BUSINESS PLAN

CEN/TC 226
ROAD EQUIPMENT

EXECUTIVE SUMMARY

European standardization of road equipment is done by the preparation of European standards in the following fields:

a) safety fences and barriers, including guard rails, safety fences, crash barriers, crash absorbers and bridge parapets ;
b) horizontal signs including road studs and road markings ;
c) vertical signs including signs, cones and marker posts ;
d) traffic lights including signals, traffic control and danger lamps ;
e) street lighting, performance requirements only ;
f) other equipments including bollards, anti-glare screens and noise protection devices.

For the next future, most of road equipment have to become integrated into the problems of traffic management and numeric economy, with in particular the intelligent transport systems both for vehicle users and road operators.

The objective of CEN/TC 226 is to establish European Standards, Harmonized European Standards and Guides in the field of road equipment, which reflect the needs of the interested parties and actual practice.

The road equipment aims to contribute to the safety, to the improvement, and to the comfort of the movements of the users.

The road equipment is subject in the majority of the European countries to National regulations. Those regulations are binding to all building owners and define safety requirements for road equipment.

1 BUSINESS ENVIRONMENT OF THE CEN/TC 226

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:

European standardization is done by the preparation of European standards on the specifications for safety, traffic control and other road equipment and their testing for assessment of the equipment performance.

This standardization takes into account the needs of the main stakeholders, such as representatives of public and private road authorities, equipment manufacturers, road users, parts manufacturers, testing laboratories.

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 equipment of the road is intended primarily to make safer our road infrastructures. They are instruments of road safety, which have their entire place in the political concerns and decisions.

Road equipment is a tool which makes it possible to guide the trajectory of the vehicles like horizontal marking, to announce the road to be followed like the panels of directional, to protect from the obstacles like the safety barriers, to inform of the possible incidents of circulation like the variable message signs, to control the traffics like traffic lights, to make available to the users the rules to be observed like the indication of police forces.

Implemented by public authorities, these products must meet requirements of quality and regularity to the standards, technical specifications or regulations. Then, because of their above-mentioned role in road safety, a relevant use must be made of it.

Even if media does not emphasize the equipment of the road, they play an important part in the road system of displacement of the goods and the people. For this reason, the managers of roadway system and the authorities of police forces are as much and in partnership with the professionals of the sector, concerned with the constant improvement of the equipment of the road and their continual adaptation to the needs to satisfy the road safety requirements.

It seems necessary to take into account the need of data exchanges between road infrastructures, road equipments and vehicles using the routes. For that purpose, liaisons have to be created with ad hoc standardization committees such as (…..) and probably new technical parameters have to be defined and introduced in road equipment standards.

Data about production and production quantities of road equipment and their impact on the road safety are not available.

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC 226

To ensure the full performance of road equipment, their production and installation is intended to be controlled in accordance with the standards established by the CEN/TC 226.

The desired European standardization deals with terminology, but also, and essentially, with the functional specifications and test methods required for assessing the performances of road equipment after their implantation and during their life.

In order to improve safety the design of roads may require the installation of safety barriers including parapets which are intended to contain and redirect errant vehicles safely for the benefit of the occupants and other road users on sections of road and at particular locations defined by the National or Local Authorities. The different performance levels of safety barriers including parapets will enable National and Local Authorities to specify the performance class of the system to be deployed. Factors to be taken into consideration include the class or type of the road, its location, geometrical layout, the existence of a vulnerable structure, potentially hazardous area or object adjacent to the road.
As safety barriers are elements of road safety for all road users, CEN/TC 226 does not neglect the specific parameters to the motorcyclists.The series of the standards on the devices of restraint will have to succeed with applicable standards in three years.

Road signs, as well vertical as horizontal, by the messages, which they transmit, and the rules which they prescribe or recall, are till now the most important mean of communication between the road and the driver. They are an essential part influencing the behaviour of the users and a direct impact on the road safety. Its role increases with the development of circulation. Well conceived and realized, they reduce the causes of the accidents and improve traffic conditions. Insufficient, too important or unsuitable, they are a factor of embarrassment and unsafety.

