BS EN 1263-2:2014

BSI Standards Publication

Temporary works equipment — Safety nets

Part 2: Safety requirements for the positioning limits

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National foreword

This British Standard is the UK implementation of EN 1263-2:2014. It supersedes BS EN 1263-2:2002 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/514/27, Nets and sheets.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Équipement temporaires de chantiers - Filets de sécurité - Partie 2 : Exigences de sécurité concernant les limites de montage

Temporäre Konstruktionen für Bauwerke - Schutznetze (Sicherheitsnetze) - Teil 2: Sicherheitstechnische Anforderungen für die Errichtung von Schutznetzen

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Foreword

This document (EN 1263-2:2014) has been prepared by Technical Committee CEN/TC 53 “Temporary works equipment”, 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of an identical text or by endorsement, at the latest by June 2015 and conflicting national standards shall be withdrawn at the latest by June 2015.

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

This document supersedes EN 1263-2:2002.

This European Standard is one of a series of standards as listed below:

— EN 1263-1, *Temporary works equipment — Safety nets — Part 1: Safety requirements, test methods*

— EN 1263-2, *Temporary works equipment — Safety nets — Part 2: Safety requirements for the positioning limits*

The significant changes incorporated in this revision are:

a) revision of Figures 1, 2, 4, and 5;

b) complete editorial revision.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies safety requirements for the positioning of safety nets in accordance with the manufacturer's instruction manual and with the product specifications and for the testing of system S, system T, system U and system V safety nets in accordance with EN 1263-1.

Small safety nets of system S according to EN 1263-1 (less than 35 m^2 and 5,0 m on the shortest side) are not dealt with in this European Standard.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1263-1:2014, *Temporary works equipment — Safety nets — Part 1: Safety requirements, test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1263-1:2014 apply.

4 Safety requirements

4.1 Instruction manual

For the use and application of safety nets an instruction manual (guidance) in accordance with EN 1263-1:2014, Clause 9 shall be included with each consignment of safety net. This instruction manual shall be available in the language of the user. It shall contain at least the following information:

— required anchorage forces;

— maximum fall height;

— minimum catching width;

— safety net linkage;

— minimum distance below the safety net;

— storage;

— examination;

— replacement.

In addition to these instructions, special installation instructions shall be followed according to the specific application of the net.

4.2 Fall height

The fall heights H_i, H_e and H_r are defined in Table 1.

Table 1 — Definitions of fall heights

	Figure	Definition	Comment
H_i	1	The vertical distance between the working level being safeguarded and the safety net	The maximum permissible fall height into a safety net is 6 m from the working level, which means that the maximum nominal fall height from the centre of gravity of a person is 7 m.
H_e	1, 2 and 5	The vertical distance between the edge of a working level being safeguarded and the safety net	This dimension is to be used to calculate the horizontal projection of the safety net beyond the working level above it. See Table 2.
H_r	1	The vertical distance between the working level being safeguarded and the 2 m wide border edge of the safety net.	Safety nets are less able to carry an impact load near the edges of the net. Therefore, the vertical distance at this point shall not exceed 3,0 m.

Safety nets should be erected as close as possible below the working level. Each of the fall heights H_i and H_e shall not exceed 6,0 m (see Figure 1, Figure 2 and Figure 5).

In addition to this, the reduced fall height H_r within 2 m of the border shall not exceed 3,0 m (see Figure 1).

