BUSINESS PLAN

CEN/TC 54
UNFIRED PRESSURE VESSELS

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:

A pressure vessel is a container for gas or liquid that operates at positive and / or negative pressure relative to atmospheric pressure and at temperatures above and/or below zero degrees Celsius. The container usually has connections to pipework and/or removable openings. CEN/TC 54 deals with a broad spectrum of pressure vessels for the energy and process industries, which fall within the scope of the SPVD or the PED. The exceptions are those with particular industry requirements (e.g. cryogenic and LNG vessels). There is a request to CEN (via a mandate M/071) to prepare standards to facilitate presumption of conformity to the PED."

The European pressure vessel industry consists of three main groups:

- a small number of large organizations that provide a range of equipment and systems, and provide installation
- a body of small to medium sized manufacturers, some of which concentrate on specialized types of vessel
- a large number of sub-contractors providing specialized products and/or services

In respect of both production value and number of suppliers, the CEN member nations that dominate the market are France, Germany, Italy, Netherlands, Spain and UK.

The diverse market and the potential danger from pressurized equipment had previously been developed in the EC member countries national regulations, which whilst being aimed at ensuring the marketing of safe products, have created barriers to trade and added cost rather than value. Standardization assists in facilitating the EC's single market legislation by providing a more uniform basis for the marketing of safe vessels across Europe. From this background, the stakeholders for Unfired Pressure Vessel standards are:

- governments
- safety regulators
- process and energy industries
- commercial and retail outlets
- manufacturers
- conformity assessment bodies

The economic benefit from the use of these standards is the removal of trade barriers and potentially pressure vessels being cheaper to produce. European standards for Unfired Pressure Vessels specify engineering requirements largely based on those that existed in National codes. This has resulted in the best of each national code being adopted, but not necessarily in lower costs. In the long term, however, if the European standard becomes widely used, other savings from the greater efficiency of not having to use various different national codes will occur.

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The conformity assessment requirements of the PED have introduced costs not previously encountered in some countries for certain classes of vessel. Although the cost to the vessel manufacturer of employing the Notified Body may or may not be cheaper than what was incurred for vessels requiring third party assessment, savings will be made on trade within the EU. Standardization has not resulted in any significant change in the form of the vessels produced, because technology is well developed and the pace of adoption of new technology is gradual. However, the standards have to be continuously updated; this is carried out by the EN 13445 Migration Help Desk (MHD) who provides support to users and correction pages to the standards via a network of experts. Technical amendments to the EN 13445 series are handled by CEN/TC/54.

The export market is significant to European manufacturers. These markets require vessels to be built to a number of codes, depending on the historical associations of the importing country. The most widely used are AD Merkblatt, PD 5500, CODAP and the ASME codes. The standards produced by CEN/TC 54 establish an agreement on how to fulfill the technical requirements for pressure vessels in Europe. It is important that it achieves recognition throughout the world; otherwise it could be overshadowed by the ASME code.

1.2 Quantitative Indicators of the Business Environment

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

The annual value of pressure vessel production in the EU was estimated at around 14000 million Euros in 2010 (source CSES report 2012 *Evaluation of the pressure equipment directive*).

Estimates of the cost of compliance have been estimated at around 2 % of the value of production.

The above costs would be balanced out by savings through avoidance of multiple certifications. Existing product and quality system certification / inspection costs were estimated to be less than 1% of production costs The value of delivery delay penalties, although being a higher proportion of cost in any particular case would not apply to all vessels, but could amount to a few million Euros.

The cost of compliance was expected to be balanced by the savings in certification and long-term efficiency.

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

To provide the necessary standards for the design, materials selection, manufacture, inspection, testing and safety of unfired metallic pressure vessels for use in satisfying the essential safety requirements of the SPVD and PED.

Standardization assists in facilitating the EC's single market legislation by providing a uniform basis for the marketing of safe pressure vessels across Europe.

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

- To develop standards utilizing the best practice of industry and/or the approach of former National standards and codes or International codes in the Unfired Pressure Vessel field, that will be accepted as satisfying the essential safety requirements of the of the SPVD and PED.
- Recognizing the economic need for the EU to continue as a major exporter, to develop those standards in a form which will promote the production of products having the most cost-effective solutions.
- To undertake the work in such a manner as to fulfill the obligations of the EC/EFTA mandate on CEN, and the expectations of the stakeholders.
- To prepare a series of nomenclature standards, and Unfired Pressure Vessel standards and a number of standards for pressure equipment used in special applications

  - to improve compatibility between the vessel and the piping standards
- - to promote the EN standards at ISO level

4.2 Identified strategies to achieve the CEN/TCs defined objectives.

Following the publication of the EN 13445 series in July 2009, the main work of CEN/TC 54 now is on amendments and revisions to incorporate other aspects such as:

- creep design
- Design by Analysis for high yield materials
- experimental design procedures
- non-ferrous materials

A complete revision of the series occurs every five years.

Although most of the technical requirements of the standards are based upon existing and well-used sources, it has been recognized that there may be benefit from pre-normative research. The European Pressure Equipment Research Council (EPERC) has been set up to meet the needs of industry and also to assist in organization of research work in support of the standards.

CEN/TC 54 has established and will maintain strong liaisons with the following committees and organizations:

CEN Committees

- CEN/TC 23 “Transportable gas cylinders”
- CEN/TC 48 “Domestic gas fired water heaters”
- CEN/TC 69 “Industrial valves”
- CEN/TC 114 “Safety of machinery”
- CEN/TC 132 “Aluminium and aluminium alloys”
- CEN/TC 138 “Non-destructive testing”
- CEN/TC 148 “Continuous handling equipment and systems - Safety”
- CEN/TC 182 “Refrigerating systems, safety and environmental requirements”
- CEN/TC 185 “Threaded and non-threaded mechanical fasteners and accessories“
- CEN/TC 210 “GRP tanks and vessels”
- CEN/TC 235 “Gas pressure regulators and associated shut off devices for use in gas transmission and distribution”
- CEN/TC 265 ”Site built metallic tanks for storage of liquids”
- CEN/TC 267 “Industrial piping and pipelines”
- CEN/TC 268 “Cryogenic vessels”
- CEN/TC 269 “Shell and watertube boilers”
- CEN/TC 286 “Liquid petroleum gas equipment and accessories”

ISO Committees

- ISO/TC11 “Boilers and pressure vessels“

Organizations

- AEGPL “Association Européene des Gaz de Pétrole Liquiéfiés”
- CECT “Comité Européen de la Chaudronnerie et de la Tuyauterie”
- CEOC “Confédération Européene d'Organismes de Contrôle”
- CLEPA “Association Européene des Fournisseurs Automobiles”
- ECCC “European Creep Collaborative Committee”
- EIGA “European Industrial Gases Association”
- EPERC “European Pressure Equipment Research Council”
- EWF “European Federation for Welding, joining and cutting”
- PNEUPROP “European Committee of Manufacturers of Compressors, Vacuum pumps and Pneumatic tools”

4.3 Environmental aspects

CEN/TC 54 takes account of European and national legislation and guidance on environmental aspects related to efficiency and harmful emissions. The committee has agreed to consider effects on the environment during the preparation and revision of new work items taking account of the information and environmental check list given in CEN Guide 4 "Guide for addressing environmental issues in product standards".

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

The main risk to timely completion of the work programme is the gradual decline in the number of experts willing to attend and undertake work on the drafts.

The implementation of the CEN three-year timeframe for production of standards has an impact on the production of amendments, since in many cases drafters require the input of more than one Working Group or Task Group to complete their task. The work programme now has to be carefully prioritised to ensure that it is completed on time.