



SLOVENSKI STANDARD

SIST EN 13775-3:2004

01-junij-2004

Železniške naprave– Merjenje novih in predelanih tovornih vagonov – 3.del: Dvoosni tovorni vagoni

Railway applications - Measuring of new and modified freight wagons - Part 3: Freight wagons with 2 wheelsets

Bahnanwendungen - Vermessung von Güterwagen beim Neubau und bei Umbauten - Teil 3: Güterwagen mit 2 Radsätzen

Applications ferroviaires - Mesure des wagons lors de leur construction et lors de modifications - Partie 3 : Wagons a deux essieux

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Ta slovenski standard je istoveten z: EN 13775-3:2003

ICS:

45.060.20 Železniški vagoni Trailing stock

SIST EN 13775-3:2004

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13775-3

June 2003

ICS 45.060.20

English version

Railway applications - Measuring of new and modified freight wagons - Part 3: Freight wagons with 2 wheelsets

Applications ferroviaires - Mesure des wagons lors de leur construction et lors de modifications - Partie 3: Wagons à deux essieux

Bahnanwendungen - Vermessung von Güterwagen beim Neubau und bei Umbauten - Teil 3: Güterwagen mit 2 Radsätzen

This European Standard was approved by CEN on 20 February 2003.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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

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Foreword

This document (EN 13775-3:2003) 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 2003, and conflicting national standards shall be withdrawn at the latest by December 2003.

This series of European Standards "Railway applications - Measuring of new and modified freight wagons" comprises the following parts:

- EN 13775-1 Part 1: Measuring principles
- EN 13775-2 Part 2: Freight wagons with bogies
- EN 13775-3 Part 3: Freight wagons with 2 wheelsets
- prEN 13775-4 Part 4: Bogies with 2 wheelsets
- prEN 13775-5 Part 5: Bogies with 3 wheelsets
- prEN 13775-6 Part 6: Tight-coupled freight wagons

Annex A is normative, the Annexes B and C are informative.

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

EN 13775-3:2003 (E)**Introduction**

It is normal practice in all European countries to carry out checks and measurements on the major components of new and modified freight wagons and bogies. In view of the importance of uniform criteria for international transport in all European countries, this European Standard has been prepared.

It is recognized that vehicles may be subject to different dimensional checks resulting from the design requirements of the equipment fitted to them when it is not included in this series of standards.

1 Scope

This European Standard specifies requirements for measuring freight wagons with 2 wheelsets. This ensures that the measuring processes are applied in accordance with uniform criteria. It applies to new and modified freight wagons with 2 wheelsets. Provisions going beyond the scope of these requirements ought to be agreed upon by the contracting parties involved.

The measuring processes relate to the whole or parts of the underframes with or without add-ons if the geometrical structure does not permit anything else. Where appropriate, other measuring methods not specified here are necessary and ought to be specified in each individual case.

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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 13775-1:2003 Railway applications - Measuring new and modified freight wagons - Part 1: Measuring principles

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EN 13775-3:2003 (E)**3 Terms and definitions**

For the purposes of this European Standard, the terms and definitions given in EN 13775-1:2003 and the following apply:

3.1 main reference axis of the wagon

straight line through the two intersection points of the intersecting arcs of a radius r at the two ends of the wagon.

NOTE Determination of the centre of the wagon is illustrated in measuring process 1.

3.2 distortion

distance of the suspension bracket bores to a reference plane running parallel to the underframe of the wagon.

3.3 optional

process which is only carried out if specially agreed between supplier and the customer.

NOTE The process ought to be ordered separately.

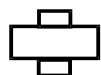
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4 Symbols and abbreviated terms

SO : top of rail

1 : vehicle end 1 <https://standards.iteh.ai/catalog/standards/sist/3c93f21c-5e92-424f-acc5-f07cb9e36f2a/sist-en-13775-3-2004>

2 : vehicle end 2



Suspension bracket with bushing



Axle guard with hornblock liner

5 Requirements**5.1 General**

The limit deviations apply to the finished products in each case.

Deviations from this European Standard are permitted as long as they do not include any dimension that represents a hazard to operation. However, they shall be agreed with the relevant contracting party and inspection agency.

5.2 Precondition

The precondition for carrying out the measuring processes as specified in this standard is that the principles laid down in EN 13775-1 are adhered to.

