



**SLOVENSKI STANDARD**  
**SIST EN 14363:2016/oprA1:2017**  
**01-september-2017**

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**Železniške naprave - Preskušanje in simuliranje vozniških karakteristik pri prevzemu železniških vozil - Preskušanje obnašanja med vožnjo in mirovanjem**

Railway applications - Testing and Simulation for the acceptance of running characteristics of railway vehicles - Running Behaviour and stationary tests

Bahnanwendungen - Versuche und Simulationen für die Zulassung der fahrtechnischen Eigenschaften von Eisenbahnfahrzeugen - Fahrverhalten und stationäre Versuche

Applications ferroviaires - Essais en vue de l'homologation du comportement dynamique des véhicules ferroviaires - Essais en ligne et à poste fixe

**Ta slovenski standard je istoveten z: EN 14363:2016/prA1**

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**ICS:**

45.060.01      Železniška vozila na splošno      Railway rolling stock in general

**SIST EN 14363:2016/oprA1:2017**      **en,fr,de**



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NORME EUROPÉENNE  
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**prA1**

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ICS 45.060.01

English Version

## Railway applications - Testing and Simulation for the acceptance of running characteristics of railway vehicles - Running Behaviour and stationary tests

Applications ferroviaires - Essais et simulations en vue  
de l'homologation des caractéristiques dynamiques des  
véhicules ferroviaires - Comportement dynamique et  
essais stationnaires

Bahnanwendungen - Versuche und Simulationen für  
die Zulassung der fahrtechnischen Eigenschaften von  
Eisenbahnfahrzeugen - Fahrverhalten und stationäre  
Versuche

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 256.

This draft amendment A1, if approved, will modify the European Standard EN 14363:2016. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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**EN 14363:2016/prA1:2017 (E)**

## **European foreword**

This document (EN 14363:2016/prA1:2017) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

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(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

## 1 Modification to the Introduction

Replace

“vehicles with established and standardised running gear”

with:

“vehicles with established or standardised running gear”.

## 2 Modifications in the whole document

Change " $Q_0$ " to " $Q_{F0}$ " (Note: Do not modify " $\Delta Q_0$ !"):

- 6.1.3, 2<sup>nd</sup> paragraph, 3<sup>rd</sup> dash;
- 6.1.3, 5<sup>th</sup> paragraph, formulae for  $a$ ,  $b$ , and  $n$ ;
- 6.1.3, end of 4<sup>th</sup> paragraph;
- 6.1.3, 5<sup>th</sup> paragraph;
- 6.1.5.2.2.3, 2<sup>nd</sup> paragraph, 1<sup>st</sup> dash;
- 6.1.5.2.2.3, 2<sup>nd</sup> paragraph, 2<sup>nd</sup> dash;
- 6.1.5.3.4, 2<sup>nd</sup> paragraph in formula and explanation (3 times);
- 6.1.5.3.4, 3<sup>rd</sup> paragraph in formula;
- 7.5.1, Table 4, Line “Max. vertical wheel force” last column (7 times);
- A.3, Figure A.4, (5 times);
- A.3, Key of Figure A.4;
- A.3, Note;
- A.8.4, 2<sup>nd</sup> paragraph formula (3 times);
- A.8.4, 2<sup>nd</sup> paragraph explanation of formula (2 times);
- A.8.4, 3<sup>rd</sup> paragraph, 1<sup>st</sup> formula;
- A.8.4, Figure A.10a (6 times) and Figure A.10b (6 times);
- A.9.3, 5<sup>th</sup> paragraph, formula (3 times);
- A.9.3, 5<sup>th</sup> paragraph, explanation of formula (2 times);
- A.9.3, 6<sup>th</sup> paragraph, formula (3 times);
- A.9.3, 7<sup>th</sup> paragraph, formula;
- A.9.4.2, 11<sup>th</sup> paragraph formulae (4 times in each formula for bogie I and II);

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- A.9.4.3, 4<sup>th</sup> paragraph, formula (3 times);
- A.9.4.3, 5<sup>th</sup> paragraph, explanation of formula (2 times);
- A.9.4.3, 6<sup>th</sup> paragraph, formula (3 times);
- A.9.4.3, 7<sup>th</sup> paragraph, 1<sup>st</sup> formula (2 times);
- A.9.4.3, 9<sup>th</sup> paragraph, formulae (4 times in each formula for bogie I and II);
- A9.4.4, 1<sup>st</sup> paragraph, formula;
- A9.4.4, 1<sup>st</sup> paragraph, explanation of formula (2 times);
- T3.3.4, Table T.2, Line "Quasi-static vertical wheel force", last column (2 times);
- T3.3.4, Table T.2, Line "Vertical wheel force, maximum", last column (2 times);
- U.1 Table U.1, footnote k, in formula and explanation (2 times);
- V, Table V.1, 2<sup>nd</sup> page, left column;
- V, Table V.1, 2<sup>nd</sup> page, right column.

