

BUSINESS PLAN
CEN/TC 135
EXECUTION OF STEEL STRUCTURES AND ALUMINIUM STRUCTURES

EXECUTIVE SUMMARY

The business environment relevant for the work of the CEN/TC includes

- The entire industry involved in design, execution and purchase of load bearing steel and aluminium structures and components, i.e. designers, contractors and their suppliers of constituent products.
- Authorities such as national building authorities, road authorities or railway authorities responsible for the regulation of the activities of the industry, in particular with regard to structural safety.
- All users of steel and aluminium load bearing structures, e.g. the users of buildings, bridges, towers, masts, silos etc.

The primary benefit from the work of the CEN/TC is

- Safe and cost effective load bearing steel and aluminium structures.
- Harmonization of the execution of load bearing steel and aluminium structures, ensuring equal competitive conditions across all nations and enterprises committed to the regulations.
- Proper environmental declarations of load bearing steel and aluminium components

The priority of the CEN/TC is

- To make European standards available for the industry and for national authorities.

1 BUSINESS ENVIRONMENT OF THE CEN/TC

1.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

- Obtaining political and economical long-term goals illustrated by obtaining common rules for the execution of bridges for the public transportation sector (i.e road bridges or railway bridges).
- Ensuring that the public works are safe and that they are produced on the basis of proven and standardized working methods and that they can be used with no restrictions across the borders.
- Ensuring cost effective solutions through standardization of rules for execution and inspection.
- Pursuing technical development through the standardization work in itself as a driving force. Expertise and knowledge from various sources are brought into the discussion resulting in provisions that are complete and modern.
- Ensuring provisions for execution closely connected with the development of European provisions for design of structures carried out by CEN/TC 250.
- Ensuring industrial competitiveness. The standards for execution of load bearing steel and aluminium structures will rationalize the production of the structures with defined levels of performance in terms of serviceability and reliability. This applies to the work of the designer as well as the constructor. Solutions and work procedures will be known to the participants, i.e. it is avoided that every method and structure is a prototype.
- Simplifying the work of European constructors so that they can perform work in all member states without prohibitive and special national rules.
- Simplifying the work of European designers so that they can perform work in all member states without prohibitive and special national rules.
- Providing proper environmental declarations of load bearing steel and aluminium components.

1.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the CEN /TC:

- The standards of the CEN/TC shall give normative provisions for all industry involved in design, execution and purchase of load bearing steel and aluminium structures.
- The relevant standards shall provide the tool for environmental product declarations, i.e. product category rules (c-PCR) complementary to EN 15804 *Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products*.
- The standards shall specify general technical delivery conditions in terms of performance characteristics with accompanying provisions for assessment and verification of constancy

of performance for load bearing structural steel and aluminium components placed on the market as construction products.

- The standards shall relate their normative requirements to CE marking information of product properties according to the Construction Products Regulation and guidance given by CEN/CENELEC.
- Relevant topics are specifications, documentation, fabrication, welding, mechanical fastening, erection, surface treatment, geometrical tolerances, inspection, testing, assessment and verification methods, classification, marking, labeling and packaging.

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

- The work of the CEN/TC harmonizes the execution of load bearing steel and aluminium structures, ensuring equal competitive conditions across all nations and enterprises committed to the regulations.
- The small and medium sized companies have particular use of standardized provisions, as the resources to develop and maintain efficient procedures and methods for the work are limited for them.
- The harmonization, and the standardizations of products implied by it, is expected to remove technical barriers to trade and open markets throughout Europe.
- The developed common rules are expected to support cost savings through implementation of them.
- The developed standards are expected to support and complement other European standards such as the Eurocodes of the CEN/TC 250.
- The relevant standard is expected to support the environmental declaration of load bearing steel components, aluminium components and other structural metal components.

3 PARTICIPATION IN THE CEN/TC

All the CEN national members are entitled to nominate delegates to CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognized European or international organizations is also possible under certain conditions. To participate in the activities of this CEN/TC, please contact the national standards organization in your country.

4 OBJECTIVES OF THE CEN/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

4.1 Defined objectives of the CEN/TC

The main objective of the CEN/TC is to provide standards for execution of load bearing steel structures and aluminium structures. There shall be a set of execution standards available such that a structure can be ordered based on these standards together with the accompanying standards for materials and the specific requirements for the Project.

A second objective is to provide a standard on Environmental Product Declarations, on Product category rules complementary to EN 15804 for Steel and Aluminium structural products, and other metal products as relevant, for use in construction works.

The following standards are currently within the committee work program:

- EN 1090-1 Steel components and aluminium components for structural use

- EN 1090-2 Technical requirements for steel structures
- EN 1090-3 Technical requirements for aluminium structures
- EN 1090-4 Technical requirements for thin-gauge, cold-formed steel elements and structures for roof, ceiling, floor and wall applications
- EN 1090-5 Technical requirements for thin-gauge, cold-formed aluminium elements and structures for roof, ceiling, floor and wall applications

EN 1090-1 shall fulfil the requirements in Mandate M 120 for harmonized standards covering metallic components.

A new standard on Product category rules complementary to EN 15804 for Steel and Aluminium load bearing products and other metal products, for use in construction works, is planned to be developed.

4.2 Identified strategies to achieve the CEN/TC.s defined objectives.

The strategy to achieve the objectives has been to establish Working Groups:

WG 2: Revision of EN 1090-2

WG 14: Development of EN 1090-4 and EN 1090-5

WG 15: Revision EN 1090-1

WG 16: Revision of EN 1090-3

A preliminary work item has been accepted to work on the introduction of product category rules complementary to EN 15804.

4.3 Environmental aspects

The introduction of the work to develop a standard on Product Category Rules (see 4.1) has as its main motivation to provide a tool for reducing to a minimum the environmental impact of the products and their manufacturing.

The other standards developed within TC135 cover only a small fraction of the total lifetime of steel structures, i.e. the relevant environmental aspects concern only environmental impact during execution, in workshops or at site, including transport from workshop to site. Environmental aspects to be considered during production of the constituent products are covered by other standards (product standards). There is no significant environmental impact related to the structure after execution, i.e. to the completed structure in service. Maintenance of corrosion protection in service is covered by other technical committees (other standards).

The environmental impact during execution of steel structures is considered to be small, limited to impact from activities such as document handling, transport, preparation, assembly, welding, mechanical fastening, surface treatment and inspection.

The relevance of environmental issues as covered by the product standards will be considered.

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC WORK PROGRAMME

A key factor which has proven to significantly influence the possibility to complete the revision of EN 1090-1, *Steel components and aluminium components for structural use*, to comply with the

Construction Products Regulation, is the significant change in objective of the Regulation compared with the previous Construction Products Directive under which the presently published version has been developed.