Road markings together with road studs form the means for horizontal signalization.
Road markings include longitudinal markings, arrows, transverse markings, text and symbols on the surface of the highway etc. Road markings can be provided by the application of paint, thermoplastics materials, cold hardening materials, pre-formed lines and symbols or by other means. Most road markings are white or yellow, but in special cases other colours are used. Road markings are either permanent or temporary. The functional life of temporary road markings is limited by the duration of the road works. For permanent road markings it is best for reasons of safety to have a functional life that is as long as possible. The standards specify the performance for road users of white and yellow road markings, as expressed by their reflection in daylight and under road lighting, retroreflection in vehicle headlamp illumination, colour and skid resistance.
To meet the requirements of visibility and durability in particular, the execution and the climate should be also handled.

The main intended use of fixed signs is for the instruction and guidance of road users. The standard allows the determination of performance levels as well as as performance classes for both sign assemblies without vertical supports and assemblies complete with vertical supports, as well as sign faces and supporting substrates, sign fixings and supports and external lighting luminaries.

Signal lights are mainly used to transfer safety messages to the road user to achieve specific reactions. Signal lights in road traffic transfer this information optically by signal lights which have a specific meaning and which differ in their colour of light and in the design of their illuminating surface. The visibility of a signal light depends on the colour, luminous intensity, luminous intensity distribution, luminance and luminance uniformity, the surrounding luminance (background luminance), the size of the illuminating area of the signal light, the

phantom light and the distance and angle between observer and signal head. The standard specifies the requirements for the visual, structural, environmental performances and testing of signal heads for pedestrian and road traffic use.
For a coherent work, CEN/TC 226 works with CENELEC (CENELEC BTTF 69-3 "Traffic Signal Control") for the electric part of the signal.

Anti-glare systems consist of manufactured equipment, which reduces the glare of approaching headlights or of other external light sources. Anti-glare systems are generally installed on public roads when it is considered beneficial to reduce the effect of glare. The standard specifies the characteristics of an anti-glare system in terms of its optical effectiveness and of the mechanical performance of its elements. It gives a method for the determination of the optical performance of anti-glare systems by calculation. Requirements and recommendations for the design of anti-glare systems to minimize maintenance are also given.

The road traffic generates noise, thus discomfort for local residents. So, the CEN/TC 226 also deals with noise reducing devices. The standards specify the performance requirements and methods of evaluation for road traffic noise reducing devices. They cover acoustic, non-acoustic and long term performance, but not aspects such as resistance to vandalism or requirements of visual appearance.

CEN/TC 226 is also dealing with structures supports since the severity of accidents for occupants of a vehicle is affected by the performance of support structures for items of road equipment under impact. Based on safety considerations, these can be made in such a way that they detach or yield under vehicle impact. Thus the Standard specifies performance requirements and defines levels in passive safety terms intended to reduce the severity of injury to the occupants of vehicles in impact with the permanent support structures of road equipment. Consideration is also given to other traffic, pedestrians or personnel in a working area.

And finally, the CEN / TC 226 also deals with standardization of vehicle parking control equipment with a standard for those people called upon to use them a parking terminal: users - enforcement agents - operators and maintenance agents dealing with the technical and functional requirements and taking into account of the ease of use, the accessibility, the security and safety and the integration into the environment. In a second step, this work can be extended to sensors for an intelligent parking and for the parking management.

Execution of the works, climate considerations, performance evaluation in service for maintenance management will also have to be handled.

The future will go more and more towards communicating systems compatible in Big Data and the CEN/TC 226 will has to take into account and introduce these new technologies in relation with other CEN/TC (ITS, vehicles,…).

3 PARTICIPATION IN THE CEN/TC 226

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 standard organization in your country.

16 of the 33 CEN members participate regularly in plenary meetings of CEN/TC 226. According to the working groups of 8 to 18 countries are involved in the work.