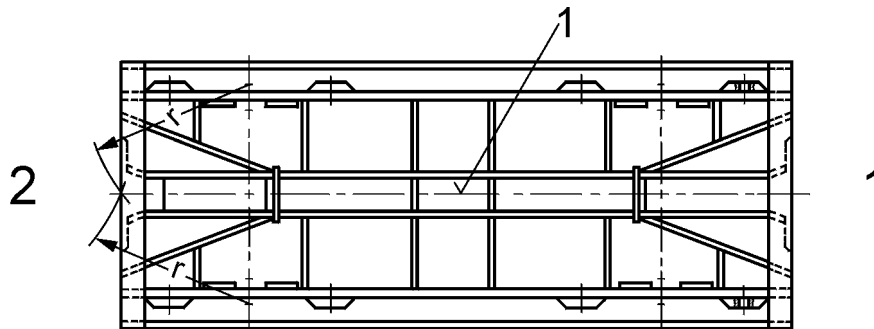
5.3 Measuring processes

The control sheet form for documentation of the results of the measuring processes given in annex A shall be used.

Measuring process 1

Determination and fixing of the main reference axis of the wagon.

Shown in the backbone position



Key

- 1 Main reference axis of the wagon

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 Figure 1

At each end of the wagon from the opposite centres of the suspension bracket bores on the associated headstock, the intersection points of two intersecting arcs with a radius r shall be determined. The straight line through the two intersection points is the main reference axis of the wagon (see Figure 1). It has to be indicated by clearly visible permanent mark.

Measuring process 2

Straightness of the outer surfaces of the underframe in the y -direction.

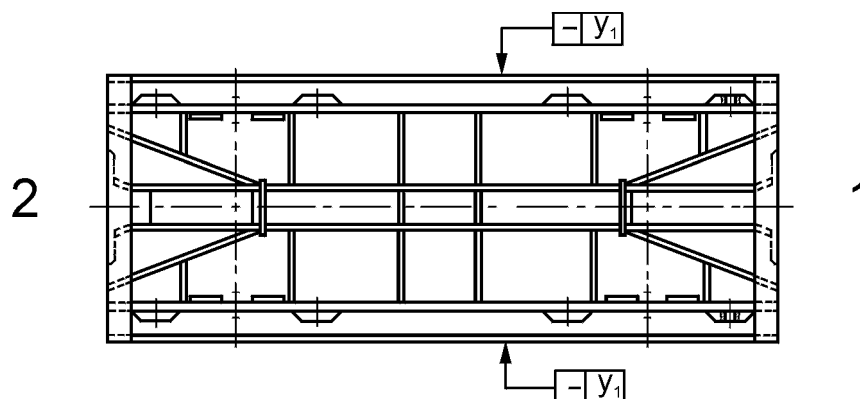


Figure 2

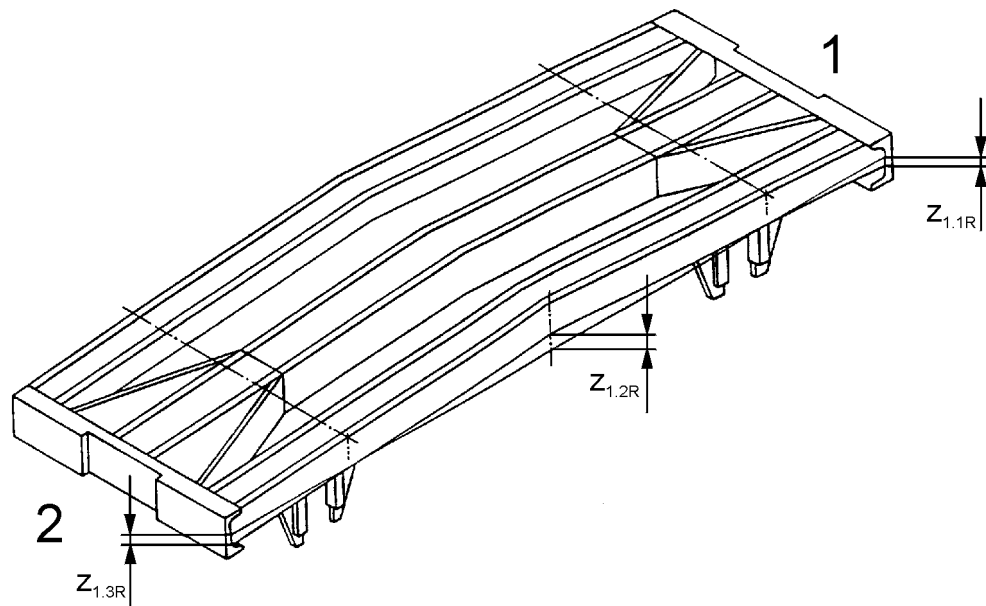
The deviation from straightness y_1 of the underframe is measured (see Figure 2).

Straightness tolerance for y_1 : 5 mm

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Measuring process 3

Deviation of the longitudinal members from straight in the z-direction.



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 Figure 3

The deviation z_1 of the longitudinal members from straight in the operating position of the underframe is measured at measuring points 1R, 2R, 3R, 1L, 2L and 3L (see Figure 3).

