

CENELEC/TC 31/SC 31-8	Secretariat DE	Date 2018-12-19
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TC or SC title: Electrostatic painting and finishing equipment

A Background

CLC/SC 31-8 was founded in the 80s as sub-committee of CLC/TC 31. For further information on the background, see Business Plan of TC 31.

The scope of CLC/SC 31-8 comprises devices and systems for liquid coating materials, powder coatings and flock which are characterised by the fact that the coating materials are charged electrostatically during the atomisation process. The electrostatic charge increases the so-called transfer efficiency which is that part of the coating material actually applied on the item. A specific characteristic of this process is that the hazardous explosive atmosphere is generated by the devices themselves which require specific requirements for ignition safety of the devices, and thus justifies the special state within the scope of CLC/TC 31.

Similar to the parent committee CLC/TC 31, the standardisation projects of CLC/SC 31-8 substantiate the Directive 2014/34/EU.

Following Standards of CLC/SC 31-8 are currently published:

- EN 50050-1:2013 (pr=22512)
Electrostatic hand-held spraying equipment - Safety requirements - Part 1: Hand-held spraying equipment for ignitable liquid coating materials
- EN 50050-2:2013 (pr=23164)
Electrostatic hand-held spraying equipment - Safety requirements - Part 2: Hand-held spraying equipment for ignitable coating powder
- EN 50050-3:2013 (pr=23165)
Electrostatic hand-held spraying equipment - Safety requirements - Part 3: Hand-held spraying equipment for ignitable flock
- EN 50176:2009 (pr=16944)
Stationary electrostatic application equipment for ignitable liquid coating material - Safety requirements
- EN 50177:2009/A1:2012 (pr=23420)
Stationary electrostatic application equipment for ignitable coating powders - Safety requirements
- EN 50223:2015 (pr=24031)
Stationary electrostatic application equipment for ignitable flock material - Safety requirements

B Business Environment

B.1 General

In contrast to TC 31 and TC 305, up to now the standardisation has been limited to Europe. Since several years the European group has discussed the option to raise the standards to the international level. But the obvious advantages of a worldwide standardisation are opposed by concern over the quality and the continuity of the normative requirements.

Products manufactured in compliance with CLC/SC 31-8 are used in many industrial companies and handicraft enterprises applying varnishes or other coating materials by atomisation. The size of these enterprises ranges from global companies, e.g. automotive and aircraft industry, to small and medium-sized enterprises (SMEs), e.g. contract spray painters.

Risk management has taken on a greater emphasis in the business environment and is an underlying principle in many OHS regulatory requirements. Insofar is the work of CLC/TC 31 an essential element of EU Directives as 2014/34/EU and 1999/92/EC.

B.2 Market demand

The market demand of the CLC/CS 31-8 standards has been increasing in recent years. They are used by designers, manufacturers, installers, maintenance and repair personnel, equipment users and the authorities. The standards published by CLC/SC 31-8 are now widely accepted by the different players. They form the basis for legislated requirements of the legislative framework of the EU in this field and are applied by ATEX Notified Bodies to issue EC Type Examination Certificates, QA Notifications resp. manufacturers to issue their EC Declaration of Conformity.

B.3 Trends in technology

The technological development of devices standardised by CLC/SC 31-8 are especially linked with the developments in the field of coating materials. Any changes in the composition of the mixture, e.g. due to increased use of liquid coating materials, require new safety requirements because of differing electrical characteristics.

By including especially the manufacturers of these devices it is ensured that such developments are reflected very early in the corresponding product standards.

B.4 Market trends

The market trend for demand for the standards of CLC/SC 31-8 is expected to continue to increase.

B.5 Ecological environment

Products manufactured in compliance with the standards of CLC/SC 31-8 significantly contribute to the protection of the environment and of the resources. Electrostatically supported coating processes are characterised by a considerably higher transfer efficiency, that is, as intended, a much higher amount of the materials used is applied to the item. This both saves resources and protects the environment by emitting less organic solvent vapours and by reducing the amount of filtered coating materials to be recycled.

B.6 Involvement of societal stakeholders

According to the CLC Rules for Standardization, CLC/SC 31-8 is proactive to cover the interests of all stakeholders in order to achieve a wide acceptance of the standards e.g. by regulators, unions and insurance companies. This is an essential goal for the ambition of CLC/SC 31-8 to provide the most accepted standards for explosion protection within the EU.

B.7 Involvement of SMEs

Many of the manufacturers of the products covered by the standards are SMEs. These enterprises are adequately represented in the committee, and are thus involved in its activities in an intense and continuous way. In the past often these manufacturers delivered new ideas for the standardisation work.

On the other hand the products manufactured in compliance with the standards of CLC/SC 31-8 are often used by handicraft enterprises. The national mirror committees, especially the German committee DKE K239, regularly gets a feedback from the users.

C System approach aspects

The CLC/TC 204 prepares standards for similar products, but the devices covered by the standards of CLC/TC 204 do not have an ignition protection since the processed coating materials do not generate an explosive atmosphere. Therefore, the products of CLC/TC 204 are a sub-group of the products covered by CLC/SC 31-8.

When considering the systems, the standardisation projects of CEN/TC271 "Surface Treatment Equipment-Safety" can be linked closely to that of CLC/SC31-8. This committee standardises open and open-fronted spray booths, and determines requirements for working areas in which products of CLC/SC31-8 are used. The compatibility of the standards of CLC/SC31-8 and those of CEN/TC271, as well as the actuality of the standards is ensured because several members are working in both committees (especially convenor, secretaries).

D Objectives and strategies (3 to 5 years)

Objective 1: Revision of the standards of CLC/SC 31-8 for adaption to standard generation of CEN/TC271.

Objective 2: Transfer of important standards of SC 31-8 to IEC level. The decision depends on strategic considerations and conditions of the market environment, and thus has to be taken as the case arises. The TC has regular contact to standardisation organisations in North America.

E Action plan

Objective 1:

- a) Revision of EN 50176 "Stationary electrostatic application equipment for ignitable liquid coating material - Safety requirements" (target date end of 2021)
- b) Revision of EN 50177 "Stationary electrostatic application equipment for ignitable coating powders - Safety requirements" and EN 50223 "Stationary electrostatic application equipment for ignitable flock material - Safety requirements" (target date 2023)

Objective 2:

- a) Decisions as the case arises (see above)

F Useful links to CENELEC web site

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