Date: 8/11/2023

BUSINESS PLAN

CEN/TC 185 Fasteners

EXECUTIVE SUMMARY

Business environment

CEN/TC 185 is responsible for the standardization in the field of mechanical fasteners, taking cognizance of the ISO standards prepared by ISO/TC 2 "Fasteners". Mechanical fasteners cover all types of products designed to connect mechanically two or more structural parts to form a solid or movable joint or to contribute essentially to establish this function, such as bolts, screws, studs, nuts, washers, pins and rivets.

Parties involved

Interested parties in standardization of fasteners in CEN/TC 185 are:

- manufacturers (including coaters),
- stock holders and
- users of fasteners, for instance, the automotive industry.

Benefits

Fasteners are used in a vast range of application in order to realize removable connections in engineering applications etc. The fact that the fastener production in Europe is several billion Euros a year and that these fasteners are used in many places makes quite clear that there is a considerable potential to save costs by reducing the product variety with the aid of standardization. Interchangeability and well defined levels of the quality of products are preconditions for the safe use of fasteners throughout the European countries. Both can be achieved by EN standards. In order to support European legislation, several EN standards were required in connection with EC/EFTA directives and have been published as harmonized or supporting standards.

Priorities

To make European Standards or other CEN deliverables related to:

- mechanical properties of all types of fasteners;
- test methods and inspection documents;
- surface coating of fasteners;
- terminology in the field of fasteners;
- quality management in the field of fasteners;
- products in the field of fasteners as bolts, screws, studs, nuts, rivets, pins, washers

1 BUSINESS ENVIRONMENT OF THE CEN/TC 185

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:

- Fasteners as covered by CEN/TC 185 are, in the first place, for industrial use.

- In the past, fasteners have been mainly produced in small and medium-sized enterprises, but now a concentration to bigger enterprises is taking place, although there are still many small and medium-sized enterprises which very often produce specialized and high-performance products.

- The trade with fasteners takes place either directly between manufacturers and users or via big dealers, which are able to supply a great variety of different fasteners.

- Fasteners are used in almost all branches of the producing industry, for example, the automotive, machine-building, electrical, shipbuilding, structural building, furniture and many other industries. Among these lines of business, in particular the automotive industry plays a leading role, since it needs large quantities of fasteners and interchangeability and consistent quality of the fasteners are extremely important for a production which is automized to a widest extent.

- CEN/TC 185 is closely linked to the standardization activities of ISO/TC 2 "Fasteners" by adopting the great majority of their projects in the frame of the Vienna Agreement.

- Fasteners are concerned by several EU directives, for which CEN/TC 185 elaborates harmonized and supporting standards.

- Fasteners in the field of aerospace are standardized by AECMA.

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 185:

Economical factors

Fastener production in Europe has a turnover of several billion Euros a year. These fasteners are used in a great number of places. This fact makes clear that there is a considerable potential to save costs by reducing the product variety with the aid of standardization.

Technical factors

Interchangeability and well defined levels of the quality of products are preconditions for the safe use of fasteners throughout the European countries. Both can be achieved b

Legal factors

Several EN standards have been required in connection with EU legislation and have been published as harmonized or supporting standards of the EC. CEN/TC 185 has been able to establish two series of standards on structural bolting assemblies, supporting the requirements of the relevant European directive. CEN TC 185 continues supporting the development of EN standards for fasteners according to the requests of EU legislation and Standardization Requests or Mandates of the EC.

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC 185

The standardization of fasteners will create European and worldwide uniform fasteners, which especially the globally playing enterprises need. It will facilitate the European and international trade of the products and will enable the developing countries to share the market on fasteners. Technical barriers to trade, which have been established by different national technical developments, will be reduced.

European and International Standards will ensure that the technical requirements for fasteners will be uniform in all countries. They will promote the competition on the market. Moreover, European and International Standards will reduce production cost and will help to supply fasteners at cheaper prices.

In some cases, national or regional regulations may be a problem, for instance regulations for structural building or for pressure vessels.

CEN/TC 185 has considered the work of the well experienced ISO/TC 2 "Fasteners" as very effective. The wide range of international standards covering all important fields of fasteners has allowed CEN/TC 185 to concentrate only on those areas, where no international standardization has taken place and/or European legislation asked for the elaboration of European Standards.

