ICS 13.200; 93.080.30

ASRO

STANDARD ROMÂN

SR EN 1317-2

Octombrie 2010

Dispozitive de protecție la drumuri
Partea 2: Clase de performanță, criterii de acceptare a încercărilor la şoc şi metode de încercare a parapetelor de siguranță

Road restraint systems. Part 2: Performance classes, impact test acceptance criteria and test methods for safety barriers including vehicle parapets

Dispositifs de retenue routiers. Partie 2: Classes de performance, critères d' acceptation des essais de choc et méthodes d' essai pour les barrières de sécurité incluant les barrières de bord d' ouvrage d' art

APROBARE

Aprobat de Directorul General al ASRO la 31 octombrie 2010

Standardul european EN 1317-2:2010 a fost adoptat prin metoda notei de confirmare şi are statutul unui standard român

Înlocuieşte SR EN 1317-2:2000, SR EN 1317-2:2000/A1:2006 şi SR EN 1317-2:2000/C91:2009

CORESPONDENȚĂ

Acest standard este identic cu standardul european EN 1317-2:2010

This standard is identical with the European Standard EN 1317-2:2010

La présente norme est identique à la Norme européenne EN 1317-2:2010

ASOCIAȚIA DE STANDARDIZARE DIN ROMÂNIA (ASRO)
Str. Mendeleev nr. 21-25, cod 010362, Bucureşti
Director General: Tel.: +40 21 316 32 96, Fax: +40 21 316 08 70
Direcția Standardizare: Tel. +40 21 310 17 30, +40 21 310 43 08, +40 21 312 47 44, Fax: +40 21 315 58 70
Direcția Publicații- Serv. Vânzări/Abonamente: Tel. +40 21 316 77 25, Fax + 40 21 317 25 14, +40 21 312 94 88
Serviciul Redacție-Marketing, Drepturi de Autor: Tel.: + 40 21 316.99.74

Table 4 — Levels of normalised working width

Classes of normalised working width levels	Levels of normalised working width m
*W*1	$W_N \leq 0,6$
*W*2	$W_N \leq 0,8$
*W*3	$W_N \leq 1,0$
*W*4	$W_N \leq 1,3$
*W*5	$W_N \leq 1,7$
*W*6	$W_N \leq 2,1$
*W*7	$W_N \leq 2,5$
*W*8	$W_N \leq 3,5$

NOTE 1 In specific cases, a class of working width level less than *W*1 may be specified.

NOTE 2 The dynamic deflection, the working width and the vehicle intrusion allow determination of the conditions for installation of each safety barrier and also to define the distances to be provided in front of obstacles to permit the system to perform satisfactorily.

NOTE 3 The deformation depends on both the type of system and the impact test characteristics.

Table 5 — Levels of normalised vehicle intrusion

Classes of normalised vehicle intrusion levels	Levels of normalised vehicle intrusion m
*VI*1	$VI_N \leq 0,6$
*VI*2	$VI_N \leq 0,8$
*VI*3	$VI_N \leq 1,0$
*VI*4	$VI_N \leq 1,3$
*VI*5	$VI_N \leq 1,7$
*VI*6	$VI_N \leq 2,1$
*VI*7	$VI_N \leq 2,5$
*VI*8	$VI_N \leq 3,5$
*VI*9	$VI_N > 3,5$

NOTE 1 In specific cases, a class of vehicle intrusion level less than *VI*1 may be specified.

NOTE 2 The dynamic deflection, the working width and the vehicle intrusion allow determination of the conditions for installation of each safety barrier and also to define the distances to be provided in front of obstacles.

The working width (W_m) is the maximum lateral distance between any part of the barrier on the undeformed traffic side and the maximum dynamic position of any part of the barrier. If the vehicle body deforms around the road vehicle restraint system so that the latter cannot be used for the purpose of measuring the working width, the maximum lateral position of any part of the vehicle shall be taken as an alternative (see Figure 1, d)).

The vehicle intrusion (VI_m) of the Heavy Goods Vehicle (HGV) is its maximum dynamic lateral position from the undeformed traffic side of the barrier; it shall be evaluated from high speed photographic or video recordings, in consideration of a notional load having the width and length of the vehicle platform and a total height of 4 m. The VI_m shall be evaluated by measuring the position and angle of the vehicle platform and assuming the notional load stays undeformed and rectangular to the vehicle platform or by using test vehicles with the notional load.

The vehicle intrusion (VI_m) of a bus is its maximum dynamic lateral position; it shall be evaluated from high speed photographic or video recordings.

The deformation of the restraint system shall be classified in accordance with Tables 4 and 5.

The actual and normalised values of dynamic deflection, working width and vehicle intrusion shall be measured and recorded in the test report.

Normalised Dynamic Deflection (D_N) in metres (m) = $D_m \times \sqrt{\frac{M_t \times (V_t \times \sin\alpha_t)^2}{M_m \times (V_m \times \sin\alpha_m)^2}}$

Normalised Working Width (W_N) in metres (m) = $W_U + \left[(W_m - W_U) \times \sqrt{\frac{M_t \times (V_t \times \sin\alpha_t)^2}{M_m \times (V_m \times \sin\alpha_m)^2}} \right]$

Normalised Vehicle Intrusion (VI_N) in metres (m) = $VI_m \times \sqrt{\frac{M_t \times (V_t \times \sin\alpha_t)^2}{M_m \times (V_m \times \sin\alpha_m)^2}}$

where

Measured maximum Dynamic Deflection in metres (m) = D_m;
Measured Working Width in metres (m) = W_m;
Undeformed width of the system = W_u;
Measure Vehicle Intrusion in metres (m) = VI_m;

Specified Total Mass in kilograms (kg) = M_t;
Specified Velocity in metres per second (m/s) = V_t;
Specified Angle in degrees (°) = α_t;
} See Table 1.

Measured Total Mass in kilograms (kg) = M_m;
Measured Velocity in metres per second (m/s) = V_m;
Measured Angle in degrees (°) = α_m.

With the above procedure, the Normalised Dynamic Deflection and Normalised Working Width shall be computed from measured data, or from other test data recorded during tests performed before the publication of the present standard, provided the data collection methods conform to the requirements of this standard.

Likewise, Vehicle Intrusion shall be evaluated, from high speed photographic or video recordings, and then normalised using measured data.

The accuracy required for the evaluation of Vehicle Intrusion shall be ± 0,2 m.