4.3 Catching width

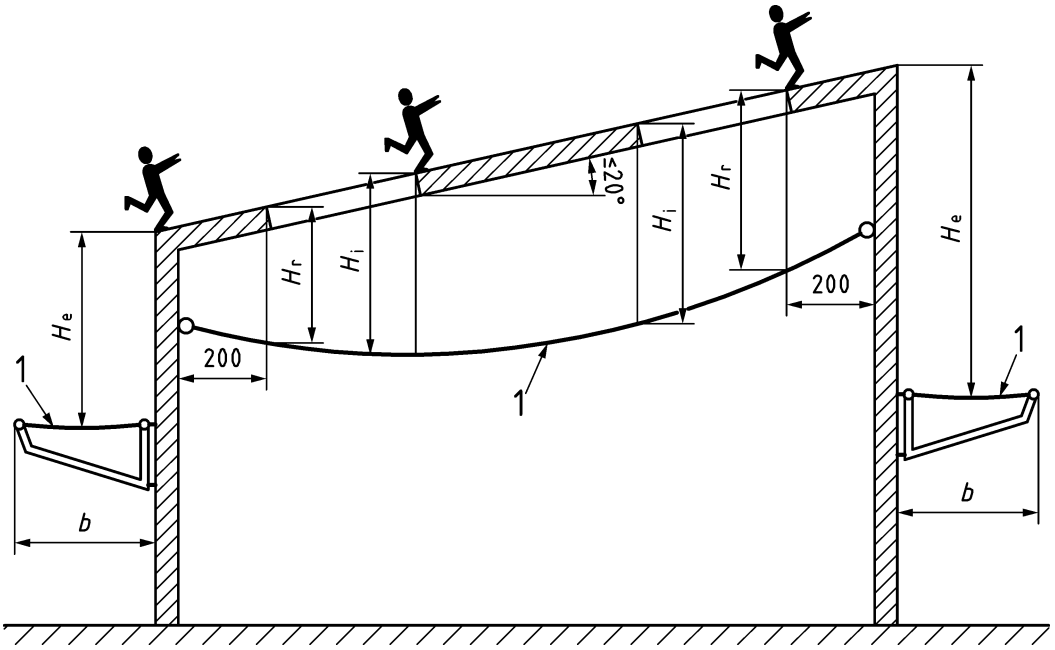
The catching width b is the horizontal distance between the edge of the working area and the edge of the safety net (see Figure 1 and Figure 2).

Dependent on the fall height, the catching width b of the safety net shall not be less than the values given in Table 2.

Table 2 — Fall heights and required catching widths

Fall height H_e	$\leq$ 1,0 m	$\leq$ 3,0 m	$\leq$ 6,0 m
Catching width b	$\geq$ 2,0 m	$\geq$ 2,5 m	$\geq$ 3,0 m

Dimensions in centimetres



Key

1 safety net

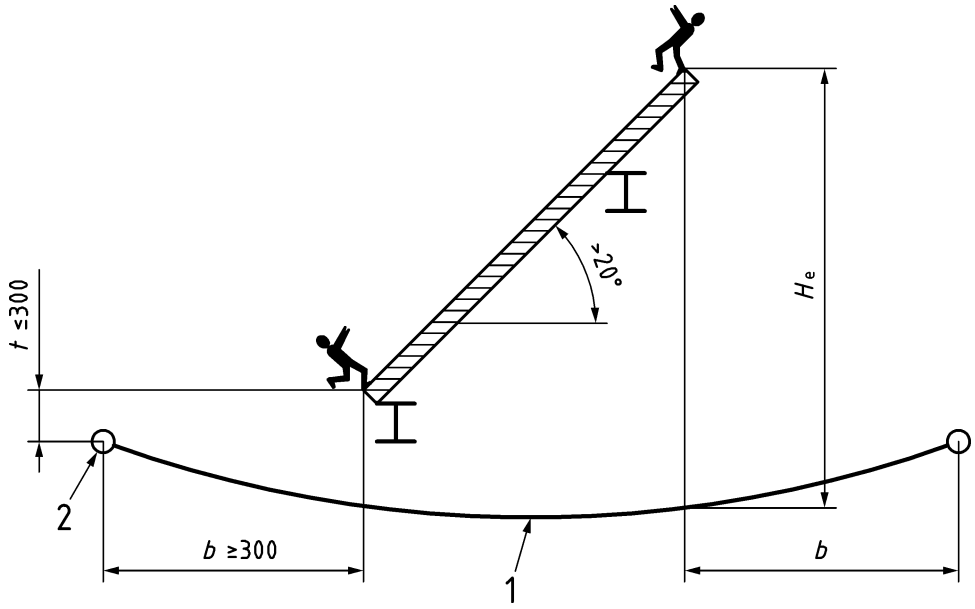
Figure 1 — Fall heights and required catching widths of working areas inclined between 0° and 20°

If the working area is inclined by more than 20°:

— the catching width b shall be at least 3,0 m;

— the distance t between the outermost working point and the lowest point of the edge of the safety net shall not exceed 3,0 m (see Figure 2).

