



SLOVENSKI STANDARD
SIST EN 1052-3:2004/A1:2007

01-julij-2007

A YtcXY dfYg_i yUb^U n]Xc j]bY!' "XY. '8 c`c Yj Ub^Y nU YfbY'ghfjybY'fXbcghj!
8 cdc`b]c`5 %

Methods of test for masonry - Part 3: Determination of initial shear strength

Prüfverfahren für Mauerwerk - Teil 3: Bestimmung der Anfangsscherfestigkeit
(Haftscherfestigkeit)

Méthodes d'essai de la maçonnerie - Partie 3: Détermination de la résistance initiale au cisaillement

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Ta slovenski standard je istoveten z: **EN 1052-3:2002/A1:2007**

ICS:

91.080.30 Zidane konstrukcije Masonry

SIST EN 1052-3:2004/A1:2007 en;fr;de

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ICS 91.080.30

English Version

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Méthodes d'essai de la maçonnerie - Partie 3:
Détermination de la résistance initiale au cisaillement

Prüfverfahren für Mauerwerk - Teil 3: Bestimmung der
Anfangsscherfestigkeit (Haftscherfestigkeit)

This amendment A1 modifies the European Standard EN 1052-3:2002; it was approved by CEN on 3 February 2007.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This amendment exists 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 CEN Management Centre has the same status as the official versions.

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

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Foreword

This document (EN 1052-3:2002/A1:2007) has been prepared by Technical Committee CEN/TC 125 “Masonry”, the secretariat of which is held by BSI.

This Amendment to the European Standard EN 1052-3:2002 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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1 Modification in 3 Principle

In the first paragraph delete ", with precompression perpendicular to the bed joints".

In the second paragraph delete "The initial shear strength is defined by the linear regression curve to zero normal stress."

Add a new final paragraph as follows:

"Two procedures, A and B are included. Procedure A involves testing specimens at different precompressions and the initial shear strength is defined by a linear regression curve to zero prestress. Procedure B involves testing specimens at zero precompression and determining a characteristic initial shear strength from a simple or a statistical consideration of the results."

2 Modification in 7.1 Preparation of masonry specimens

Delete the first sentence "Prepare at least . . . > 200 mm." and substitute the following:

"Prepare type I specimens according to Table 2 and Figure 1. If $h_u > 200$ mm, type II specimens may be used. Where for practical purposes it is necessary to cut units, ensure that the faces of the unit to be mortared are representative of the unit as a whole."

In Figure 1 headings delete "Type A" and substitute "Type I" and delete "Type B" and substitute "Type II".

In the final sentence delete "In case of specimens according to Figure 1A, the . . ." and substitute "In the case of Type I specimens according to Figure 1, the . . ."

3 Modification in Table 2 Dimensions and type of shear test specimens

Delete existing Table 2 and substitute new Table 2 as shown below:

Table 2 — Dimensions and type of shear test specimens

Unit length	Specimen type and dimensions	
l_u mm	Type according to Figure 1	Dimensions mm
≤ 300	I	$l_s = l_u$
> 300	I	$300 < l_s < 350$
≤ 300	II	$h_1 = 200$ $l_s = l_u$
> 300	II	$h_1 = 200$ $300 < l_s < 350$

4 Modification in 8.1 Placing the specimens in the testing machine

In the first paragraph delete, " t_u " and substitute "the width of the unit".

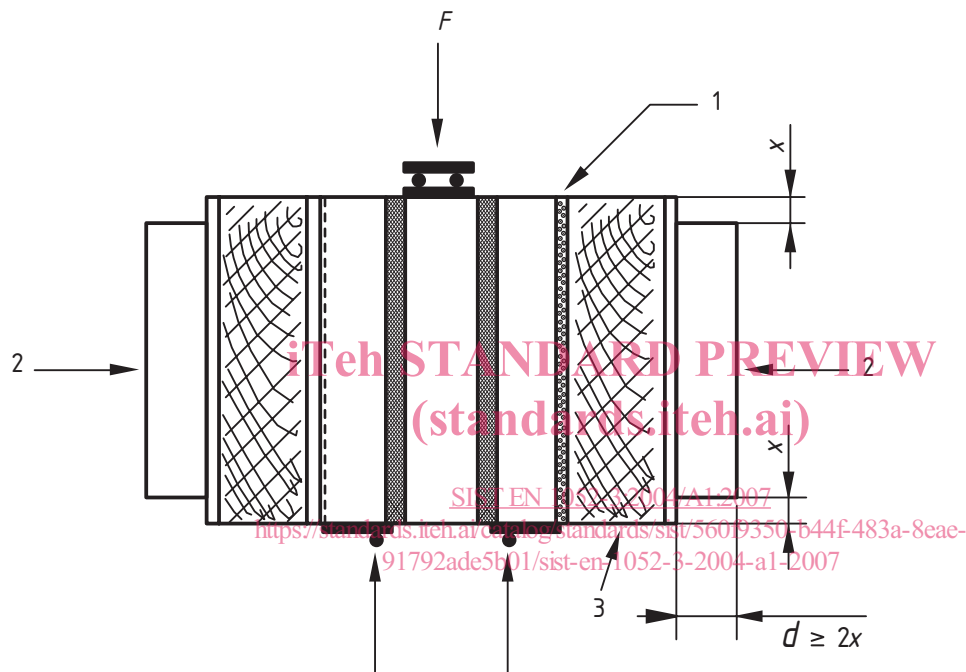
5 Modification in Figure 2 - Loading of shear test specimen