**3 Modifications to Clause 3****3.1 Modification to 3.11**

*Replace:*

"is equal to the tangent of the cone angle  $\tan \gamma_e$  of a wheelset with coned wheels whose lateral movement has the same kinematic wavelength as the given wheelset and is the relevant parameter of contact geometry on straight track and on large radius curves"

*with:*

"tangent of the cone angle of a wheelset with coned wheels whose lateral movement has the same kinematic wavelength as the given wheelset".

**3.2 Modification to 3.12**

*Replace:*

"ratio between curve radius  $R_E$  negotiable without longitudinal creepage and the actual curve radius  $R$  of the track section and it describes the radial steering capability of a free wheelset in a track section as the relevant parameter of contact geometry on small and very small radius curves"

*with:*

"ratio between curve radius  $R_E$  negotiable without longitudinal creepage and the actual curve radius  $R$  of the track section and it describes the radial steering capability of a free wheelset in a track section".

**3.3 Modification to 3.13**

*Replace:*

"given by the combinations of speed and cant deficiency for which the vehicle is intended to be operated"



*with:*

"the combinations of speed and cant deficiency for which the vehicle is intended to be operated".

## **4 Modification to Clause 5**

### **4.1 Modification to 5.3.1**

*Replace*

"In this context, evidence (test reports, technical specifications, letter declaring conformity, etc.) shall be provided to show whether the values of the most important vehicle parameters for running behaviour are within the construction and maintenance tolerances."

*with:*

"In this context, evidence (for example technical specifications, letter declaring conformity and/or test reports) shall be provided to show whether the values of the most important vehicle parameters for running behaviour are within the construction and maintenance tolerances."

### **4.2 Modification to 5.3.2, Note 1**

*Replace*

"Vehicles of long distance and high speed trains are considered, if necessary, for the loading conditions with and/or without seat reservation in certain test conditions."

*with:*

"Vehicles of long distance and high speed trains are considered, if necessary, using the loading conditions with and/or without seat reservation in certain test conditions."

### **4.3 Modification to 5.3.2, last dash**

*Replace "load conditions" with "loading conditions".*

### **4.4 Modification to 5.3.3**

*Adapt Note to status of EN 15654-2 (prEN, FprEN or EN).*

### **4.5 Modification to 5.5**

*Replace "weather conditions" with "description of weather conditions during test runs".*

## **5 Modification to Clause 6**

### **5.1 Modification to 6.1.1 – Method 3, 1<sup>st</sup> paragraph**

*Replace:*

"It measures separately the change in vertical wheel force  $\Delta Q/Q$  when the vehicle is subjected to twisted track. The assessment criterion is the *X*-factor together with the wheel unloading  $\Delta Q/Q$ ."

*with:*

"It measures separately the relative wheel unloading  $\Delta Q/Q$  when the vehicle is subjected to twisted track. The assessment criterion is the *X*-factor together with the relative wheel unloading  $\Delta Q/Q$ ."

### **5.2 Modification to 6.1.1, Note 5**

*Delete the link "<http://www.uic.org>".*

**EN 14363:2016/prA1:2017 (E)****5.3 Modification to 6.1.5.1.4, 3<sup>rd</sup> paragraph**

*Replace:*

"If the actual twist of the test track is smaller than the test twist specified in 6.1.5.1.2, the missing twist shall be included within the vehicle, e.g. by including shims in the springs in an appropriate way. Justification of the method of shimming that is used shall be documented. This shall demonstrate that the effect of the shimming achieves the same effects as would be achieved if the required twist was applied at the track level. A.7 contains suggestions for calculating the thickness of the shims depending on their location."

*with:*

"If the installed twist of the test track is smaller than the test twist specified in 6.1.5.1.2, the missing twist shall be included within the vehicle, for example by including shims in the springs (and anti-roll bar seats) in an appropriate way. Justification of the used method of shimming shall be documented. This shall demonstrate that the effect of the shimming achieves the same effect as the application of the required twist at track level. A.7 contains suggestions for calculating the thickness of the shims depending on their location."

**5.4 Modification to 6.1.5.1.5, 2<sup>nd</sup> paragraph**

*Delete:* "; wavelengths below 2 m shall be excluded from the signal".

**5.5 Modification to 6.1.5.1.8**

*Turn last paragraph into the last bullet point of the list above.*

**6 Modifications to Clause 7****6.1 Modification to 7.1**

*Replace:*

"The initial assessment of the dynamic performance of a vehicle type shall generally be verified by on-track tests"

*with:*

"The initial assessment of the dynamic performance of a vehicle type shall generally be performed based on on-track tests".

**6.2 Modification to 7.2.1**

*Replace:*

"...with measured accelerations at the bogie frame and accelerations in the vehicle body."

*with:*

"...with measured accelerations at the *running gear* and accelerations in the vehicle body."

**6.3 Modification to 7.2.2, Table 1**

*Start new page at line "Maximum admissible speed of the vehicle  $V_{adm}$ ".*

**6.4 Modifications to 7.3.1****6.4.1 Table 2, Column Test zone 4**

*Line: mean value of curve radius:*