Dimensions in centimetres



Key

1 safety net

2 lowest point of the edge of the safety net

Figure 2 — Fall heights and required catching widths of working areas inclined by more than 20°

5 Positioning of system S safety nets

5.1 Size of system S safety nets

For the positioning of system S safety nets the smallest size shall be at least 35 m^2. For rectangular safety nets the length of the shortest side shall be at least 5,0 m.

Small safety nets (less than 35 m^2 and 5,0 m on the shortest side) are not part of this standard and should be determined by national regulations where applicable.

5.2 Positioning fixings

System S safety nets shall be positioned with tie ropes or other devices on anchorage points capable of bearing the characteristic load. For attachment devices other than tie ropes a safety factor of 2 shall be used. The distance between the anchorage points shall be less than 2,5 m.

To calculate each anchorage point, the characteristic load P used shall be at least 6 kN with the fall height being 6,0 m. The assumed angle of this load shall be $\alpha = 45°$ (see Figure 3). For the calculation of the supporting framework only three characteristic loads of 4 kN, 6 kN and 4 kN shall be considered applied in the most unfavourable way (see Figure 3).

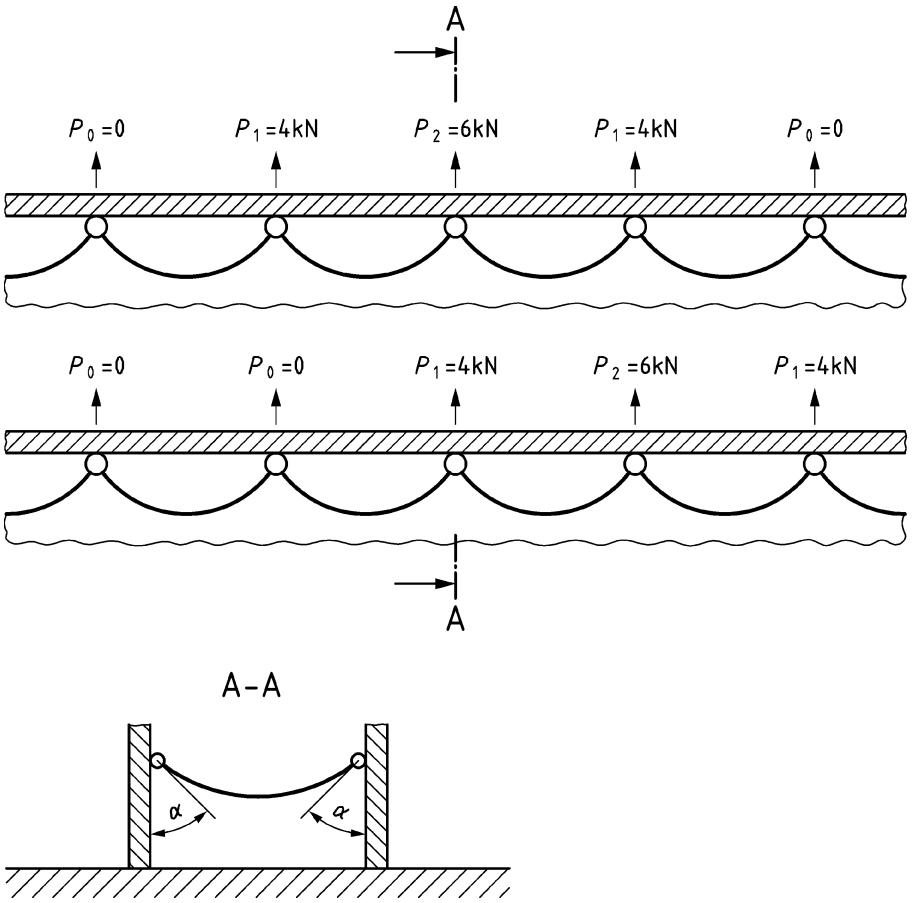