Delete " $e = \frac{l_u}{15}$ " and substitute " $e = \frac{l_s}{15}$ ".

In headings delete "Type A" and substitute "Type I" and delete "Type B" and substitute "Type II".

6 Modification in Figure 3 - Precompression load

Delete the existing figure and substitute the following:



Add the following to the Key

d depth of loading beam

x length by which the loading beam extends beyond the end of the platen

7 Modification in 8.2 Loading

Add a new subclause heading "8.2.1 Procedure A" below the heading "8.2 Loading".

Add a new subclause after the first two paragraphs as follows:

"8.2.2 Procedure B

Test at least six specimens at zero precompression."

Delete the final (third) paragraph and substitute the following:

8.2.3 Loading rate

Increase the shear stress at a rate between 0,1 N/(mm²/min) and 0,4 N/(mm²/min)."

8 Modification in 8.3 Measurements and observations

After "- the precompression load F_{pi} " add "for procedure A".

9 Modification in 8.4 Replications

Delete lines 5 and 6 and substitute the following:

"- further specimens may be tested until shear failures of the types shown in Figure A.1 or Figure A.2 have been achieved for each precompression level (Procedure A) or six times (Procedure B) or alternatively;"

In the final line, add "for Procedure A" after "may be needed".

10 Modification in 9 Calculations

In line 1 add "for Procedure A" after "shear strength and"

At the end of the clause add:

"where

- f_{voi} is the shear strength of an individual sample (N/mm²);
- f_{pi} is the precompressive stress of an individual sample (N/mm²);
- $F_{i, max}$ is the maximum shear force (N);
- F_{pi} is the precompressive force (N);
- A_j is the cross sectional area of a specimen parallel to the bed joints (mm²)."

11 Modification in 10 Evaluation of results

Add a new subclause heading "**10.1 Procedure A**" below the heading "10 Evaluation of results".

At the end of Clause 10 add a new subclause as follows:

"10.2 Procedure B

10.2.1 General

Calculate the mean initial shear strength f_{vo} to the nearest 0,01 N/mm².

The characteristic initial shear strength may be calculated using 10.2.2 or 10.2.3.

10.2.2 Simple method

The characteristic shear strength, f_{vok} , shall be calculated as:

$$f_{vok} = 0,8 \times f_{vo}$$

or f_{vok} shall be taken as the lowest individual result whichever is the lower, and shall be given to the nearest 0,01 N/mm².

10.2.3 Statistical method

Calculate for each individual bond strength $f_{vo1}, f_{vo2}, \dots, f_{von}$ the values of Y_1, Y_2, \dots, Y_n

where

$$Y_i = \log_{10} f_{voi} \text{ and calculate } Y_{mean} = \frac{\sum Y_i}{n}$$

where $i = 1, \dots, n$.

Calculate $Y_c = Y_{mean} - (k \times s)$

where

s is the standard deviation of the n log values;

k is a function of n given in Table 3;

n is the number of individual values (normally 6);

Y is \log_{10} of the initial shear strength, f_{vo} .

Calculate the characteristic initial shear to the nearest 0,01 N/mm²

n	k
6	2,18
7	2,08
8	2,01
9	1,96
10	1,92
11	1,89
12	1,89
20	1,77

Take the characteristic initial shear strength to be $f_{vko} = \text{anti log}_{10} (Y_c)$ N/mm² to the nearest 0,01 N/mm².

NOTE The characteristic value derived is based upon a 95 % confidence level.”