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Execution of steel structures and aluminium structures - Part 1: Requirements for conformity assessment of structural components

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English Version

Execution of steel structures and aluminium structures - Part 1: Requirements for conformity assessment of structural components

Exécution des structures en acier et des structures en
aluminium - Partie 1: Exigences pour l'évaluation de la
conformité des composants structuraux

Ausführung von Stahltragwerken und Aluminiumtragwerken
- Teil 1: Konformitätsnachweisverfahren für tragende
Bauteile

This European Standard was approved by CEN on 15 June 2008.

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Foreword

This document (EN 1090-1:2009) has been prepared by Technical Committee CEN/TC 135 “Execution of steel and aluminium structures”, the secretariat of which is held by SN.

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of an identical text or by endorsement, at the latest by January 2010, and conflicting national standards shall be withdrawn at the latest by August 2011.

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

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 Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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

Introduction

This harmonised European Standard is a part of a group of European standards dealing with design and manufacturing of load bearing components and structures made of steel or aluminium.

This harmonised European Standard deals with provisions for conformity assessment of components which imply conformity to performance characteristics declared by the manufacturer of the components.

The components have structural characteristics which make them fit for their particular use and function.

The structural characteristics are governed by the design and the manufacture of the components.

This harmonised European Standard does not contain rules for structural design and manufacture. Such rules are called up from the relevant parts of Eurocode for design requirements and from EN 1090-2 (steel) and EN 1090-3 (aluminium) for execution requirements.

To use this harmonised European Standard for assessment and declaration of conformity of structural steel or aluminium components all relevant design and execution standards within the group need to be available.

This harmonised European Standard has been prepared to satisfy Mandate M 120 – Structural metallic products and ancillaries (2/4) – issued by the European Commission.

1 Scope

This European Standard specifies requirements for conformity assessment of performance characteristics for structural steel and aluminium components as well as for kits placed on the market as construction products. The conformity assessment covers the manufacturing characteristics, and where appropriate the structural design characteristics.

This European Standard covers also the conformity assessment of steel components used in composite steel and concrete structures.

The components can be used directly or in construction works or as structural components in the form of kits.

This European Standard applies to series and non-series structural components including kits.

The components can be made of hot rolled or cold formed constituent products or constituent products produced with other technologies. They may be produced of sections/profiles with various shapes, flat products (plates, sheet, strip), bars, castings, forgings made of steel and aluminium materials, unprotected or protected against corrosion by coating or other surface treatment, e.g. anodising of aluminium.

This European Standard covers structural cold formed members and sheeting as defined in EN 1993-1-3 and EN 1999-1-4.

This European Standard does not cover conformity assessment of components for suspended ceilings, rails or sleepers for use in railway systems.

NOTE For certain steel and aluminium components, particular specifications for performance and other requirements have been developed. The particular specifications may be issued as an EN or as Clauses within an EN. An example is given in EN 13084-7 for single wall steel chimneys and steel liners. Such particular specifications will take precedence in case of non-compliance with the requirements of this European Standard.

2 Normative references

The following referenced documents are indispensable for the application 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	<i>Execution of steel structures and aluminium structures — Part 2: Technical requirements for steel structures</i>
EN 1090-3	<i>Execution of steel structures and aluminium structures — Part 3: Technical requirements for aluminium structures</i>
EN 1990:2002	<i>Eurocode: Basis of structural design</i>
EN 1991 (all parts)	<i>Eurocode 1: Actions on structures</i>
EN 1993 (all parts)	<i>Eurocode 3: Design of steel structures</i>
EN 1994 (all parts)	<i>Eurocode 4: Design of composite steel and concrete structures</i>
EN 1998 (all parts)	<i>Eurocode 8: Design of structures for earthquake resistance</i>
EN 1999 (all parts)	<i>Eurocode 9: Design of aluminium structures</i>
EN 10045-1	<i>Metallic materials — Charpy impact test — Part 1: Test method</i>

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