Tooted ja süsteemid betoonkonstruktsioonide kaitsmiseks ja parandamiseks. Katsemeetodid. Kaldnihketugevuse määramine

Products and systems for the protection and repair of concrete structures - Test methods - Determination of slant shear strength

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 12615:2000 sisaldab Euroopa standardi EN 12615:1999 ingliskeelset teksti. Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 12615:2000 consists of the English text of the European standard EN 12615:1999. This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: Käesolev Euroopa standard kirjeldab meetodit konstruktsioonliimitise tugevuse määramiseks kahe betoonsubstraadi vahel. Meetodit võib kasutada kaldnihkepinge määramiseks järgmistel variantidel: kivistunud betoon liimitud kivistunud betoonile; värske betoon liimitud kivistunud betoonile. Katset võib läbi viia nii kuival kui märjal kivistunud betoonsubstraadil.	**Scope:**

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English version

Products and systems for the protection and repair of concrete structures – Test methods

Determination of slant shear strength

Produits et systèmes pour la protection et la réparation des structures en béton – Méthodes d'essais – Détermination de la résistance au cisaillement

Produkte und Systeme für den Schutz und die Instandsetzung von Betontragwerken – Prüfverfahren – Bestimmung der Druckscherfestigkeit

This European Standard was approved by CEN on 1999-04-16.

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CEN

European Committee for Standardization
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Contents

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 104 "Concrete (performance, production, placing and compliance criteria)", 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of an identical text or by endorsement, at the latest by november 1999, and conflicting national standards shall be withdrawn at the latest by november 1999.

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.

It has been prepared by Sub-Committee 8 "Products and systems for the protection and repair of concrete structures" (Secretariat AFNOR).

1 Scope

This European Standard describes a method for the determination of the strength of a structural bond between two concrete substrates. The method can be used to measure the slant shear bond strength in the following combinations :

- hardened concrete bonded to hardened concrete ;
- fresh concrete bonded to hardened concrete.

The test can be carried out with either dry or wet hardened concrete substrates.

2 Normative references

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

EN 196-1, *Methods of testing cement - Part 1 : Determination of strength.*

prEN 1766, *Products and systems for the protection and repair of concrete structures - Test methods - Reference concretes for testing.*

3 Test method

The slant shear test is carried out on restored concrete prisms having the dimensions shown in figure 1 and with a bond surface inclined at an angle of 60° to the cross-sectional axis of the prism. For tests involving the bonding of hardened concrete to hardened concrete a smaller, alternative prism size of 40 mm x 40 mm x 160 mm can be used in appropriate circumstances. The test is performed by applying a compressive force along the longitudinal axis of the restored prism until fracture occurs.

4 Equipment

a) steel moulds for producing concrete test pieces of size 100 mm x 100 mm x 400 mm conforming to prEN 1766, alternative 40 mm x 40 mm x 160 mm conforming to EN 196-1 ;

b) concrete mixer as in prEN 1766 ;

c) grit blasting equipment ;

d) concrete saw mounted on cutting bench ;

e) a suitable frame for clamping the cut test pieces together during the bonding, for example see figure 2 ;

f) a compression testing machine capable of applying a constant rate of loading of between 1 kN and 10 kN per second with a capacity of at least 200 kN (for prisms 40 mm x 40 mm x 160 mm) and with a capacity of at least 1 000 kN (for prisms 100 mm x 100 mm x 400 mm) ;

g) steel wire brush.