BUSINESS PLAN

CEN/TC 262

METALLIC AND OTHER INORGANIC COATINGS, INCLUDING FOR CORROSION PROTECTION AND CORROSION TESTING OF METALS AND ALLOYS

EXECUTIVE SUMMARY

CEN/TC262 has and continues to develop a portfolio of standards for metallic and other inorganic coatings used for protective, decorative and engineering purposes, in particular:

- specifications;
- test methods;
- performance;
- vocabularies;

and

- product standards.

Metallic and other inorganic coatings are widely used in many diverse areas dominated by:

- aerospace;
- automotive;
- construction;
- consumer retail;
- electrical consumer goods;
- electronics;
- infrastructure.

Correct application of and testing of the coatings is necessary to ensure product performance and/or that the design life is achieved; many of the industrial users of these coatings are international buyers of sub-components where it is essential to achieve constant quality and performance regardless of the source of the items involved.

In many cases heavy metals are used as part of the processes, generating hazardous waste, and presenting health and safety risks.

Sustainable use of materials is of increasing importance. The protection afforded by coatings reduces costly repairs and replacements and ensures longer component life, leading to a more sustainable use of resources.

All the above factors mean that corrosion protection, component life and the preservation of appearance are of ever increasing importance, necessitating European and international standardization of specifications, procedures and nomenclature.

In addition, the CEN/TC 262 portfolio includes extensive standardization of corrosion of metals and alloys, including corrosion test methods and protection against corrosion.

European and international standards contribute to the reduction in international barriers to trade and reduction of hazardous waste released to the environment.

The objectives of CEN/TC 262 are to contribute to the elimination of technical barriers to trade within Europe and globally.

CEN/TC 262 has developed and continues to develop a portfolio of European Standards which address the above issues, working in parallel with the relevant ISO Technical Committees, in particular ISO/TC 107 *Metallic and other inorganic coatings* and ISO/TC 156 *Corrosion of metals and alloys*.

The scope of CEN/TC 262 excludes standards on cathodic protection.

1 BUSINESS ENVIRONMENT OF THE CEN/TC 262

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:

Metallic and other inorganic coatings are used in industrial manufacturing processes and in the construction industry.

The use of such coatings in the market place is extremely diverse, including:

- aerospace (manufacture of aircraft);
- agriculture;
- construction (building components, architechtural/decorative, offshore & marine);
- consumer (domestic appliances, electrical goods);
- costume jewellery;
- electronics (data storage, semi-conductors;
- transport (road, rail and marine);
- infrastructure;
- energy (oil, gas, renewables).

The products and methods employed to deposit or to form coatings are as diverse as the end users and cannot be described simply. Within the total range of products and processes involved the following large and important segments can be identified:

- hot dip galvanizing
  - for corrosion protection;
- electroplating:
  - for decorative purposes;
  - for corrosion protection;
  - for engineering purposes;
- non electroplated metallic coating (chemically deposited and physically applied):
  - for corrosion protection;
  - for engineering purposes;
- sherardizing;
  - for corrosion protection
- conversion coating (phosphate, chromate and other)
  - for pretreatment and post-treatment
- vitreous enamelling;
  - for decorative purposes;
  - for corrosion protection;
  - for design performance.

The uses of each type of coating are very broad, but in many cases the correct application of and the ability to test the coatings is necessary to ensure product performance and/or that the design life is achieved.

Many of the industrial users of these coatings are international buyers of sub-components coated with such coatings intended for use in the automotive industry and in the manufacture of air-craft and engines. These users need to be able to achieve constant quality and performance regardless of the source of the items involved and they need to be able to specify both the coatings required and the performance against recognized international standards. In addition, many of the coating types mentioned above are used by major industry clients for protection with regard to, e.g. national infrastructure projects and assets.

In common with many other industrial processes, chemical substances used in most of these processes (such as electroplating, non-electrolytic chemical metal coating and many conversion coating processes) require satisfactory management of the risks associated with their use. These risks should be managed under the prevailing national and/or European legislation of the producer state.

European environmental regulations, e.g. REACH, will however have a material effect on the ability of Europe-based organizations to compete with extra-European regions thereby placing increased pressure on supply to domestic and international markets with standards and specifications developed in Europe or in tandem with international counterparts. It is absolutely vital that Europe has an adequate voice internationally, in order to safeguard its presence in the global market.

These factors are driving the industry towards the development of processes that present reduced health, safety and environmental risk. The resulting new coatings and coating processes will fall outside the existing national and international standards framework.

As the general marketplace demands ever increasing quality and life from consumer goods, the importance of corrosion protection, the life of component parts and the preservation of aesthetic appearance will continue to increase, as will the need for recognized international standards using internationally recognized nomenclature.

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 diverse nature of the metal and inorganic coatings industries and their many markets make the provision of global and European market information difficult to provide on a consolidated basis. Such information will be added in due course should it become available.

Quantitative indicators of the cost of corrosion worldwide lead us to conclude costs are about 3 % of GDP. [See, e.g. G F Kays (Director General, World Corrosion Organization), 'Now is the Time', 2010.].

