

The European Standard on Anti-Seismic Devices

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Summary

The European Committee for Standardization (CEN) officially created the Technical Committee CEN-TC 340: *Anti-seismic Devices* in 1993. The mission of this TC was to proceed with the standardization of devices for use in structures erected in seismic areas and designed in accordance with EUROCODE 8: *Design of Structures for Earthquake Resistance*.

This European Standard, named EN 15129, specifies functional requirements of Seismic Hardware and general design rules thereof, material characteristics, manufacturing and testing requirements, as well as acceptance, installation and maintenance criteria of all the types of seismic devices.

The scope of the paper is that of illustrating the structure of EN 15129, the criteria adopted in its drafting, the procedures followed for its approval, and some of the aspects which render this Standard unique and innovative.

Keywords:

Seismic Norm, European Norm, Seismic Hardware, Seismic Devices, Seismic Design

1. Introduction

Modern seismic design strategies, such as Seismic Isolation and Energy Dissipation, have been devised and implemented entailing the use of special mechanical devices to be included in the structural system in order to substantially change its overall behaviour under a seismic attack.

Said design strategies could not have found useful application without a parallel development of the hardware needed to implement them.

Thus, many research laboratories and certain pioneering industries have decided to invest important resources in this field, inventing and improving a series of devices that exploit well known physical phenomena for the seismic protection of structures.

As it is often the case when technological growth in a given field reaches important levels of development as well as a reasonable degree of maturity, a need spontaneously arises to establish ground rules that define principles of general validity.

Said rules ultimately come to nest in documents of increasing importance like *recommendations*, *guidelines* and *standards*.

Within the spirit of the above, in March, 1992, the Italian Standardization Institute (UNI) forwarded to the European Committee on Standardization (CEN) a formal request calling for the creation of a Technical Committee charged with drafting a norm to cover anti-seismic hardware.