SLOVENSKI STANDARD
SIST EN 1337-9:2001

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Konstrukcijska leģiģļ a - 9. del: Zaģļ ita

Structural bearings - Part 9: Protection

Lager im Bauwesen - Teil 9: Schutz

Appareils d'appui structuraux - Partie 9: Protection

Ta slovenski standard je istoveten z: **EN 1337-9:1997**

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EUROPEAN STANDARD
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English version

Structural bearings - Part 9: Protection

Appareils d'appui structuraux - Partie 9: Protection

Lager im Bauwesen - Teil 9: Schutz

This European Standard was approved by CEN on 24 October 1997.

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.

This European Standard exists 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.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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 Working Group 5 of Technical Committee CEN/TC 167 "Structural bearings", the secretariat of which is held by UNI.

The European Standard prEN 1337 "Structural bearings" consists of the following 11 parts:

Part 1:	General design rules
Part 2:	Sliding elements
Part 3:	Elastomeric bearings
Part 4:	Roller bearings
Part 5:	Pot bearings
Part 6:	Rocker bearings
Part 7:	Spherical and cylindrical PTFE bearings
Part 8:	Guided bearings and restrained bearings
Part 9:	Protection
Part 10:	Inspection and maintenance
Part 11:	Transport, storage and installation

This Part 9 "Protection" includes Annex A (informative).

Further to CEN/TC 167's decision Part 1 and Part 2 form a package of standards and they come into force together, while the other parts come into force separately after the publication of Part 1 and Part 2.

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 May 1998, and conflicting national standards shall be withdrawn at the latest by May 1998.

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.

1 Scope

This part of this European Standard deals with the measures to protect structural bearings from the effects of the environment and other external influences which would reduce their working life.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate place 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.

ISO 2409: 1992	Paints and varnishes - Cross-cut test
ISO 2808: 1991	Paints and varnishes - Determination of film thickness
ISO 4628-1: 1982	Paints and varnishes - Evaluation of degradation of paint coatings - Designation of intensity, quantity and size of common types of defect - Part 1: General principles and rating schemes
ISO 4628-2: 1982	Paints and varnishes - Evaluation of degradation of paint coatings - Designation of intensity, quantity and size of common types of defect - Part 2: Designation of degree of blistering
ISO 4628-3: 1982	Paints and varnishes - Evaluation of degradation of paint coatings - Designation of intensity, quantity and size of common types of defect - Part 3: Designation of degree of rusting
ISO 4628-4: 1982	Paints and varnishes - Evaluation of degradation of paint coatings - Designation of intensity, quantity and size of common types of defect - Part 4: Designation of degree of cracking
ISO 4628-5: 1982	Paints and varnishes - Evaluation of degradation of paint coatings - Designation of intensity, quantity and size of common types of defect - Part 5: Designation of degree of flaking
ISO 6272: 1993	Paints and varnishes - Falling - weight test
ISO 7253: 1996	Paints and varnishes - Determination of resistance to neutral salt spray (fog)
ISO 8501-1: 1994	Preparation of steel substrates before application of paints and related products - Visual assessment of surface cleanliness - Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings

3 Definitions

For the purposes of this standard the following definitions apply:

3.1 accidental damage: Damage inflicted on the bearing from factors to which it is not intentionally exposed.

3.2 environmental damage: Damage caused by factors associated with the location in which the bearing is intended to function and which could be predicted at the time the bearing is installed.

3.3 marine environment : Location affected by sea salt spray and with an average zinc corrosion rate between 30 g/m^2 per annum and 60 g/m^2 per annum (as 99.9% Zn).

3.4 protection against corrosion: Measures taken to prevent damage to the bearing due to the corrosion of all, or parts thereof, for a time period specified.

3.5 protective coating: Any coating applied to the bearing, or parts thereof, to protect them from environmental damage.

3.6 protective measures: Any measures taken to protect the bearing, or parts thereof, from the effects of the environment and other external causes, that would otherwise reduce its working life.

3.7 working life: The specified period for which a corrosion protection system will provide the minimum performance required by the standard or otherwise agreed.

4 General requirements

4.1 Protection against environmental influences

4.1.1 Corrosion protection

This clause specifies the corrosion protection requirements for the metallic components of structural bearings that would otherwise suffer environmental damage due to corrosion. It excludes surfaces subject to sliding, rolling, friction grip or local pressure.

4.1.1.1 Performance

The system for protection against corrosion qualified in accordance with this standard shall ensure that for a period of ten years after delivery the items meet the requirements detailed below provided the bearings have been handled, stored and installed in accordance with this standard:

- No blistering density in excess of Grade 1 of ISO 4628-2.
- No rusting in excess of rust Grade Ri: 1 of ISO 4628-3.
- No breakdown of coating in excess of Class 1 of ISO 4628-4.
- No degree of flaking in excess of Class 1 of ISO 4628-5.

Where the bearing is to be installed in an environment more aggressive than a marine environment, alternative corrosion protection requirements may need to be agreed.

4.1.1.2 Documentation

To define the corrosion protection system, the following shall be documented:

- Manufacturers procedure for the corrosion protection of bearings;
- Material suppliers specifications;
- Tests.

The above shall include as a minimum the following:

- Standard of surface preparation (eg. Sa 2½ in accordance with ISO 8501 Sa);
- Type of protective coating (e.g. sprayed zinc, two pack epoxy acrylated rubber);
- Number of coats;
- For paint systems:
  - Item number and colour;
  - Brand name and manufacturers reference number;
  - Datasheet number;
  - Where applied;
  - How applied;
  - Minimun dry film thickness;
  - Maximum local dry film thickness;
  - Procedures for treatment of local damage to protective coatings;
- Results of the tests according with Table 1.

Table 1

Test	Standard	Acceptance criteria
Neutral salt spray	ISO 7253	After: 720 Hours;
		No blister in excess of Grade 1 of ISO 4628-2;
		No rust in excess of Ri 1 of ISO 4628-3;
		No breakdown in excess of Class 1 of ISO 4628-4;
		No flaking Class 1 in excess of ISO 4628-5.
Minimun dry film thickness	ISO 2808	As specified by the paint manufacturer
Cross-cut	ISO 2409	0 or 1
Falling-weigth	ISO 6272	No visible damage with 1 kg ball and fall of 10 cm

These tests shall be repeated every five years or whenever a change to the corrosion protection system is made.

4.2 Electrolytic corrosion

Where dissimilar metals are used, care shall be taken to avoid electrolytic corrosion.

5 Conformity evaluation

5.1. General

The tests and inspections specified in this clause shall be carried out to demonstrate the products conformity with this European Standard.

The tests and inspections are required under a production control scheme.

If and when in addition to production control, third party control is required, the type tests shall be performed prior to commencing the third party control.

Results of previous type tests are only valid if no changes in production have occurred which influence conformity to this European Standard.

When during third party audit testing, a non-conformance is detected, the audit test specified in this clause shall be repeated on a further sample. If a further non-conformance is detected, the causes of the non-conformity shall be traced and rectified. Documentary evidence that the non-compliance has been rectified shall be included in the manufacturer's records.