SLOVENSKI STANDARD
SIST EN 12561-7:2004

01-september-2004

Železniške naprave - Vagoni-cisterne - 7. del: Delovni odri (pohodni adi) in lestve

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

Bahnanwendungen - Kesselwagen - Teil 7: Arbeitsbühnen und Leitern

Applications ferroviaires - Wagons-citernes - Partie 7 : Plates-formes et échelles

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ICS:

45.060.20 Železniški vagoni Trailing stock

SIST EN 12561-7:2004 **en**

EUROPEAN STANDARD

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February 2004

ICS 45.060.20

English version

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

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This European Standard was approved by CEN on 3 November 2003.

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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 Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 12561-7:2004: E

Contents

Foreword

This document (EN 12561-7:2004) 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of an identical text or by endorsement, at the latest by August 2004, and conflicting national standards shall be withdrawn at the latest by August 2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports the objectives of the framework Directives on Transport of Dangerous Goods.

This European Standard has been submitted for reference into the RID and/or in the technical annexes of the ADR. Therefore in this context the standards listed in the normative references and covering basic requirements of the RID/ADR not addressed within the present standard are normative only when the standards themselves are referred to in the RID and/or in the technical annexes of the ADR.

This document is in compliance with the following regulations being in force on the date of approval of this EN:

— Regulations concerning the International carriage of Dangerous goods by rail (RID) [1)]

— Regulations governing the reciprocal use of wagons in international traffic (RIV) [2)]

This document therefore supports essential requirements of

— Council Directive 96/49/EC of 23 July 1996 on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail [3)] due to the fact that RID forms an integral part of this Directive.

— Council Directive 96/48/EC of 23 July 1996 on the interoperability of the trans-european highspeed rail system [4)]

— Council Directive 93/38/EEC of 14 June 1993 co-ordinating the procurement procedures of entities operating in the water, energy, transport and telecommunications sectors [5)]

— Council Directive 91/440/EEC of 29 July 1991 on the development of the community railways [6)]

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1) May be purchased from: OTIF, Gryphenhübeliweg 30, CH-3006 Bern

2) May be purchased from: UIC Bureau RIV-RIC, 16 rue Jean Rey, F-75015 Paris

3) Official Journal of the European Communities N° L 235 of 17.09.96

4) Official Journal of the European Communities N° L 235 of 17.9.96

5) Official Journal of the European Communities N° L 199 of 09.08.93

6) Official Journal of the European Communities N° L 237 of 24.08.91

This series of European Standards "Railway applications - Tank wagons" consists of:

— Part 1: Marking of 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: Top devices for top emptying and filling of liquid products
— Part 5: Top devices for bottom emptying and top filling of liquid products
— Part 6: Manholes
— Part 7: Platforms and ladders
— Part 8: Heating connections

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

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 795, *Protection against falls from a height — Anchor devices — Requirements and testing*.

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

UIC 503:1994, *Continental wagons running in Great Britain — General conditions (Reference profile, axle-load, etc.) for the acceptance, in international traffic with Great-Britain, of 2-axle and bogies wagons registered with other UIC railways / Note: Including 1. Amendment up to 1995-07-01.*

UIC 573:1999, *Technical conditions for the construction of tank wagons*.

UIC 535-2:1997, *Standardisation and positioning of steps, end platforms, gangways, handrails, tow hooks, automatic coupler and brake valve controls on wagons in connection with the fitting of the automatic coupler of the UIC member railways and OSJD member railways / Note: Including Amendment up to 1977-03-01.*

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions 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

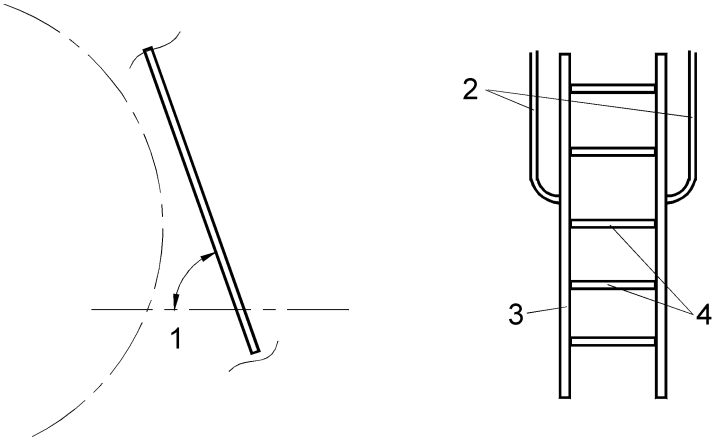
4.1 General

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 The end ladder is usually fitted at the crossing gangway.

Ladders shall be fitted with 2 handrails.

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.

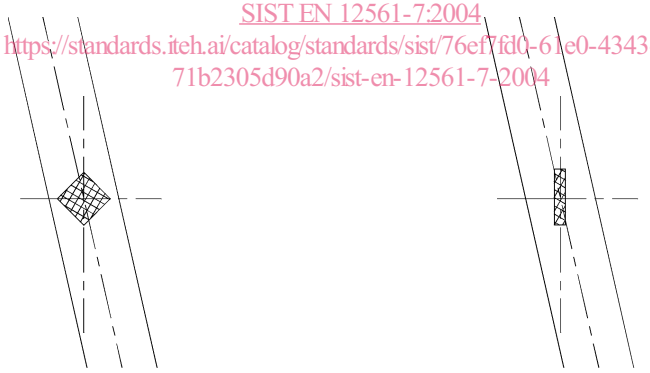


Figure 2 — Examples of rung cross sections

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 Figures 3 and 4. All the rungs shall be equally spaced.

The sides of square steel rungs shall be between 20 mm to 30 mm. Rectangular steel rungs shall have a cross section of 40 mm x 8 mm. Different shaped rungs of equivalent strength are permitted provided they are slip resistant.

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 1200 mm to 1400 mm above the rail.

The lateral ladders shall not infringe the loading gauge.

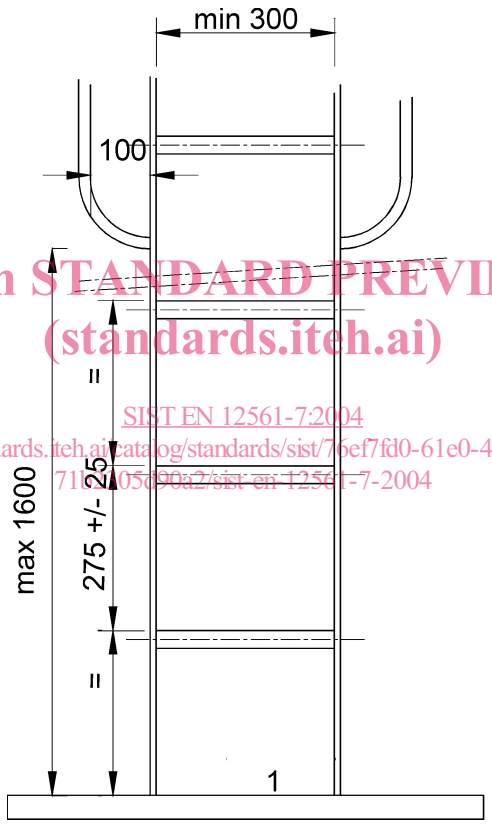
4.3 Design values

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 and RIV.

Dimensions in millimetres



Key

1 Top of crossing gangway

Figure 3 — Main dimensions of lateral ladders