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC 262

The provision of European and international standards has already and will continue to contribute to the reduction in international barriers to trade, particularly in:

- quality control of materials and products;
- manufacturing processes and procedures;
- product lifetime;
- management of risks to the environment.

3 PARTICIPATION IN THE CEN/TC 262

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 262 AND STRATEGIES FOR THEIR ACHIEVEMENT

4.1 Defined objectives of the CEN/TC 262

The objectives of CEN/TC 262 are to contribute to the elimination of technical barriers to trade within Europe and globally.

CEN/TC 262 has developed and continues to develop a portfolio of European Standards which address:

- specifications, test methods, performance standards, vocabularies and product standards for metallic and other inorganic coatings used for protective, decorative and engineering purposes;
- product standards where the metallic or other inorganic coating is a major component of the product and for which no more appropriate competence exists in CEN;

Prior to 1998, CEN/TC 262 was called "Protection of metallic materials against corrosion". In 1996 CEN/TC 262/SC 1 was merged into the parent TC and the Working Group structure has evolved as items from the original work programme have been published and new work has been initiated.

Whenever appropriate CEN/TC 262 aims to develop its standards in parallel with the relevant International Standards Organization Technical Committee. This has given rise to extensive collaboration with ISO/TC 107 *Metallic and other inorganic coatings*and with ISO/TC 156 *Corrosion of metals and alloys*.

A significant number of projects have involved adoption of published International Standards as European Standards. Maintenance of the CEN/TC 262 portfolio will involve consideration of existing ISO standards and their joint revision through the Vienna Agreement as appropriate.

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

CEN TC 262 has published 132 standards with 18 in development. CEN/TC 262 currently has 3 active working groups:

- WG 2 — *Hot dip galvanized coatings*
- WG 5 — *Vitreous enamel coatings*;
- WG 12 — *Maintenance and ISO coordination*.

The current objectives of CEN/TC 262 are to:

- continue development of methods of test and performance standards for metallic and other inorganic coatings, particularly where the products or the process materials are environmentally sensitive;
- develop a maintenance programme for standards already published by CEN/TC 262;

- develop closer liaison and harmonization with ISO/TC 107 and its subcommittees, and with ISO/TC 156. For example:

  - joint working takes place via CEN/TC 262/WG 5 and ISO/TC 107/WG 2 on vitreous and porcelain enamels
  - CEN/TC 262, ISO/TC 107 and ISO/TC 156 are jointly committed to a consistent approach to use of accelerated corrosion testing standards in work of common interest. A Joint Working Group has been established for this purpose under ISO/TC 107, ISO/TC 156 and ISO/TC 35/SC 14, which will work in collaboration with CEN/TC 262.

Although it currently has no work items, WG 2 *Hot dip galvanized coatings* is active in monitoring the work of ISO/TC 107/SC 4/WG 2 on sherardizing, and expects to contribute actively to future revisions of EN ISO galvanizing standards, e.g. when revision of the galvanizing standard EN ISO 1461 becomes due and the guidance documents for the use of zinc coatings for corrosion protection in atmospheric exposure (EN ISO 14713-1, -2 and -3) are revised.

The scope of CEN/TC 262 specifically excludes:

- thermally sprayed coatings, which are covered by CEN/TC 240;
- paints or other organic coatings, which are covered by CEN/TC 139;
- cathodic protection, which is covered by CEN/TC 219.

4.3 Environmental aspects

The production of articles that incorporate a metallic or other inorganic coating (falling under the scope of CEN TC 262) should necessarily be managed under the required environmental regulatory regime of the producer member state. Revision of existing standards and new developing standards should recognize the existing and potential future benefits that can be accrued through application of these processes, while allowing for industrial innovation and changes in the environmental regulatory field.

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC 262 WORK PROGRAMME

The technical programme of CEN/TC 262 has reached an advanced state, with the majority of high priority work items being published. There is therefore little risk that the programme of work will fail to be completed. However, the addition of new CEN members will necessitate the review of some standards to ensure that their requirements are satisfied.

The main problem facing CEN/TC 262 will be in identifying appropriate experts to reconstitute Working Groups to undertake the revision of standards, ensuring that limited resources are used effectively.

Environmentally driven standards development largely centres around chemical analysis where the quantifying of toxic components is important. Depending on how health and safety regulations impact on the use these materials and products, more reliable methods for their determination may become necessary.

The effect of European environmental legislation (e.g. REACH) will become increasingly influential on the range, content and scope of revised and emerging standards under the scope of CEN TC 262. The Committee must be able to react to this changing landscape and deliver standards that meet the needs of the recipient markets in a timely and effective manner.

CEN/TC 262 has established WG 12 to oversee the maintenance of its portfolio of standards and the harmonization of standards with those of ISO/TC 107 and ISO/TC 156.

Currently there are no EU directives associated directly with the approval of metallic and other inorganic coatings technology. The work of some other CEN Technical Committees may have an impact on the work of CEN/TC 262, for example the harmonized standards supporting implementation of the Construction Products Regulation, being developed by CEN/TC 135 *Execution of steel structures and aluminium structures*, CEN/TC 350 *Sustainability of construction works* and CEN/TC 351 *Construction products - Assessment of release of dangerous substances*.