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Railway applications - Vehicle end design for trams and light rail vehicles with respect to pedestrian safety

Táto technická normalizačná informácia obsahuje anglickú verziu CEN/TR 17420:2020.
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TECHNICAL REPORT

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English Version

Railway applications - Vehicle end design for trams and light rail vehicles with respect to pedestrian safety

Applications ferroviaires - Conception de l'extrémité des véhicules pour tramways et véhicule ferroviaire léger en ce qui concerne la sécurité des piétons

Bahnanwendungen - Fahrzeugkopfgestaltung von Straßenbahnen und Light rail Fahrzeugen im Hinblick auf den Passantenschutz

This Technical Report was approved by CEN on 23 September 2019. It has been drawn up by the Technical Committee CEN/TC 256.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (CEN/TR 17420:2020) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

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

CEN/TR 17420:2020 (E)**1 Scope**

This technical report is applicable to tram vehicles according to EN 17343¹. Tram-Train vehicles, on track machines, infrastructure inspection vehicles and road-rail machines according to EN 17343¹ and demountable machines/machinery are not in the scope of this technical report.

This technical report describes passive safety measures to reduce the consequences of collisions with pedestrians. These measures provide the last means of protection when all other possibilities of preventing an accident have failed, i.e.:

- design recommendations for the vehicle front to minimize the impact effect on a pedestrian when hit,
- design recommendations for the vehicle front end for side (lateral) deflections in order to minimize the risk of being drawn under the vehicle on flat ground (embedded track),
- design recommendations for the vehicle body underframe to not aggravate injuries to a pedestrian/body lying on the ground,
- recommendations to prevent the pedestrian from being over-run by the leading wheels of the vehicle.

The following measures to actively improve safety are not in the scope of this technical report:

- colour of front;
- additional position lights;
- additional cameras;
- driver assistance systems;
- additional acoustic warning devices, etc.;
- view of the driver / mirrors;
- consequences for pedestrian injuries due to secondary impact with infrastructure (side posts, concrete ground, poles, trees, etc.).

The recommendations of this technical report only apply to new vehicles.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 15663:2017+A1:2018, *Railway applications – Vehicle reference masses*

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