2 Normative references

The following referenced documents are indispensable for the application 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 795, *Protection against falls from a height — Anchor devices — Requirements and testing*

EN 14564, *Tanks for transport of dangerous goods – Terminology*

EN ISO 6346:1995, *Freight containers — Coding, identification and marking (ISO 6346:1995)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14564 and the following apply.

3.1

platform

level floor at the top of the tank for inspection, maintenance and operational purposes

3.2

walkway

structure supporting grating to provide access between ladders and platforms

3.3

protective device

device to deflect operating personnel from protruding parts of a moving tank wagon in accordance with UIC 535-2

4 Ladders

4.1 General

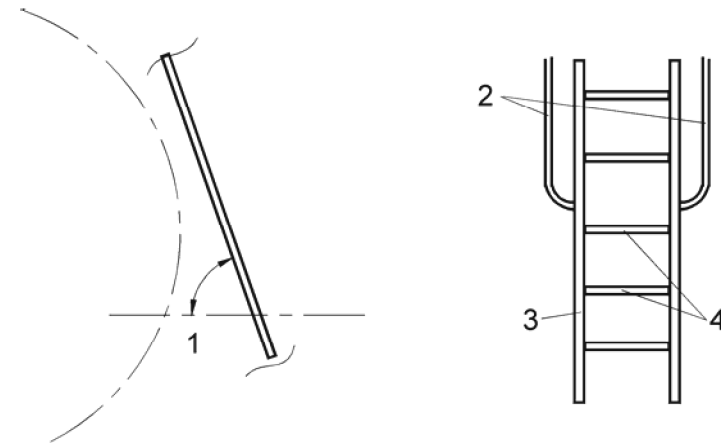
Where tank wagons are fitted with ladders, they shall either be fitted with one fixed ladder located at the end or with a fixed ladder on each side of the tank wagon.

NOTE 1 The end ladder is usually fitted at the crossing gangway.

Ladders shall be fitted with 2 lateral handrails.

NOTE 2 For traffic of continental tank wagons running in Great Britain, the kinematic gauge for Great Britain rules defined in the Technical Specification for Interoperability for freight wagons (TSI) also apply and to avoid conflict between these rules, local arrangement for handrail should be allowed to stay in the gauge.

The pitch of the ladder as shown in Figure 1 shall be between 75° and 90°. Where the pitch is less than 75° steps shall be used in place of rungs. The depth of the steps shall be at least 80 mm.



Key

- 1 Pitch
- 2 Handrails
- 3 String
- 4 Rung

Figure 1 — Terms

The rungs and the steps shall be welded to the strings and shall be slip-resistant. Rung slip resistance can, for example, be achieved by using square or flat bars with a cross section as shown in Figure 2.

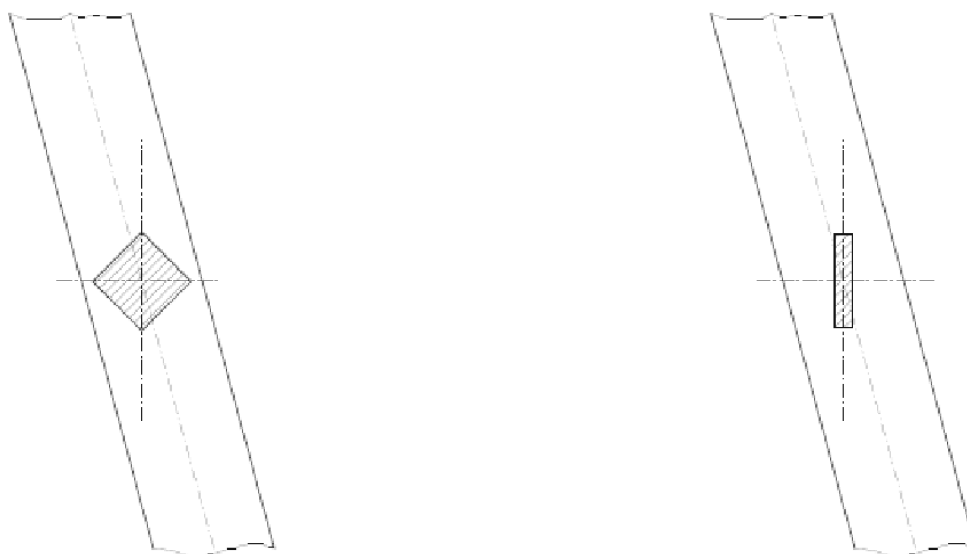


Figure 2 — Examples of rung cross sections

If they are from square or rectangular section, they shall not have sharp edges.

Steps shall have a grating according to the requirements of Clause 7.

4.2 Main dimensions

The main dimensions of ladders shall be as shown in Figure 3 and Figure 4. All the rungs shall be equally spaced.

The sides of square steel rungs shall be between 20 mm to 30 mm. Different shaped rungs of equivalent strength are permitted provided they are slip resistant (e.g. rectangular steel rungs with a cross section of 40 mm × 8 mm).

The clearance above and behind each rung shall be as shown in Figure 5.

The handrail shall be made from circular cross section tubes or bars of at least 20 mm outside diameter.

The ladder handrail shall be connected to the toe plates of the walkways or platforms.

The clearance around the handrail shall be at least 100 mm.

Where lateral ladders protrude more than 250 mm from the chassis of the tank wagon, a protective device shall be fitted at a height of between 1 200 mm to 1 400 mm above the rail (see Figure 6).

The lateral ladders shall not infringe the loading gauge.

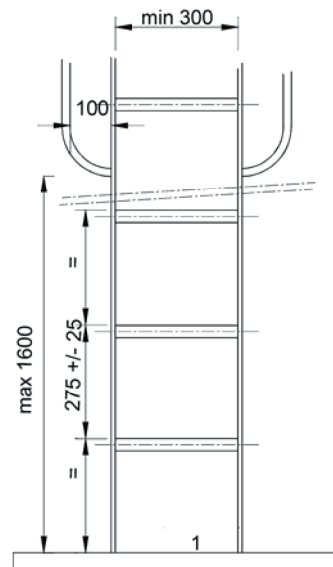
4.3 Design values

Ladders shall be designed to withstand a static load of 2,0 kN in the centre of any rung. The maximum allowable elastic deformation under this load shall not exceed 1/200 of the width.

4.4 Marking

A warning sign for overhead electrical danger shall be located near to each ladder in accordance with EN ISO 6346:1995, Annex C or Technical Specification for Interoperability for Freight Wagons.

Dimensions in millimetres



Key

- 1 Top of crossing gangway

Figure 3 — Main dimensions of end ladders