SLOVENSKI STANDARD
SIST EN 772-2:1999

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Metode preskušanja zidakov - 2. del: Ugotavljanje odstotnega deleža lukenj v betonskih zidakih (z odtisom na papirju)

Methods of test for masonry units - Part 2: Determination of percentage area of voids in aggregate concrete masonry units (by paper indentation)

Prüfverfahren für Mauersteine - Teil 2: Bestimmung des prozentualen Lochanteils in Mauersteinen aus Beton (mittels Papiereindruck)

Méthodes d'essai des éléments de maçonnerie - Partie 2: Détermination du pourcentage de vides dans les éléments de maçonnerie en béton (par empreinte sur papier)

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This European Standard was approved by CEN on 2 July 1998.

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

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 125 "Masonry", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by February 1999, and conflicting national standards shall be withdrawn at the latest by September 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies a method of determining the percentage area of voids in aggregate concrete masonry units.

2 Normative references

This European Standard incorporates by dated or undated reference, provision 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.

pr EN 771-3 Specification for masonry units - Part 3: Aggregate concrete masonry units (dense and lightweight aggregates)

3 Principle

After preparation of the specimens thick pieces of paper are impressed on the test surfaces[1] of the masonry units and the indentation measured to give the percentage area of voids.

4 Symbols

A_v is the total cross sectional area of voids, (mm^2)

A_u is the cross sectional area of masonry unit, (mm^2)

M_{pv} is the mass of paper cut to the shape of the void, (g)

M_{pu} is the mass of paper cut to the shape of the masonry unit, (g)

5 Materials

Thick, stiff sheets of paper, the dimensions of each piece of paper exceeding the dimensions of the masonry unit by at least 20 mm in both directions.

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[1] The test may be arranged so that the percentage area of voids in opposing faces of the masonry unit are tested simultaneously or faces tested singly.

6 Apparatus

6.1 A **compression testing machine.**

6.2 A **planimeter.**

6.3 A **weighing instrument** capable of weighing to an accuracy of 0,1 g.

7 Preparation of specimens

7.1 Sampling

The method of sampling shall be in accordance with **pr EN 771-3**. The minimum number of specimens shall be six, but a larger minimum number may be specified in the product specification, in which case that larger number shall be used.

7.2 Surface treatment

Remove any roughness on the test face(s) of the masonry unit.

8 Test procedure

8.1 Obtaining the indentations

Place one sheet of paper on the bottom platen of a compression testing machine (**6.1**).

Place the masonry unit on the paper, with the voids running vertically, and then, if required to test two faces simultaneously, place a second sheet of paper on the top face of the masonry unit.

Apply a load of approximately 3 kN.

Mark the outline on both sheets of paper of the indentations that have been made.

8.2 Measurement

8.2.1 General

Measure the areas of the cross section of the voids and the masonry unit in accordance with **8.2.2** or the weights of the corresponding areas of paper in accordance with **8.2.3**.

8.2.2 Measurement by geometry

For each sheet of paper determine the total cross sectional area of the voids A_v and of the masonry unit A_u and express them to the nearest 10 mm^2 using the planimeter (**6.2**).

8.2.3 Measurement by weight

For each sheet of paper cut out the area representing the area of the masonry unit and weigh it to the nearest 0,1 g. Record the weight M_{pu}.

From the sheet of paper representing the area of the masonry unit cut out the areas representing the voids and weigh these to the nearest 0,2 g. Record the weight M_{pv}.

9 Expression of results

Determine the percentage area of voids by geometry,

$$\frac{A_v}{A_u} \times 100 \qquad ...(1)$$

, or by weight,

$$\frac{M_{pv}}{M_{pu}} \times 100 \qquad ...(2)$$

for the paper applied to each bed face of the masonry unit.

Determine the mean percentage area of voids, if required, to the nearest 1 %.

10 Test report

The test report shall contain the following information:

a) The number, title and date of issue of this European Standard.

b) the name of the organization that carried out the sampling and the method used ;

c) the date of testing;

d) the type, origin and designation of the masonry unit by reference to **pr EN 771-3**;

e) The number of specimens in the sample.

f) A reference to the method used (i.e. by geometry or by weight).

g) The percentage area of voids of each specimen and the mean value, if required, to the nearest 1 %.

h) Remarks, if any.