Most of the European requirements that are necessary to be covered by supporting standards of the EU directives could already be implemented within the work of ISO/TC 2. CEN/TC 185 has therefore been able to accept and adopt those concerned ISO standards as EN standards.

International fastener standards do not always meet completely the requirements of the European countries. However, CEN/TC 185 has then the possibility to modify International standards and publish them as European Standards. Even in those cases, the costs of the elaboration of a European Standard can be kept on a low level.

Fasteners and their reliability are important for the safety of constructions. Standards defining the mechanical properties of fasteners and adapting them to the latest technical cognizances are therefore under continuous revision.

Several EN standards have been required in connection with EU directives and have been published as harmonized or supporting standards. CEN/TC 185 has been able to establish two series of standards on structural bolting assemblies, supporting the requirements of the relevant European directive. CEN TC 185 continues supporting the development of EN standards for fasteners according to the requests of EU directives and Standardization Requests or Mandates of the EC.

3 PARTICIPATION IN THE CEN/TC 185

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 185 AND STRATEGIES FOR THEIR ACHIEVEMENT

4.1 Defined objectives of the CEN/TC 185

CEN/TC 185 elaborates standards on fasteners taking into account the ISO standards prepared by ISO/TC 2 "Fasteners", mainly by adoption of those ISO standards.

The most important objectives of CEN/TC 185 for the market in the field of fasteners are in line with those of ISO/TC 2:

– the interchangeability of fasteners on the basis of a high level of performance;

– the quality assurance of fasteners;

– the reduction of product variety;

– communication.

All of these objectives contribute to the expected benefits mentioned above.

The reduction of product variety in connection with the enormous quantity of fasteners needed on the market leads to big production numbers of the individual products, which allows fully automatized manufacturing and well-controlled manufacturing processes. This is the precondition for an effective and cheap production.

The supply of identical fasteners can only work if there is a clear communication between supplier and customer and this is achieved in the first place by standardized designations of the products.

Furthermore, CEN/TC 185 has the task to finalize the series of standards to be prepared under the mandates given by the European Union.

4.2 Identified strategies to achieve the defined objectives of the CEN/TC 185

Since it is the goal of CEN/TC 185 to avoid the creation of new trade barriers in the field of fasteners between Europe and the rest of the world, the European countries cooperate closely with the respective bodies of ISO/TC 2 "Fasteners" and use the parallel voting procedure according to the Vienna Agreement for acceptance as possible. Therefore, the planning of the work programme and the setting of priorities are closely connected with the work programme and the priorities of ISO/TC 2.

Only where this is not possible, working groups of CEN/TC 185 become active and elaborate independent EN standards.

CEN/TC 185 has given high priority to standards which had to be prepared under the mandate M/071 "Standardization in the fields of pressure equipment" (see Legal factors), which are classified as supporting standards (see work programme of CEN/TC 185).

Besides the publication of EN ISO standards, the main task of CEN/TC 185 is the finalization of two series of standards on structural bolting assemblies prepared under the mandates M/120 "Structural metallic products under the CPD", which are classified as harmonized or supporting standards (see work programme of CEN/TC 185)

4.3 Environmental aspects of the CEN/TC 185

CEN/TC 185 considers the following environmental aspects in the standardisation of fasteners:

– *Raw materials:* aspect relating to the choice of materials including coating (excluding packaging);

– *Manufacture:* aspect relating to all the internal or external processes required to produce the fasteners (excluding packaging);

– *Recyclability at product end-of-life:* aspect taking account of the reduction of the product impact at end-of-life and of its recyclability rate;

– *Hazardous substances:* aspect relating to substances contained in a product likely to penalise during manufacture, use or product end-of-life (heavy metals, flame retardants, fluorine atoms, bromium, chlorine, etc.).

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC 185 WORK PROGRAMME

The work programme of CEN/TC 185 is very closely linked to the work of ISO/TC 2 "Fasteners". Nearly all ISO standards are adopted by CEN/TC 185, all work is carried out under ISO lead within the scope of the Vienna Agreement.

One problem which, in some cases, places constraints on the completion or implementation of EN ISO standards on fasteners is the fact that changing from national to European (International) Standards may force the users of the fasteners to incur enormous organizational and logistical expense, since such fasteners are used in thousands of places and may require changes of constructions. Therefore, the conversion from existing national standards to EN ISO standards can be costly