Furthermore, CEN/TC 226 keeps bilateral contacts with the following CEN/TCs:

- CEN/TC 139, Paints and varnishes
- CEN/TC 169, Light and lighting
- CEN/TC 224, Personal identification, electronic signature and cards and their related systems and operations
- CEN/TC 229, Precast concrete products
- CEN/TC 278, Road transport and traffic telematics
- CEN/TC 350, Sustainability of construction works
- CEN/TC 351, Construction Products - Assessment of release of dangerous substances
- ISO/TC 204, Intelligent transport systems

Besides, the following European and International federations or associations are observing members of CEN/TC 226:

- ANEC, the European consumer voice in standardization
- EGGA, European General Galvanizers Association

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

4.1 Defined objectives of the CEN/TC 226

The purpose of the Technical Committee is to prepare European standards on all types of road equipment covered by the scope of CEN/TC 226, namely:

- Road restraint systems as safety barriers including terminals and transitions, crash cushions, pedestrian parapets ;
- horizontal signs including road studs and road markings ;
- vertical signs including signs, cones and variable message signs ;
- traffic control including Warning and safety light devices and Signal heads ;
- other equipment including bollards, anti-glare screens, noise protection devices, vehicle parking control equipment …

To fulfil this purpose, the objectives are multiple:

- the main one is the CE marking of road equipment under the Construction Products Regulation (305/2011/EU) entered into force on 1 July 2013 repealing the Construction Products Directive (89/106/EEC). To do this, the CEN/TC 226 develops candidate harmonized standards under the Mandate given by the European Commission, M/111 "Circulation fixture" and its amendments. This process will aid the completion of the single market and lower barriers to trade.

- to develop supporting standards such as test methods for verifying the characteristics set out in the specification standards,

- to develop standards and/or guides on the installation, use and maintenance of these products taking into account the climate, the soil types, …..

- to take into account vehicles users and road operators new needs , the necessary data exchanges between vehicles, road infrastructure and road equipment.

The objective of CEN/TC 226 is to finalize at least the first generation of the candidate harmonized standards in the coming three years and especially the "package" concerning the road restraint systems.

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

CEN/TC 226 has approved a working programme for the standardization of road restraint systems, horizontal signs, vertical signs, traffic control, noise reducing devices, vehicle parking control equipment and break away safety.

The work items were grouped to product families, which are covered by different Working Groups established under the responsibility of the TC.

4.3 Environmental aspects

CEN TC 226 takes account of European and national legislation, guidance and latest practices on environmental aspects related to efficiency and emissions (affecting air, ground water, noise etc.) CEN/TC 226 will consider the environmental aspects in the preparation and revision of product standards as well as the content of CEN Guide 4 "Guide for addressing environmental issues in product standards"

The following subjects will be taken into account:

- Regulated Dangerous Substances for EN 1423 glass beads, according to the work achieved by CEN/TC 351,
- Construction Product Regulation, taking into account the basic requirement n°7, sustainable use of natural resources.
- Protection against noise with the noise reducing devices on roads (CEN/TC 226/WG 6).

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC 226 WORK PROGRAMME

The preparation of standards depends of the management of CEN/TC226 work program, of experts availability but also of parameters that TC cannot handle, such as research results, experience returns, product innovations, improvements in measurement methods as well as of regulatory constraints.

CEN/TC 226 – Structure

CEN/TC 226 "Road equipment"

Chairman: Michel BRY (France)
Secretary: Nathalie GIRARDOT (AFNOR)

CEN/TC 226/WG 1 "Road restraint systems"

Convenor: Martin PAGE (France)
Secretary: Frédérique RIGAH (AFNOR)

CEN/TC 226/WG 2 "Horizontal signs"

Convenor: Emiliano MORENO LOPEZ (Spain)
PSS: AENOR

CEN/TC 226/WG 3 "Vertical signs"

Convenor: Sandra JACOBI (Allemagne)
Secretary: Lilian PANEK (DIN)

CEN/TC 226/WG 4 "Traffic control"

Convenor: David OVERTON (United-Kingdom)
PSS: BSI

CEN/TC 226/WG 5 "Street lighting"

Convenor : Kai SØRENSEN (Denmark)

CENT/C 226/WG 6 "Noise protection devices"

Convenor : Jean-Pierre CLAIRBOIS (Belgium)
PSS: NBN

CENT/C 226/WG 9 "Clockwork parking meters and automatic car park ticket dispensers"

Convenor : Thierry BRUSSEAUX (France)
Secretary: Frédérique RIGAH (AFNOR)

CENT/C 226/WG 10 "Passive safety of support structure for road equipment"

Convenor : Henry KAMDEM (France)
Secretary: Frédérique RIGAH (AFNOR)

CENT/C 226/WG 11 "Variable message signs"

Convenor : Wolfgang ERNST (Austria)
PSS: ASI