Figure 3 — Examples of characteristic loads at the anchorage points

5.3 Safety net linkage

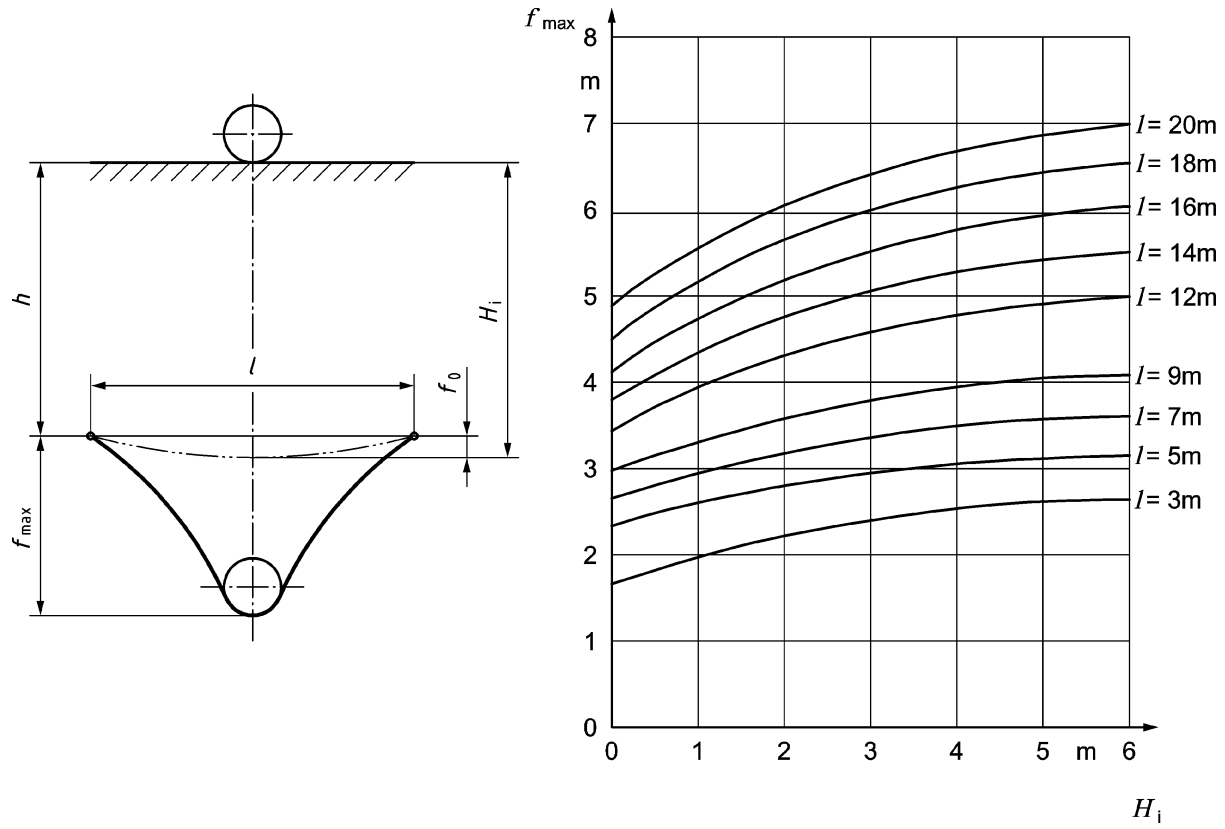
For the linkage of single safety nets, coupling ropes in accordance with EN 1263-1 shall be used. The linkage shall be made in such a way that gaps greater than 100 mm do not develop between the edges of the nets.

When system S safety nets are linked by overlapping, the minimum overlap shall be at least 2,0 m.

5.4 Deformation of the safety net

The maximum deformation of the safety net when rigged according to the test conditions given in EN 1263-1:2014, Clause 7, is shown in Figure 4.

NOTE Safety distances below the deformed safety net are not covered by this European Standard.



Key

l	span of the safety net (smallest side)
h	vertical distance between anchorage point of the safety net and the working level above
H_i	vertical distance between the safety net and the working level above
f_0	deformation caused by the self-weight of the safety net
f_{max}	maximum deformation caused by the self-weight of the safety net plus dynamic load

The curves only apply if:

— $f_0 \leq 0{,}1 \cdot l$

— $H_i = h + f_0 \leq 6{,}0$ m

Figure 4 — Maximum deformation of the safety net

6 Positioning of system T safety nets

6.1 Positioning

System T safety nets shall be erected according to the instruction manual supplied with the consignment.

