



## **BUSINESS PLAN**

### **CEN/TC 114 Safety of machinery**

#### **EXECUTIVE SUMMARY**

##### **Business Environment**

The main activity of CEN/TC 114 is standardisation of general principles for safety of machinery incorporating terminology and methodology.

Parties involved:

- European Commission /EFTA
- Industry (manufacturer, designer)
- ETUI-REHS - European Trade Union Institute for Research, Education and Health and Safety
- ANEC European Association for the Co-ordination of Consumer Representation in Standardization
- Health and Safety Government Bodies
- National Boards of Occupational Health and Safety
- Public authorities
- National Trade Union Confederations
- National Employer's Associations
- ILO International Labour Organization
- WHO World Health Organization

##### **Benefits**

- To elaborate European Standards (and other CEN deliverables) on safety of machinery which presumed to comply with the essential health and safety requirements of the European legislation related to the safety of machinery covered by these documents;
- To actively support the aim of the European legislation related to the safety of machinery to harmonize the health and safety regulations related to machinery in order to create an internal European Market allowing the free movement and trade of machinery;
- To provide added values to the essential health and safety requirements of the European legislation related to the safety of machinery.

##### **Priorities**

To make European Standards or other CEN deliverables<sup>1</sup> available related to

- basic concepts, general principles for design of machinery, risk assessment and risk reduction;
- fundamental safety issues regarding e.g. safety distances, two-hand controls, emergency stops, interlocking devices and guards;
- hygiene requirements for the design of machinery.

This includes the consideration of hazards related to the application of Artificial Intelligence to machinery and those related to cyber security aspects.

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<sup>1</sup> e.g. CEN Technical Specifications or CEN Technical Reports

## 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:

It is the aim of CEN/TC 114 to successfully meet the requirements of CEN, particularly in support of Directives under Article 114 (former Article 95) of the Treaty of Lisbon, for example:

- The Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast)

With respect to this Machinery Directive, an adequate safety is enshrined in the principle of incorporating safety into the design and manufacturing of machines. When choosing the most appropriate solutions, the manufacturer must apply the following principles, in the following order:

- eliminate or reduce risks as far as possible;
- take the necessary protective measures against risks that cannot be eliminated;
- inform users of the residual risks due to any shortcomings in the protective measures adopted, indicate whether any particular training is required and specify any need to provide personal protective equipment.

These principles have to be applied taking into account a machine's entire lifetime, including handling, assembly, maintenance, repair and dismantling, and even in foreseeable abnormal situations. The manufacturer must also take into account the conditions of use and the constraints imposed by wearing personal protective equipment so as to minimize the operator's discomfort, fatigue and stress.

Machinery put on the European Market has to meet the essential health and safety requirements laid down in the European legislation related to the safety of machinery..

Machinery manufactured in conformity with specified published European standards which have also been published as identically worded national standards ('transposed harmonised standards'), will be presumed to comply with the essential health and safety requirements of the European legislation related to the safety of machinery covered by those standards.

The European Committee for Standardisation (CEN) is working to produce a complex of European Standards of three types in support of the European legislation related to the safety of machinery. The standards have the following structure:

- Type-A standards comprise basic concepts, principles for design and general aspects that can be applied to all machinery.
- Type-B standards deal with one safety aspect or one type of safety-related device that can be used across a wide range of machinery.
  - Type-B1 standards on particular safety aspects (e.g. safety distances, surface temperature, noise).
  - Type-B2 standards on safety-related devices (e.g. two-hand control devices, interlocking devices, pressure-sensitive protective devices, guards).
- Type-C standards deal with detailed safety requirements for a particular machine or group of machines.

## 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:

- indication of cases where European Standards prepared by CEN/TC 114 are cited in the Official Journal of the European Union as harmonised standards under the European legislation related to the safety of machinery;
- indication of cases where European Standards prepared by CEN/TC 114 are cited as normative references in European Standards of own and other CEN committees.

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

- ◆ Supporting manufacturers to construct machines complying with essential safety and health requirements of the European legislation related to the safety of machinery.
- ◆ Development of product standards which are based on an European and through the collaboration with ISO/TC 199 also internationally accepted approach.
- ◆ Provision of an overall framework and guidance to enable designers, manufacturers, etc. to produce machinery etc. which is safe for the intended use for occupational and private purposes.
- ◆ Comprehension of a wide range of interests such as consumer groups and employee representatives to take part in the future development of the philosophy and methodology for any machine and for any risk or combination of risks.
- ◆ Contribution towards the removal of technical barriers to trade and opening of the markets throughout Europe.
- ◆ Reduction of the risks of injury at home work, and leisure activities.
- ◆ Contribution towards the achievement of equal levels of performance in the various countries for each safety aspect dealt with in a European Standard.
- ◆ Stimulation of the development of protective devices as technology develops.
- ◆ Facilitation of the relations between manufacturers, users, and bodies in charge of technical inspection and testing.
- ◆ Promotion of the risk based approach to machinery design.
- ◆ Providing a common basis for coherent and comprehensive product safety and health standards.
- ◆ Avoiding duplication of work on horizontal subjects like methodology, protective devices and particular health and safety aspects.
- ◆ Support or expected to support European legislation related to the safety of machinery

## 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 an appropriate representation 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

- To provide designers, manufacturers, etc. with an overall framework and guidance to enable them to produce machines that are safe for their intended use.

