

## **Methods of test for masonry - Part 5: Determination of bond strength by the bond wrench method**

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of bond strength by the bond wrench method

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1052-5:2005 sisaldab Euroopa standardi EN 1052-5:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 30.05.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1052-5:2005 consists of the English text of the European standard EN 1052-5:2005.</p> <p>This document is endorsed on 30.05.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This document specifies a method for determining the bond strength of horizontal bed joints in masonry using a bond wrench.</p>	<p><b>Scope:</b> This document specifies a method for determining the bond strength of horizontal bed joints in masonry using a bond wrench.</p>
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**ICS** 91.080.30

**Võtmesõnad:** loading, masonry, masonry walls, material, material testing machines, mathematical calculations, mortars, preparation, production, storage, strength of materials, symbols, tensile strength, test pieces, test reports, testing, walls

English version

## Methods of test for masonry - Part 5: Determination of bond strength by the bond wrench method

Méthodes d'essai de la maçonnerie - Partie 5:  
Détermination de la résistance à la rupture d'un joint de  
muret selon la méthode du moment de flexion en tête de  
muret

Prüfverfahren für Mauerwerk - Teil 5: Bestimmung der  
Biegehaftzugfestigkeit

This European Standard was approved by CEN on 14 February 2005.

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## Foreword

This document (EN 1052-5:2005) 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of an identical text or by endorsement, at the latest by October 2005, and conflicting national standards shall be withdrawn at the latest by October 2005.

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

## 1 Scope

This document specifies a method for determining the bond strength of horizontal bed joints in masonry using a bond wrench.

Guidance is given on the preparation of the specimens, the conditioning required before testing, the testing equipment, machine, the method of test, the method of calculation and the contents of the test report.

## 2 Normative references

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

EN 772-1, *Methods of test for masonry units — Part 1: Determination of compressive strength*

EN 772-10, *Methods of test for masonry units — Part 10: Determination of moisture content of calcium silicate and autoclaved aerated concrete units*

EN 998-2, *Specification for mortar for masonry — Part 2: Masonry mortar*

EN 1015-3, *Methods of test for mortar for masonry — Part 3: Determination of consistence of fresh mortar (by flow table)*

EN 1015-7, *Methods of test for mortar for masonry — Part 7: Determination of air content of fresh mortar*

EN 1015-11, *Methods of test for mortar for masonry — Part 11: Determination of flexural and compressive strength of hardened mortar*

## 3 Principle

The bond strength of masonry by the bond wrench method is derived from the strength of small masonry specimens tested to destruction. The specimen is rigidly held and a clamp is applied to the top unit. A bending moment is applied to the clamp by a lever until the top unit is pulled from the remainder. The characteristic value, calculated from the maximum stresses achieved by the samples is considered to be the bond strength of the masonry.

## 4 Terms, definitions and symbols

For the purposes of this document, the following terms and definitions apply.

### 4.1

#### **masonry**

assemblage of masonry units laid in a specified pattern and jointed together with mortar

### 4.2

#### **bond strength**

strength of a masonry specimen when subjected to a locally applied normal force and bending moment so as to remove a single unit from the specimen