

norm**NEN-EN 1317-6**

Afscherpende constructies voor wegen -
Deel 6: Afscherpende systemen voor
voetgangers, borstwering voor
voetgangers

Publicatie uitsluitend voor commentaar

Road restraint systems - Part 6: Pedestrian restraint systems,
Pedestrian Parapet

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Descriptors:

English version

**Road restraint systems - Part 6: Pedestrian restraint systems,
Pedestrian Parapet**

Dispositifs de retenue routiers - Partie 6: Dispositifs de
retenue pour piétons, Garde-corps

Rückhaltesysteme an Straßen - Teil 6:
Fußgängerrückhaltesysteme, Brückengeländer

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 226.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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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FOREWORD

This Draft European Standard has been prepared by CEN / TC 226 " Road Equipment"
This document is currently submitted to CEN Enquiry

This European Standard consists of the following Parts under the general title : Road restraint systems.

- Part 1 : Terminologie and general criteria for test methods ;
- Part 2 : Performance classes, impact test acceptance criteria and test methods for safety barriers ;
- Part 3 : Crash cushions - Performance classes, impact test acceptance criteria and test methods for crash cushions ;

The following Parts have not yet available but in course of preparation :

- Part 4 : Impact tests acceptance criteria and test methods for terminals and transitions of safety barriers ;
- Part 5 : Durability criteria and evaluation of conformity ;
- Part 6 : Pedestrian road restraint system.

In accordance with the common rules at CEN/ CENELEC, the following countries are bound to implement this European Standard : Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

The drafting work for the standard started in September 1990 in CEN/TC226/ WG1 "Safety Barriers "under the convenorship of AFNOR

1 - INTRODUCTION

Based on the safety considerations of pedestrians road and footpath bridges and similar structures requires the installation of special road restraint systems : pedestrian parapets

Pedestrian parapets are designed and provided to restrain and to guide pedestrians and other non vehicle road users including cyclists and equestrians

Aspects included in the standard are :

- i) safety in use for pedestrians and other highway users (excluding motor vehicles),
- ii) loadings (live loadings , wind , snow and other impacts),
- iii) analysis and test methods.

2 - SCOPE

This European Standard ENspecifies geometrical and technical requirements and defines the requirements for design, manufacture and installation of pedestrian parapets on road and footpath bridges and on top of retaining walls and other similar structures.

This standard also applies to road and footpath bridges and similar structures which cross over or are adjacent to railway, canals or rivers

Note : The authorities for railways , rivers and canals may also have additional special requirements

This European Standard does not cover the requirements for :

- vehicle restraint systems or pedestrian restraint systems in residential, commercial or industrial buildings and their curtilages,
- non rigid handrails,
- transparency or risks relating to the climbing of children.

The geometrical requirements of this standard shall also be met where :

- i) a vehicle restraint system (ref. prEN 1317-2) is also required to function as a pedestrian parapet,
- ii) a lattice, trough or suspension type bridge or similar structure is to carry pedestrians.

3 - 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.

prEN 1317-1 - Road Restraint Systems - Part 1 : Terminologie and general criteria for test methods .

prEN 1317-2 - Road Restraint Systems - Part 2 : Performance classes, impact test acceptance criteria and test methods for safety barriers.

prEN 1317-5 - Road Restraint Systems - Part 5 : Durability criteria and evaluation of conformity

ENV 1991-3-1995 - Basis of Design and Actions on Structures - Traffic Loads on Bridges

ENV 1991-2-3-1995 - Basis of Design and Actions on Structures - Snow Loadings

ENV 1991-2-4 - Basis of Design and Actions on Structures - Wind Loadings

4 - DEFINITIONS

For the purpose of this standard the following definitions apply :

4.1 Pedestrian parapet

A pedestrian or ' other users ' restraint system along the bridge or on top of a retaining wall or similar structure and is not designed to act as a road vehicle restraint system.

4.2 Posts

Vertical or inclined members of a pedestrian restraint system which withstand both horizontal and vertical forces and transmit these forces to the supporting structure.

4.3 Rails

Members of a pedestrian restraint system that transmit vertical and horizontal forces to the posts.

4.4 Infilling

Material fixed to posts and or rails of a pedestrian restraint system.

