

MAAVÄRINAVASTASED SEADMED

Anti-seismic devices

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Anti-seismic devices

Dispositifs anti-sismiques

Erdbebenvorrichtungen

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European foreword

This document (EN 15129:2018) has been prepared by Technical Committee CEN/TC 340 “Anti-seismic devices”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by November 2018, and conflicting national standards shall be withdrawn at the latest by November 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15129:2009.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Regulation 305/2011.

For relationship with EU Regulation 305/2011, see informative Annex ZA, which is an integral part of this document.

The main changes with respect to the previous edition are listed below:

- editorial revision;
- new subclause 10.1 AVCP;
- new Annex ZA.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document covers the design of devices that are provided in structures, with the aim of modifying their response to the seismic action. It specifies functional requirements and general design rules of the devices for the seismic and non-seismic design situations, material characteristics, manufacturing and testing requirements, as well as assessment and verification of constancy of performance, installation and maintenance requirements. This document covers the types of devices and combinations thereof as defined in 3.4.

NOTE Additional information concerning the scope of this document is given in Annex A.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1090-2, *Execution of steel structures and aluminium structures — Part 2: Technical requirements for steel structures*

EN 1337 (all parts), *Structural bearings*

EN 1337-1:2000, *Structural bearings — Part 1: General design rules*

EN 1337-2:2004, *Structural bearings — Part 2: Sliding elements*

EN 1337-3:2005, *Structural bearings — Part 3: Elastomeric bearings*

EN 1337-7:2004, *Structural bearings — Part 7: Spherical and cylindrical PTFE bearings*

EN 1337-10:2003, *Structural Bearings — Part 10: Inspection and maintenance*

EN 1990:2002, *Eurocode — Basis of structural design*

EN 1991-1-5, *Eurocode 1: Actions on structures — Part 1-5: General actions — Thermal actions*

EN 1998 (all parts), *Eurocode 8: Design of structures for earthquake resistance*

EN 1998-1:2004, *Eurocode 8: Design of structures for earthquake resistance — Part 1: General rules, seismic actions and rules for buildings*

EN 1998-2:2005, *Eurocode 8 — Design of structures for earthquake resistance — Part 2: Bridges*

EN 10025 (all parts), *Hot rolled products of structural steels*

EN 10083 (all parts), *Steels for quenching and tempering*

EN 10088 (all parts), *Stainless steels*

EN 10088-2:2014, *Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*

EN 10204, *Metallic products — Types of inspection documents*

EN 10210 (all parts), *Hot finished structural hollow sections of non-alloy and fine grain steels*

- EN 10297 (all parts), *Seamless circular steel tubes for mechanical and general engineering purposes — Technical delivery conditions*
- EN ISO 898 (all parts), *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes — Coarse thread and fine pitch thread (ISO 898 series)*
- EN ISO 4287, *Geometrical product specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters (ISO 4287)*
- EN ISO 4526, *Metallic coatings — Electroplated coatings of nickel for engineering purposes (ISO 4526)*
- EN ISO 4527, *Metallic coatings — Autocatalytic (electroless) nickel-phosphorus alloy coatings — Specification and test methods (ISO 4527)*
- EN ISO 6158, *Metallic and other inorganic coatings — Electrodeposited coatings of chromium for engineering purposes (ISO 6158)*
- EN ISO 6507-2, *Metallic materials — Vickers hardness test — Part 2: Verification and calibration of testing machines (ISO 6507-2)*
- EN ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system (ISO 7500-1)*
- ISO 34 (all parts), *Rubber, vulcanized or thermoplastic — Determination of tear strength*
- ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*
- ISO 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*
- ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*
- ISO 815 (all parts), *Rubber, vulcanized or thermoplastic — Determination of compression set*
- ISO 1083, *Spheroidal graphite cast irons — Classification*
- ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*
- ISO 4664 (all parts), *Rubber, vulcanized or thermoplastic — Determination of dynamic properties*
- ISO 14737, *Carbon and low alloy cast steels for general applications*