- To give added values to European legislation related to the safety of machinery.
- To adjust the work programme to meet the market needs.
- To promote and facilitate the use of Type-A and Type-B standards in Type-C standards.

#### **4.2 Identified strategies to achieve the CEN/TC's defined objectives**

- To adjust the extent of the work programme to the available resources, for example to the number of experts available.
- To use synergy effects resulting from the close technical cooperation with ISO/TC 199 and by using the parallel approval procedure of documents according to the Vienna Agreement between CEN and ISO.
- To ensure, among experts, a balance between those of scientific competencies, social partners (employers and employees) and those experienced in practice to ensure that the contents of the CEN deliverables are valid and usable.
- To seek out sufficient resources to fulfil the work programme
- To make exclusively use of electronic means of communication in-between meetings.

In the past CEN/TC 114 established in total 17 Working Groups to prepare CEN deliverables in the field of machinery safety. However, following CEN/BT decision 31/2015 all WG's needed to become formally disbanded in May 2016 since they were no longer active at all.

The former WG's were titled as follows:

- Working Group 1 'Basic concepts'
- Working Group 2 'Safety distances'
- Working Group 3 'Terminology'
- Working Group 4 'Rules for the drafting and presentation of safety standards'
  
- Working Group 5 'Hand/arm speed'
- Working Group 6 'Safe control systems' (jointly with CENELEC/TC 44X)
- Working Group 7 'Two-hand controls' (jointly with CENELEC/TC 44X)
- Working Group 8 'Pressure-sensitive mats and similar devices' (jointly with CENELEC/TC 44X)
- Working Group 9 'Emergency stop and safety hold' (jointly with CENELEC/TC 44X)
  
- Working Group 10 'Interlocking devices with and without guard locking'
- Working Group 11 'Guards (fixed and movable)'
- Working Group 12 'Fluid power systems and components'
- Working Group 13 'Radiation'
- Working Group 14 'Risk assessment'
- Working Group 15 'Emission of airborne hazardous substances from machines'
- Working Group 16 'Fire and explosion'
- Working Group 17 'Permanent access to machines and industrial plant'

In addition, a Joint WG with participation from CENELEC, ISO and IEC was established to revise EN 292 - ISO/TR 12100 to become EN ISO 12100-1 and -2 (in the meantime replaced by EN ISO 12100:2010).

In the meantime, a few European Standards which were originally elaborated by CEN/TC 114 and adopted, later on, by ISO/TC 199 as International Standards with different number, were subject to their first revision. Following the recommendations given in the "Guidelines for the Implementation of the Agreement on Technical Cooperation between ISO and CEN" [Vienna Agreement (VA)] CEN/TC 114 has decided to use the parallel ISO-CEN approval procedure for the revision of these documents. As the technical revision work is carried out preferably under VA-ISO lead in the corresponding WG's of ISO/TC 199 the number of active WG's of CEN/TC 114 has been reduced continuously (see above).

## Co-operation, co-ordination and advice

Liaisons with governmental/public authorities, organizations and committees have been or should be established as follows:

- EC - European Commission
- EFTA - European Free Trade Association
- ANEC - European Association for the Co-ordination of Consumer Representation in Standardization
- ETUI-REHS - European Trade Union Institute for Research, Education and Health and Safety
- NORMAPME – European Office of Crafts, Trades and Small and Mediumsized Enterprises for Standardisation
- ORGALIME - Liaison Group of the European Mechanical, Electrical, Electronic and Metalworking Industries
- ILO - International Labour Organization
- ISSA - International Social Security Association
- CEN Consultants for machinery safety
- CEN Rapporteur for Sector Machinery Safety (SMS)
- CEN/TC 122 'Ergonomics'
- CEN/TC 144 'Tractors and machinery for agriculture and forestry'
- CEN/TC 153 'Machinery intended for use with foodstuffs and feed'
- CEN/TC 169 'Light and lighting'
- CEN/TC 211 'Acoustics'
- CEN/TC 231 'Mechanical vibration and shock'
- CEN/TC 305 'Potentially explosive atmospheres – Explosion prevention and protection'
- CENELEC/TC 44X 'Safety of machinery - Electrotechnical aspects'
- CENELEC/TC 211 'Electromagnetic fields in the human environment'
- all CEN/TCs in charge of preparing CEN Type-C standards/CENELEC product standards
- ISO/TC 199 'Safety of machinery'

### 4.3 Environmental aspects

The documents elaborated by CEN/TC 114 do not explicitly deal with such aspects. However, if there is a coherence between health and safety requirements directly linked to the intended use and the environment, these aspects are mentioned and stressed by the WG's of CEN/TC 114.

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

The technical standardisation work has been transferred mostly on ISO level. Therefore, the factors affecting completion and implementation of the CEN/TC work programme are the same as for ISO/TC 199.