6.2 Safety net linkage

For the linkage of single safety nets, coupling ropes in accordance with EN 1263-1 shall be used. The linkage shall be made in such a way that gaps greater than 100 mm do not develop between the edges of the nets.

When system T safety nets are linked by overlapping, the minimum overlap shall be 0,75 m.

6.3 Support frame positioning

The support frame shall be positioned so that the person falling into the safety net does not impact with the frame.

7 Positioning of system U safety nets

For positioning limits of system U safety nets, see EN 13374.

8 Positioning of system V safety nets

8.1 Position of the upper edge of the safety net

The upper edge of the safety net shall be located at least 1,0 m above the working level (see Figure 5).

Dimensions in centimetres

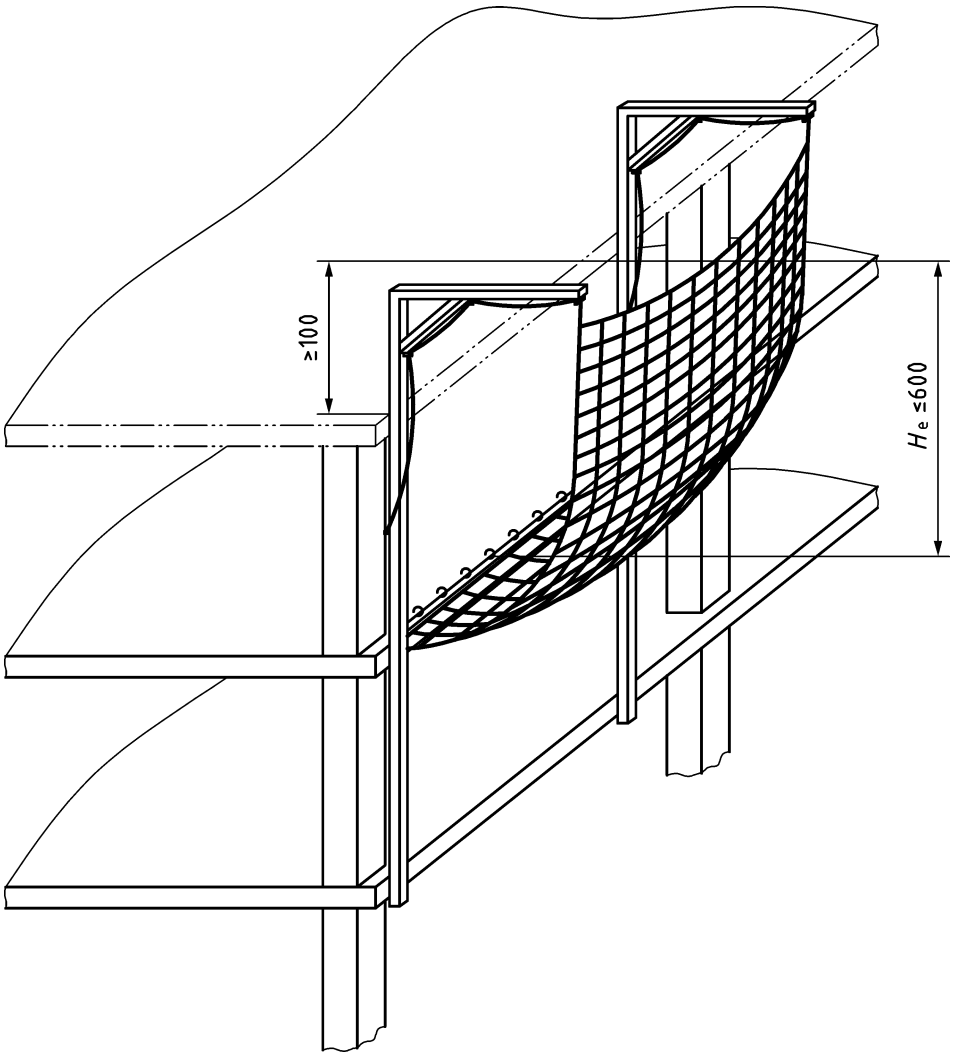


Figure 5 — Position of the upper edge of the safety net

8.2 Safety net linkage

For the linkage of single safety nets, coupling ropes in accordance with EN 1263-1 shall be used. The linkage shall be made in such a way that gaps greater than 100 mm do not develop between the edges of the nets.

