

BUSINESS PLAN
CEN/TC 271
SURFACE TREATMENT EQUIPMENT - SAFETY

EXECUTIVE SUMMARY

Business Environment

European manufacturers of surface treatment equipment represent around 50 % of the international foreign trade volume. Runner up is Asia with a share of 30%.

Surface technology is applied in all producing industries like automotive, furniture, white goods, agricultural machinery, semiconductors, electronics, optics, machinery.

Surface treatment technology covers Cleaning and pre-treatment, Shot-blasting, Paint application, Plating, Plasma surface treatment.

Since 1990 TC271 has developed standards along the paint application process including cleaning and pre-treatment. The demand from other fields of surface treatment increased in the past years. TC271 is responding to this demand by extending its activities beyond the existing focus on machinery for the application of organic coating material. New and identified future fields of activity are Plating technology, Shot blasting technology, Plasma surface treatment technology.

Parties involved in standardization are

- Industry of surface treatment equipment
- Industry of chemical manufacturing (paints etc.)
- Public authorities
- Industry using surface treatment technology

Benefits

Since 1990, 15 standards of TC271 have been adopted. These cover machinery for the paint application process. Some of the standards are applicable for further industrial processes (e.g. cleaning and pretreatment for plating and other production processes, waste gas treatment of other industry processes).

The published standards promote commercial interoperability in Europe and based on the technological lead of European surface technology they are also applied in international target markets.

Priorities

To make available European standards related to

- harmonized safety requirements for surface treatment equipment,
- harmonized test procedures for surface treatment equipment,
- minimization of environmental impact of surface treatment equipment.

To assure the match of interfaces to standards from other European standardization committees (e.g. CENELEC 31-8)

To cover machinery safety for surface treatment equipment of all market relevant technologies.

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:

The field of surface treatment technology is characterized by a large variety of specific technologies and fields of application. Thus it is not possible to give a general status concerning the state of the art technology or a general view on the technical development.

Stakeholders in the standardization field of TC271 are

- manufacturers of surface treatment equipment
- industry users of surface treatment equipment
- manufacturers of surface treatment process materials
- health and safety organizations
- environmental organisations
- governmental organisations

An interest of non-european standardization organisations is observed. An informal exchange is conducted discontinuously with standardization organisations from USA, Russia, China, Brasil.

The participation of stakeholders in standardization activities is limited due to large work load in other European or national regulatory processes.

Requirements for safe design and construction of surface treatment equipment are related to the following European Directives (2006/42/EC; 94/9/EC & 2014/34/EC; 97/23/EC)

Occupational safety for surface treatment is detailed in national regulations and guides.

Surface treatment technology is affected by European and national regulations of which some overlap and introduce a conflict between machinery and occupational safety requirements.

Many surface treatment processes have considerable environmental impact. The emissions to the environment and waste are subject to various European and national regulations. Guides and specifications dealing with reducing environmental impact of surface treatment processes are available in the market.

Many surface treatment processes consume a considerable amount of energy and resources. The limitation of energy- and resource-usage is driven by economic interests and in some fields by national regulation. Requirements developed under the EuP Directive (Lot 4 ENTR) for ovens may in future affect the construction of dryers used in surface technology processes. Guides and specifications dealing with energy efficiency and resource efficiency are available in the market.

The continuous development of surface treatment technology is accompanied by patenting activity. Up to now no limitation of scope of TC271 standards due to patents has been observed.

1.2 Quantitative Indicators of the Business Environment

As the majority of surface treatment equipment is not uniquely represented by international statistical codes the foreign trade the global market is subject to estimation. VDMA, the German Engineering Federation, estimates the foreign trade in paint application technology to account for € 4.000.000.000 of which European manufacturers still have nearly 50% share. Over the past years the Asian share is increasing and today accounts for nearly 30%.

The European manufacturing industry in surface treatment is characterized by a few large companies (> 1000 employees) and a vast majority of small and medium sized enterprises. Manufacturers of surface treatment equipment are mainly located in Germany, Italy, France, United Kingdom and Poland. Further manufacturers are known to TC271 from Spain, Belgium, Denmark, Sweden, Czech Republic, Turkey, Switzerland, Austria and Slovenia.

The implementation of TC271 standards has supported interoperability in the European market. Although the TC271 standards EN12215 and EN13355 have, due to a formal objection raised against specific requirements of these standards, not been listed in the OJEC, these two standards are regularly used by industry for procurement requirements and for declaration of conformity.

Limitations of interoperability are observed with regard to deviating occupational and environmental national regulations and their conflicting overlap with the requirements defined in TC271 standards.

The increasing focus on energy efficiency is leading to the implementation of measures in conflict with safety requirements defined in TC271 standards. Consequently TC271 is implementing information into the standards to clarify the relation between measures for energy efficient design and construction and requirements for safe design and construction of the machinery.

