BUSINESS PLAN

CEN/TC 23
TRANSPORTABLE GAS CYLINDERS

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:

1.1.1 General information regarding the sector and product

The industrial and medical gas market comprises a small number of specialist gas suppliers feeding a large number of users, ranging from small workshops to major companies. Gas cylinders have been the subject to national legislative controls for over a century and their long life means that there is a huge number of cylinders manufactured under these national rules. However, the establishment of a single European market is essentially complete. International governmental agreements applying to the cross border transport of gases are well established. These cross border agreements have now been incorporated into an obligatory European Directive (2008/68/EC) and therefore into national regulations. This has provided a strong incentive for the generation of supporting technical standards at the European level. Transportable gas cylinders, their fittings and the procedures governing their use in the field are subject to continuous development aimed at improving gas carrying efficiency without compromising on safety. The standardization process has an important role to play in achieving this balance.

1.1.2 Interested parties in the standardisation process

In addition to the producers, fillers and distributors of gases, the manufacturers of the transportable gas cylinders and their fittings have a key interest in the standardisation process. Regulatory agencies and testing/certification bodies that have enforced the existing national requirements also have a significant interest in this work. Industry participation from the cylinder manufacturers and gas companies is well established both through inclusion in national delegations and through liaison membership of the industry organisations EIGA and ECMA. Recently, the few regulatory agencies who used to participate directly in the work have not attended and only a few contribute in national discussions. The end users of gases in cylinders form a very heterogeneous group and since they are not organized in any tangible way they do not participate.

1.1.3 Technical factors

The market in transportable gas cylinders comprises a mixture of traditional product types, developments in these and new product types in novel materials. Technical requirements for the traditional product types are generally well established but the specifications need to be capable of accommodating technical developments. In general, the TC is seeking to follow the policy of ISO by developing performance-based standards. For the novel materials test work has been necessary to establish the validity of test methods before inclusion in the standards.
1.1.4 Legal factors

1.1.4.1 At the European level, cross-border transport of dangerous goods has been subject to the RID/ADR agreements for many years. Non-mandatory European directives have also existed covering the design and manufacture of the main cylinder types since the mid-1980's. The RID/ADR is now following the well-established practice of supplementing the technical requirements contained in the texts with references to CEN or ISO standards. The Transport of Dangerous Goods Directive (2008/68/EC) has incorporated the RID/ADR agreements into EU law, and the standards included in the RID/ADR are the mandatory route for compliance with the law in the EU member states. 35 standards from TC23 have been referenced so far.

1.1.4.2 A further directive, the Transportable Pressure Equipment Directive (TPED) 2010/35/EU, has been implemented covering aspects related to the creation of a single system of approvals for cylinder manufacturing and periodic in-service inspections of the cylinders and will allow free circulation and use for transportable pressure equipment within the EU.

1.1.4.3 A new use for gas cylinders is for the storage of gaseous fuels (hydrogen and CNG) in vehicles and this is necessitating a new relationship with the regulators of vehicle construction. However, given the international nature of the vehicle industry, this is a more significant factor at the ISO level.

1.1.5 International trade and standardisation aspects
At the Global level, transport of dangerous goods is covered by the UN “Recommendations on the Transport of Dangerous Goods, Model Regulations” (so called “Orange Book”). The content for gases includes ISO pressure receptacle standards and more will be included as they are published. Parallel ISO/CEN voting has been used where possible and common standards are gradually being achieved. The automatic adoption of UN text into the ADR and RID coupled with the use of EN ISO standards will bring the maximum harmonisation of European and global standards and practice.

