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Metoda poliranja preskušancev pred merjenjem odpornosti proti drsenju

Method of polishing specimens prior to the measurement of slip and skid resistance

Verfahren zur Bestimmung des Griffigkeitsbeiwertes vor und nach Polierung

Méthode de détermination de la valeur de résistance au dérapage/à la glissance d'unités de pavage polies ou non polies

Ta slovenski standard je istoveten z: CEN/TS 12633:2014

ICS:

93.080.20 Materiali za gradnjo cest Road construction materials

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TECHNICAL SPECIFICATION

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CEN/TS 12633

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ICS 93.080.20

Supersedes ENV 12633:2003

English Version

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

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Foreword

This document (CEN/TS 12633:2014) has been prepared by Technical Committee CEN/TC 178 “Paving units and kerbs”, the secretariat of which is held by BSI.

This document supersedes ENV 12633:2003.

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Introduction

Health and safety aspects

WARNING: The application of emery polishing agents during the course of the operations described in this Technical Specification can generate particles that could be injurious to health. It is essential to ensure that appropriate precautions are taken, e.g. the use of dust masks and/or dust extracting facilities. It is also essential to ensure that the equipment is electrically safe in wet test conditions.

1 Scope

This Technical Specification describes a laboratory method for polishing paving units using a flat-bed polishing machine prior to the measurement of slip and skid resistance to evaluate the durability of this characteristic. This Technical Specification may not be applicable to profiled paving units: for these types of units the method of polishing does not reflect the polishing in practice.

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 772-20, *Methods of test for masonry units - Part 20: Determination of flatness of faces of aggregate concrete, manufactured stone and natural stone masonry units*

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

ISO 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

3 Principle

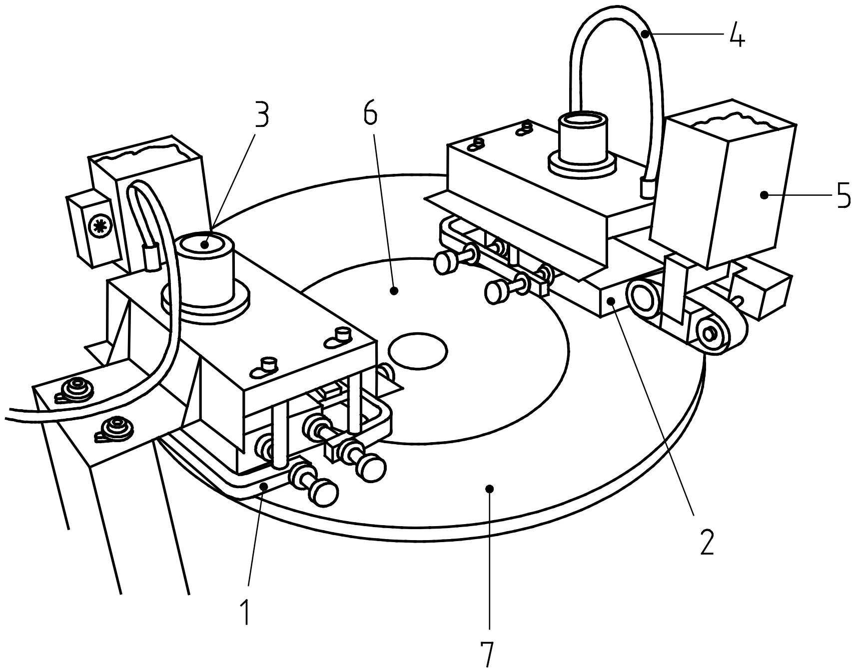
The Technical Specification describes the test method for polishing paving units using an abrasive agent in contact with a rotating resilient mat.

4 Apparatus

4.1 Straight-edge

4.2 Set of feeler gauges with a width of (6 ± 1) mm capable of measuring with an accuracy to 0,05 mm

4.3 Flat-bed polishing machine (see Figure 1) comprising the following:



Key

1 sample holder
2 sample
3 adjustable mass
4 water supply
5 emery hoppers with adjustable conveyors
6 lap wheel
7 rubber annulus

Figure 1 — Flat-bed polishing machine

a) a machined, flat circular cast iron or steel grinding lap not less than (600 ± 3) mm in diameter, which can be rotated in a horizontal plane at a speed of (29 ± 1) r/min;

b) a flat smooth-surfaced natural rubber annulus of (600 ± 3) mm external diameter, approximately (320 ± 3) mm internal diameter and a thickness of (9 ± 1) mm fixed to the upper surface.

The rubber annulus shall have a hardness from 60 to 75 IRHD in accordance with ISO 48. It shall be covered by a certificate of conformity from the manufacturer which includes the date of manufacture.

It should be stored in the dark at a temperature in the range 5 °C to 25 °C and should be conditioned by bringing to a temperature of (20 ± 5) °C throughout it mass before fixing to the grinding plate. The annulus can be used as long as the hardness remains in the specification.

If glue is used to attach the annulus to the grinding plate, care should be taken to ensure it does not affect the hardness of the rubber.

c) two adjustable metal holders capable of loosely holding in place specimens conforming to Clause 6;

d) means of locating, two specimens within the two holders according to the following configuration:

— with the centre points of their outer edges (270 ± 1) mm from the centre of the lap;

— positioned diametrically opposite to each other;

— with their long sides lying in the direction of rotation of the lap.

The specimens shall be free to move in a vertical plane but be restrained from moving in the horizontal plane.

e) means to ensure that the required load can be applied evenly at the centre of each test specimen and which can move in a vertical direction;

f) weights which permit uniform loading of the test specimen against the surface of the rubber annulus and which, including test specimen, tray (if used) and adjustable weight, will provide a contact stress of (2 250 ± 50) N/m² over the area of the final prepared contact surface;

NOTE This stress corresponds to a total mass of 2,924 kg for an area of 150 mm × 85 mm.

g) separate mechanisms to feed corn emery and emery flour and a means to feed water.

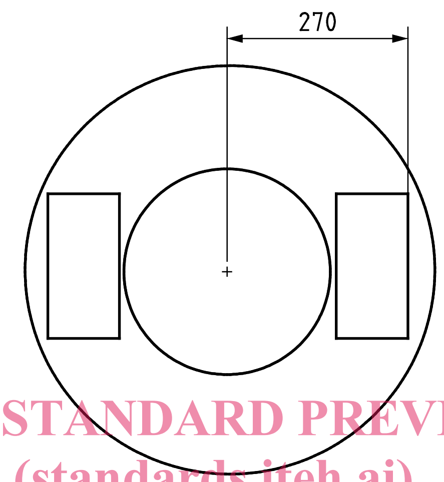


Figure 2 — Position of the units onto the flat-bed polishing machine

4.4 Polishing media, consisting of the following:

a) fresh natural corn emery, of a grading that conforms with Table 1;

Table 1 — Grading requirements for corn emery

Nominal width of sieve aperture µm	total passing %
600	98 to 100
500	70 to 100
425	30 to 90
355	0 to 30
300	0 to 5

b) fresh air-floated or water-washed emery flour 95 % of which passes a 50 µm test sieve.

The polishing media shall be used once only.

4.5 Reference material

The reference material is a control stone specimen prepared as described in Annex A.

The control stone specimens may be replaced for internal control by secondary control specimens defined by the laboratory.