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Limit deviations for $z_{1,1}$ and $z_{1,3}$: ± 5 mm

for $z_{1,2}$ for wagons ≤ 15 m: $\begin{matrix} +5 \\ 0 \end{matrix}$ mm

>15 m: $\begin{matrix} +7 \\ 0 \end{matrix}$ mm

The difference in the transverse direction shall not exceed the following values between the right-hand and left-hand sides:

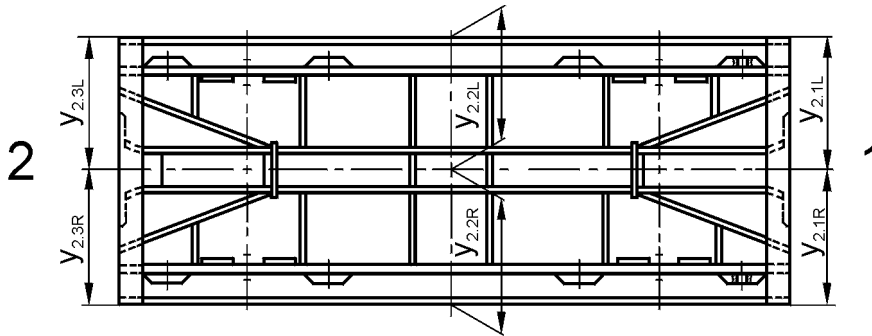
$$|z_{1,1R} - z_{1,1L}| \leq 5 \text{ mm}$$

$$|z_{1,3R} - z_{1,3L}| \leq 5 \text{ mm}$$

These values apply to wagons with no design camber. If design requirements exist, the data in the drawing shall prevail.

Measuring process 4

Underframe widths; the distance of the outer surfaces from the main reference axis of the wagon.

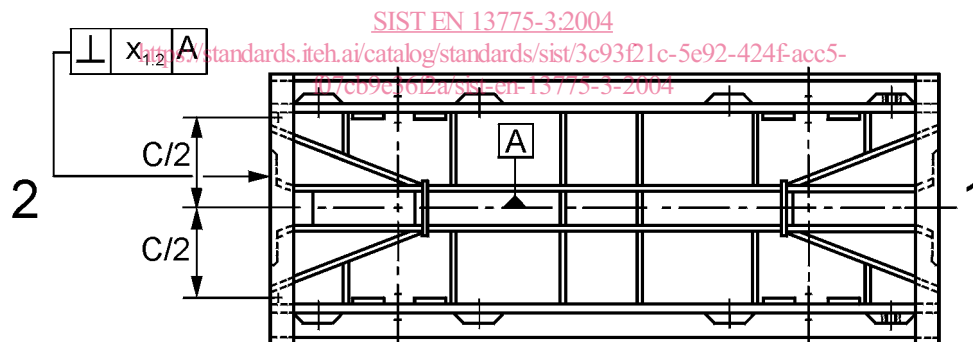
**Figure 4**

The distance y_2 is measured from the main reference axis of the wagon to outer surface of the underframe at measuring points 1R, 2R, 3R, 1L, 2L and 3L (see Figure 4).

Limit deviation for y_2 : $\begin{matrix} +2 \\ -3 \end{matrix}$ mm

iTeh STANDARD PREVIEW**Measuring process 5****(standards.iteh.ai)**

Squareness of the headstocks to the main reference axis of the wagon.

**Figure 5**

The rectangularity x_1 of the headstock to the main reference axis of the wagon is measured in the space between the buffers c at both wagon ends (see Figure 5).

Limit deviation for x_1 : ≤ 5 mm relative to C

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Measuring process 6

Length over headstocks.

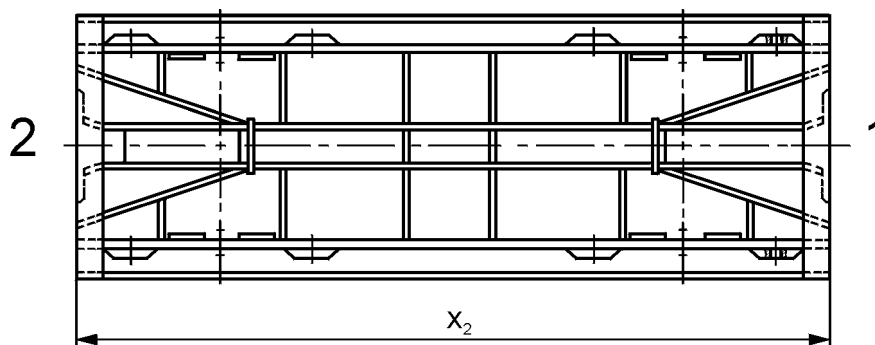


Figure 6

The total length x_2 of the underframe over the headstocks is measured in the main reference axis of the wagon (see Figure 6).

Limit deviation for x_2 : $^{+10}_0$ mm

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