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:
Detailed market statistics are not publicly available, however the market may be characterised as follows:

— The gas distribution business is supplied by several multinational companies, together with a large number of small, typically specialist, suppliers;
— Cylinder manufacture for use in general applications is carried out by approximately 10 companies, producing over 3 000 000 high pressure cylinders per annum;
— A total of over 50 000 000 cylinders are in use in the CEN member countries (including cylinders for breathing apparatus and for fire extinguishers);
— All manufacturing industry relies to a greater or lesser extent on the use of industrial gases. Safe and economical gas cylinders are therefore a key part of the infrastructure of European industry.
— Industrial gases in cylinders are used extensively for pharmaceutical and diagnostic purposes as well as for calibrating devices such as breath alcohol meters and atmospheric monitors, thus contributing to the healthcare and regulation of modern society.
2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

2.1 Economical factors
The main stimulus for the CEN work is to establish a uniform high basis of safety in the transport and use of gases. Economic benefits should arise through harmonisation of the market in cylinders, and the ability to move cylinders between markets, however this has not been quantified. These benefits have given a significant motivation to industry’s efforts in developing harmonised standards. In addition, standardization work will enable the development of lighter weight cylinders, which will lead to economic benefits through reduced raw material and transport in use costs.

2.2 Realization of objectives
The realized objectives will:

— support a transition to a legal framework based on essential requirements supported by technical standards;
— assist free trade by the harmonisation of manufacturing and testing requirements and procedures for in-service use;
— in conjunction with legislative developments establish the confidence of the national competent authorities in foreign inspection regimes;
— provide a common set of European standards, which will assist in the formulation of global standards through ISO.

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

4.1.1 The TC will elaborate a set of European Standards in the Transport (of dangerous goods) and Pressure Equipment sectors on:

— the design, manufacture and testing of transportable gas cylinders;
— design and testing of cylinder valves and fittings and dimensions for interchangeability;
— operational requirements, including filling conditions, inspections at time of fill, periodic inspection, cylinder identification and specific applications.

These standards will cover all applications except cylinders dedicated for LPG use and cryogenic receptacles for deeply refrigerated liquefied gases.

4.1.2 It will produce standards that are suitable for adoption into the RID/ADR. Where technical advances are considered to justify modifications to RID/ADR these will be clearly identified.

4.1.3 It will adjust the work programme to meet market needs and the needs of the TPED and the PED, if such a need becomes apparent.
4.1.4 It will work in coordination with ISO when possible, and to align as closely as possible where technical differences are necessary.

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

4.2.1 Summary

Note In the following summary, the details relating to the progress of work were correct at the time of compiling this update to the Business Plan.

The work undertaken by CEN/TC 23 comprises 77 published CEN standards of which 42 are EN ISO standards. There are 20 work items in progress but only three are EN standards. Each work item has been allocated a project leader including a European project leader when the work under the Vienna agreement is under the leadership of a non-European. These statistics demonstrate the policy that where possible similar existing or revised ISO standards will be adopted as European Standards, either under the Vienna Agreement or by UAP.

Hitherto, with any specific European requirements, i.e. those relating to directives and mandates, or established European technical practices not yet adopted at ISO were covered in European Annexes (e.g. NA, ZA's etc.). This has been declared no longer possible since the global relevance policy of ISO and the Vienna agreement require that any market variations are shown within the ISO standard. This development is presenting a new challenge since the USA and Canadian delegated to ISO TC58 have declared their intention of voting against any ISO standard showing European variations. A way forward acceptable to all is being sought actively.

Drafts for circulation at the Enquiry stage and the Formal Vote stage are prepared in 3 languages. At all other stages of review, comment and discussion at meetings the work is carried out in the English language only.

Meetings of the TC have recently been infrequent since the significant developments are now mostly at the ISO level. In general the WG's resolve their difficulties at the WG level and most matters can be dealt with in this way or by correspondence at the TC level.

4.2.2 Structure of the TC

1 work item (on terminology) is referred directly to the TC. All other work items are referred to one of the 3 sub-committees, as follows:

- SC 1, Cylinder design; its work relates to the work of ISO/TC 58/SC 3.
- SC 2, Fittings; its SC relates to the work of ISO/TC 58/SC 2.
- SC 3, Operational requirements, its work relates to the work of ISO/TC 58/SC 4.

