SLOVENSKI STANDARD
SIST EN 524-1:1999

01-oktober-1999

Zaġļ itne cevi za prednapete kable iz jeklenih trakov ï Metode preskuġanja - 1. del: Doloļ evanje oblike in mer

Steel strip sheaths for prestressing tendons - Test methods - Part 1: Determination of shape and dimensions

Hüllrohre aus Bandstahl für Spannglieder - Prüfverfahren - Teil 1: Ermittlung der Formen und Maße

Gaines en feuillard d'acier pour câbles de précontrainte - Méthodes d'essai - Partie 1: Détermination de la forme et des dimensions

Ta slovenski standard je istoveten z: **EN 524-1:1997**

ICS:

77.140.75	Jeklene cevi in cevni profili za posebne namene	Steel pipes and tubes for specific use
91.080.40	Betonske konstrukcije	Concrete structures

SIST EN 524-1:1999 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 524-1

March 1997

ICS 77.140.75; 91.080.40

Descriptors: prestressed concretes, tubes, sheating, prestressing steels, classifications, specification, verification, marking

English version

Steel strip sheaths for prestressing tendons - Test methods - Part 1: Determination of shape and dimensions

Gaines en feuillard d'acier pour câbles de précontrainte - Méthodes d'essai - Partie 1: Détermination de la forme et des dimensions

Hüllrohre aus Bandstahl für Spannglieder - Prüfverfahren - Teil 1: Ermittlung der Formen und Maße

This European Standard was approved by CEN on 1997-01-27. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

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 standard is a part of the series EN 524 "Sheaths for prestressing tendons - Test methods" which additionally comprises the following parts

- Part 2 Determination of flexural behaviour
- Part 3 To-and-fro bending test
- Part 4 Determination of lateral load resistance
- Part 5 Determination of tensile load resistance
- Part 6 Determination of leaktightness (Determination of water loss)

These European standards apply to EN 523 "Steel strip sheaths for prestressing tendons - Terminology, requirements, quality control".

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 September 1997, and conflicting national standards shall be withdrawn at the latest by September 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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 the procedure for determining the shape and dimensions of sheaths for prestressing tendons which comply with EN 523.

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 523 Steel strip sheaths for prestressing tendons - Terminology, requirements, quality control

3 Apparatus and accuracy

- A possible test device is shown in figure 2
- The procedure to determine the relative volume of profile (V_{rel}) shall allow for an accuracy of 5 %
- Vernier calliper (accuracy of 0,1 mm)
- Micrometer gauge (accuracy of 0,01 mm)

4 Internal diameter, height of profile and wall thickness of sheaths

The internal diameter, d_1, and the height of profile, h, shall be determined by means of a vernier calliper using the specimen described in clause 5. Measurements shall be taken at both ends of the specimen in two directions at right angles to one another (see figure 1) before the specimen is sealed. The mean values shall be calculated from the values obtained.
The wall thickness shall be measured by a micrometer gauge at least at four different points.

5 Relative volume of profile

A test specimen with a length of at least l = 500 mm [1]) shall be sealed at one end so that it is watertight. The total volume V_{tot} of the hollow space inside the specimen shall be determined by filling the specimen with water and then measuring the content (see figure 2). The volume V_{ref} and the surface area A_{ref} of the reference cylinder shall be calculated from the mean internal diameter d_1 as described in clause 4 and the length l of the test specimen. The relative volume of the profile (V_{rel}) measured in cm^3/cm^2 is calculated using the following equation:

$$V_{rel} = \frac{V_{tot} - V_{ref}}{A_{ref}}$$

where

A_{ref} (= $\pi \times d_1 \times l$) is the surface area of the reference cylinder (in cm^2);

V_{ref} is the volume of the reference cylinder (in cm^3);

V_{tot} is the volume of water in the specimen (in cm^3).

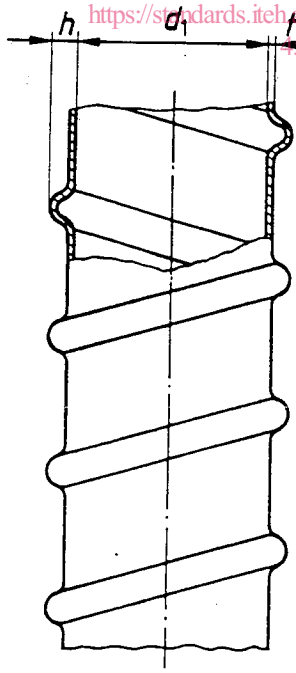

Figure 1: Internal diameter, height of profile and wall thickness of sheaths

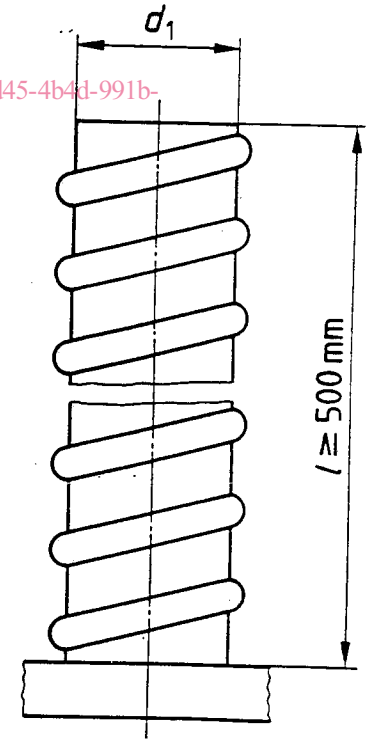

Figure 2: Test set-up for determining the total volume

[1]) It is recommended that the specimen length chosen is such that the specimen can be used for the other test.