4.5 Plinth

A continuous upstand which supports the posts and is part of the attached structure to which the pedestrian parapet is fixed.

4.6 Kicking Plate

A continuous upstand which can be attached to the pedestrian restraint system.

4.7 Base-plate

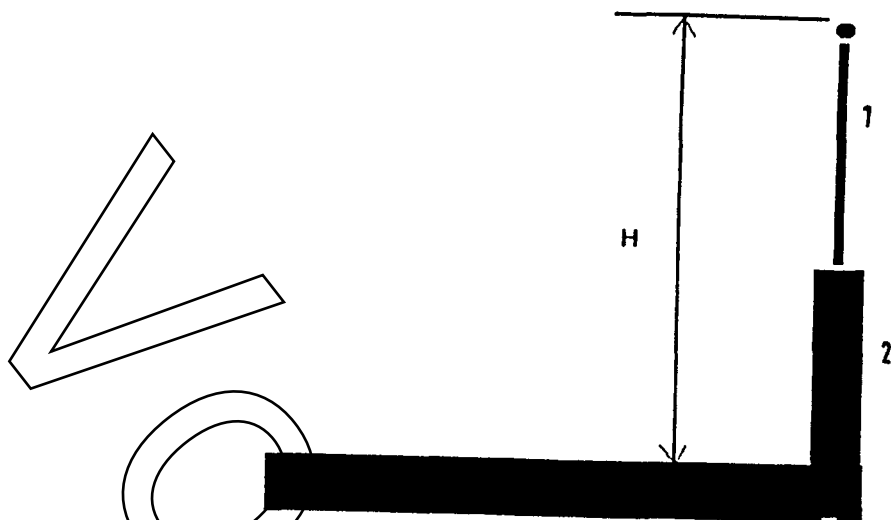
The plate attached to the base of a pedestrian restraint system post.

4.8 Handrail

A rigid rail attached to or part of a pedestrian restraint system to assist and guide pedestrians.

4.9 Height

The vertical distance between the pedestrian walking surface and the top of the pedestrian restraint system-see figure 1:



- 1) Metal
- 2) Concrete

Figure 1

Note : The height includes the height of the plinth and kicking rail where they are provided.

5 - SYMBOLS

Q (i/ii / iii)	Loads on posts and rails
H	Height in metres above the pedestrian walking surface
ULS	Ultimate Limit State
SLS	Serviceability Limit State
γF	Load Factor
Q m	Maximum Load Test
QK	Nominal Load
TL	Test Load
LL	Nominal Live Load
WL	Nominal wind Load
E	Energy
b	Width of Footway
q	Distributed Load
F	Force
d	Deformation

6 - REQUIREMENTS

6.1 - General

6.1.1 - Construction provisions

The design and manufacture / fabrication and erection of the pedestrian parapet shall ensure that :

- the pedestrian parapet shall be erected to form a continuous flowing alignment;
- all external surfaces and edges are to be finished so that they will not cause injury to pedestrians (smooth surfaces and no sharp edges);
- all members, infill, joints and fixings are able to transmit the designed loads and forces acting as a separate system to the main structure;
- provision for expansion and contraction movement of the main structure is to be made in the design of the pedestrian parapet system;
- corrosion pockets are avoided;
- provision is made for adequate drainage including hollow sections and channels;
- compatibility between component parts is made and there is avoidance of electrolytic action so there is no reaction between materials;
- it has strength and durability to resist vandalism caused by humans;
- fixings and fittings cannot be loosened without using tools.

The designer or manufacturer or fabricator or erector should also be able to demonstrate :

- i) ease of assembly at site location,
- ii) ease of maintenance and repair including replacement of sections,

6.1.2 - Other provisions

The pedestrian parapet system should make allowances for maintenance personnel and bicycles and ensure that the design does not inhibit the fixing of :

- kicking plates up to 150 mm high to the base of posts;
- absail ropes to be fixed to posts above the 150 mm skirting height to support one operative;
- where horses and cattle are expected to use the main bridge structure that crosses over or adjoins a highway a 600 mm solid high upstand shall be provided above the bottom rail;
- where a plinth is to be provided the minimum height shall be 50 mm.

Bestelformulier

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