This sub-committee structure was set up to manage the large programme of work of CEN/TC 23 and has two specific benefits, as follows:

- through the allocation of the secretariats to AFNOR, BSI and DIN it spreads the secretariat work load between these 3 member bodies and this is essential to maintaining the programme dates detailed in this business plan;
- it mirrors the structure of the equivalent ISO committee ISO/TC 58 and thus greatly assists ISO/CEN co-operation.
Given that
— this structure was set up to process a large European work programme in support of the single market and this is now essentially complete;
— the TC now has only 35 published EN standards and 42 EN ISO standards;
— the list of current of work items has only 3 EN projects, but 17 EN ISO projects.

Therefore, the time has come to consider closure of these Sub Committees and this will be promoted by developing a consensus which includes an orderly re-assignment of responsibilities. In particular, the on-going secretarial support of experts by AFNOR and DIN will need to be assured.

4.2.3 Liaisons

The following liaisons currently exist at the TC level:
CEN:
— CEN/TC 70 "Manual means of fire fighting equipment"
— CEN/TC 79 "Respiratory protective devices" assisted by a having a common Secretariat with CEN/TC 79/SC 5
— CEN/TC 286 "Liquefied petroleum gas equipment and accessories" ISO:
— ISO/TC 58 "Gas cylinders"
— ISO/TC 197 "Hydrogen technologies"

External:
— European Industrial Gases Association (EIGA)
— European Cylinder Manufacturers Association (ECMA)
— Association Européenne des Gaz de Petrole Liquefiés (AEGPL)

4.3 Environmental aspects

Gas cylinders are made for repeated use and typically have a life of around 50 years. The traditional construction from steel and aluminium alloy means that recycling at the end of life is easily arranged. Even non-refillable cylinders made for a single use, can be recycled without difficulty. Therefore, environmental issues have not been uppermost in the minds of the experts from the industry whose main incentive has been to establish a single European market and now, via ISO, to establish a single global market. The TC is thus somewhat late in addressing environmental factors.

Given the large existing portfolio of standards and the fact that many are drafted in ISO, the TC considers that wholesale revision of existing standards to add environmental considerations is impractical. Therefore, the TC will incorporate requirements for protection of the environment only when drafting new standards or when systematic revisions are being undertaken. A guidance document will be prepared during the course of 2013 by the TC to assist convenors of the various working groups. This guidance document will be submitted to ISO/TC58 and its sub committees to encourage the inclusion of environmental protection considerations when drafting its new standards or revisions, especially those subject to the Vienna agreement.

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

5.1 WG's are generally well supported by relevant manufacturers and gas companies. However, additional direct support from regulatory agencies is necessary and would help minimise adverse comment at the Enquiry and Formal Vote stages. However, the CEN Consultant is very active in communicating the needs of the regulators and his input at the enquiry stage is helpful.
5.2 Much of the detailed drafting is carried out by a small number of individual industry experts. Progress is therefore dependant on the limited time available to these experts, and the necessary demands of their employers.

5.3 Changes to key personnel through retirement or redeployment can seriously affect the progress of a draft, particularly when this happens suddenly and no advance planning for a change has been possible. Most significantly this applies to project leaders, but changes to personnel in the Secretariats, the Consultants and at CEN/CS can also affect progress.

5.4 As drafted the texts reflect current good practice within the industry, however occurrences in the field sometimes necessitate change. If technical changes are then needed to the draft standards this can require additional consultations and hence delays.

5.5 Periodic (biennial) changes to the directives relevant to the transport of dangerous goods have required backstaging of work to reflect the changed essential requirements. These have caused delays and future changes would equally result in delays to the publication of affected standards.

5.6 Former difficulties caused by complex and sometimes incompatible I.T. requirements for the drafting of standards that placed an unwelcome burden on project leaders and drafters seem to be largely in the past.