For system V safety nets, overlapping shall not be used.

8.3 Positioning

The safety net shall be attached to “gallow” type system supports at its upper edge and to the building or supporting framework at its lower edge.

For the positioning of the net, the following points shall be taken into account:

— the distance between any two top supports shall not exceed 5,0 m;

— the supports shall be secured against turning;

— the distance between the bottom edge anchorage devices for the attachment of the net to the building shall not exceed 0,50 m (see Figure 6);

— the distance between the anchorage points and the edge of the building shall be at least 0,1 m (see Figure 6);

Dimensions in centimetres

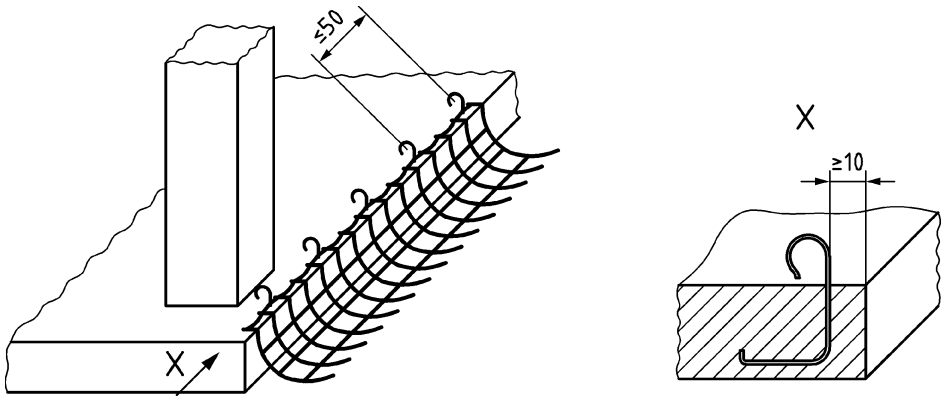


Figure 6 — Anchorage points for the attachment of the lower edge of the safety net to the building by a border rope

— the upper edge of the safety net shall be attached to a “gallow” type support by a tie rope (see Figure 7).

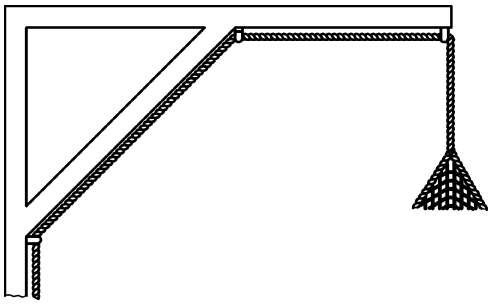


Figure 7 — Attachment of the upper edge of the safety net to a “gallow” type support with a tie rope

Annex A
(informative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN-CENELEC national member.

This European Standard does not fall under any Directive of the EU.

In the relevant CEN-CENELEC countries these A-deviations are valid instead of the provisions of the European Standard until they have been removed.

Clause	Deviation
	Denmark
4.3 Catching width, Figure 1	Danish Ministry of Labour, Order on the conditions of construction sites and similar work places (Order 589, 22 June 2001, Clauses 19 and 21.1)
4.3 Catching width, Figure 2	Danish Ministry of Labour, Order on the conditions of construction sites and similar work places (Order 589, 22 June 2001, Clauses 19 and 21.1)
Clause 6 Positioning of system T safety nets	Danish Ministry of Labour, Order on the conditions of construction sites and similar work places (Order 589, 22 June 2001, Clauses 19 and 21.1)
Clause 8 Positioning of system V safety nets	Danish Ministry of Labour, Order on the conditions of construction sites and similar work places (Order 589, 22 June 2001, Clauses 19 and 21.1).

Bibliography

EN 13374, *Temporary edge protection systems — Product specification — Test methods*

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