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

The generation of safety codes by harmonized safety standards for surface treatment equipment supports interoperability in Europe and safe industry production environment.

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.

In 2013/2014 CEN members from the following countries are

- observing the work of CEN/TC271:
Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Germany, France, Latvia, Lithuania, Italy, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Switzerland, Turkey and the United Kingdom;

- actively participating in working groups of CEN/TC271:
Belgium, France, Germany, Italy, Switzerland, the United Kingdom

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

4.1 Defined objectives of the CEN/TC

EN12921-series

- Ratify NWIP (revision of EN) until 2014-11-01
- Revise standards to
 - Update references
 - Clarify requirements
 - Update of requirements for safety related controls
 - Implement information on measures for energy efficient design and use and measures for reduction of environmental impact of surface treatment machinery. Where applicable indicate the relation of these measures to safety requirements defined in the standard.
- Deliver draft within regular timeframe

EN12621

- Ratify NWIP (revision of EN) until 2014-11-01
- Revise standard to
 - Update references
 - Implement requirements related to PED
 - Update of requirements for safety related controls
 - Implement information on measures for energy efficient design and use and measures for reduction of environmental impact of surface treatment machinery. Where applicable indicate the relation of these measures to safety requirements defined in the standard.
- Deliver draft within regular timeframe

WI00271059 coating powder supply systems

- Ratify NWIP (new EN) until 2014-11-01
- Establish draft for ENQ until end of 2015

EN1953

- Ratify NWIP (amendment of EN) until 2014-11-01
- Amend standard to
 - Implement requirements for rotary atomizers
 - Implement information on measures for energy efficient design and use and measures for reduction of environmental impact of surface treatment machinery. Where applicable indicate the relation of these measures to safety requirements defined in the standard.
- Deliver amendment within regular timeframe

EN12757-1

- Decide on the need for revision at plenary meeting 2017

EN12215, EN13355, EN12981

- Ratify NWIP (revision of EN) until 2014-11-01
- Establish draft until end of 2015
- Implement information on measures for energy efficient design and use and measures for reduction of environmental impact of surface treatment machinery. Where applicable indicate the relation of these measures to safety requirements defined in the standard.
- Deliver draft within regular timeframe

EN12581

- Decide on the need for revision at plenary meeting 2017

EN1539

- Submit draft to 2nd ENQ until 2014-11-03
- Implement information on measures for energy efficient design and use and measures for reduction of environmental impact of surface treatment machinery. Where applicable indicate the relation of these measures to safety requirements defined in the standard.

EN12753

- Ratify NWIP (revision of EN) until 2014-11-01
- Revise standard to
 - Update references
 - Extend scope to all significant hazards
 - Implement new knowledge on temperature dependency of LEL
 - Implement information on measures for energy efficient design and use and measures for reduction of environmental impact of surface treatment machinery. Where applicable indicate the relation of these measures to safety requirements defined in the standard.
- Deliver draft within regular timeframe

EN14462

- Submit draft to FV until 2014-06-03

WI00271060 electroplating machinery – safety requirements

- Circulate first WD until 2014-10-19
- Submit draft to ENQ until 2015-06-25

Shot blasting machinery

- Verify support from industry and CEN members until 2015-03-30

Plasma surface treatment machinery

- Verify support from industry and CEN members until 2015-03-30

Dry ice blasting machinery

- Verify support from industry and CEN members until 2015-03-30

Interfaces of surface treatment standards

- establish preWI (new TS) until 2014-11-01
- prepare WD on basis of preliminary WI until 2015-12-31

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

The tasks resulting from the objectives shall be handled for each preliminary or active WI in the designated working group. The TC271 secretariat will give support for central objectives (e.g. energy efficiency and environmental impact). The drafts delivered by the WGs will be reviewed by the TC271 secretariat to assure a comparable safety level through out the field of surface treatment machinery.

When considering systems, the standards of CENELEC SC31-8 are linked closely to the TC271 standards. The compatibility of the standards from both committees is ensured as several members, especially both secretaries of TC271 and SC31-8, are working in both committees.

4.3 Environmental aspects

See 4.1

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

TC271 is lacking active participation from the CEN members listed as members of the TC. Thus it is challenging to achieve the support of minimum 5 CEN members for the ratification of NWIPs. The active members of TC271 see the need for active improvement of the related standards and would welcome a CEN business process which allows to proceed with standardization projects even if less than 5 CEN members actively support the project, as long as there is no negative vote on an NWIP.

The EC Machinery working group is not taking final decision on the formal objection raised against EN12215 and EN13355. A mandate for the revision of these standards has been drafted by the EC but never been addressed to CEN/TC271 as an official mandate.

The support of the TC by CEN consultants is essential to the development of the standards. Thus the missing support is affecting the implementation of TC271 standards.