BRITISH STANDARD

BS EN
524-2 : 1997

Steel strip sheaths for prestressing tendons — Test methods

Part 2. Determination of flexural behaviour

The European Standard EN 524-2 : 1997 has the status of a British Standard

ICS 77.140.75; 91.080.40

National foreword

This British Standard is the English language version of EN 524-2 : 1997. The UK participation in its preparation was entrusted by Technical Committee B/525, Building and civil engineering structures, to Subcommittee B/525/2, Structural use of concrete, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Summary of pages

This document comprises a front cover, an inside front cover, an EN title page, pages 2 to 4, an inside back cover and a back cover.

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EUROPEAN STANDARD
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Descriptors: Prestressed concretes, tubes, sheathing, prestressing steels, classifications, specification, verification, marking

English version

Steel strip sheaths for prestressing tendons — Test methods — Part 2: Determination of flexural behaviour

Gaines en feuillard d'acier pour câbles de précontrainte — Méthodes d'essai — Partie 2: Détermination du comportement à la flexion

Hüllrohre aus Bandstahl für Spannglieder — Prüfverfahren — Teil 2: Bestimmung des Biegeverhaltens

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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

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 1 *Determination of shape and dimensions*
- 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 the 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.

Contents

1 Scope

This European Standard specifies the procedure for determining the flexural behavior 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 General

The flexural behaviour of sheaths is characterised by their load/deformation curve and the load F_{pl} at the beginning of plastic deformation when subjected to three-point-bending.

4 Specimen

A section of 1100 mm length of the sheath under consideration shall be taken.

5 Procedure

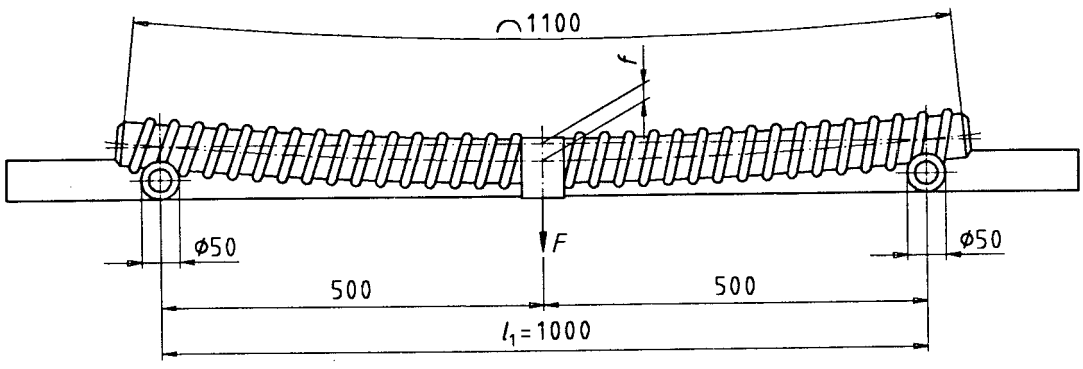
The specimen shall be subjected to three-point-bending as shown in figure 1 by increasing and releasing the load F until plastic deformation begins to take place. The distance between the supports shall be

l_1 = 1000 mm.

The process of increasing and releasing the load F shall be observed by the load/deformation curve (see figure 2) until the load F has reached the value F_{pl} under which the irreversilble deflection Δf_t is not less than 5 % (0,05f_t) but not more than 10 % (0,10f_t) of the total deflection f_t. Loading in the range of F_{pl} should be maintained for at least 1 min.

6 Test results

The load/deformation curve, the load F_{pl}, the actual value of irreversible deflection Δf_t and the total deflection f_t shall be reported.



Dimensions in millimetres

Figure 1. Test set-up for determining the load F_{pl} at the beginning of plastic deformation

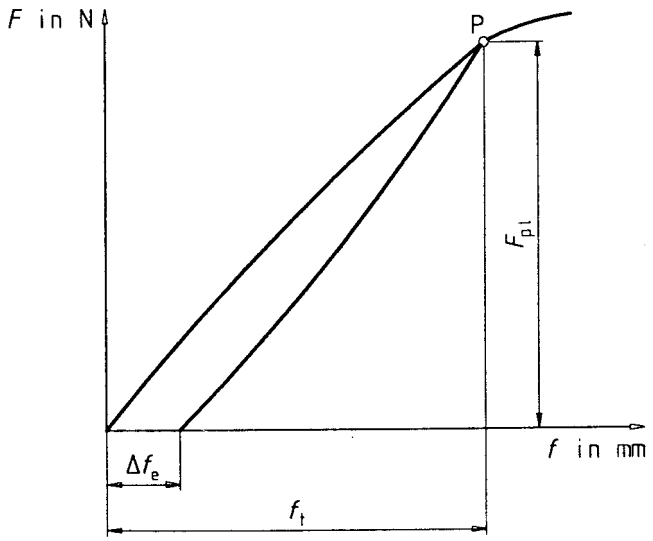


Figure 2. Load/deformation curve for the determination of F_{pl} and Δf_t

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