



Every two months, Dr. Martin Thedens, Chair of IEC TC 31 "Equipment for explosive atmospheres", offers his perspective on the latest developments in the world of standards.

IEC 60079-0 "EXPLOSIVE ATMOSPHERES – Part 0: Equipment – General requirements" defines Specific Conditions of Use as essential information for the installation, use, and maintenance of the Ex equipment. These Specific Conditions of Use are provided on an Ex equipment certificate and the certificate number includes the suffix "X".

These Specific Conditions of Use are in addition to the installation design, selection, installation of equipment, inspection, maintenance, repair, and overhaul requirements of the IEC 60079 Series and the ISO/IEC 80079 Series. They do not repeat those requirements. Having this definition in mind, we have to consider the different players: standardisation, certification bodies, manufacturers, and users.

Specific Conditions of Use are required in several clauses by standards of the IEC 60079 Series and the ISO/IEC 80079 Series. With the GWP – the 'Good Working Practice' of IEC TC 31 which is available on the IEC dashboard (www.iec.ch/tc31) – the rules and principles are given for the various teams of IEC TC 31 and its three SCs, how to draft Specific Conditions of Use, indicated by the "X" marking: "The specification for use of the "X" marking should be carefully considered such that it does not dilute the value of the "X" marking as a means of imparting critical information necessary for installation or maintenance. The description of the "X"

Specific conditions of use – "X" is not always a social media platform

marking in the document needs to include what the "Specific Condition of Use" is that needs to be provided for safe installation and maintenance. Each Specific Condition of Use shall require that the manufacturer provide clear and practical guidance for mitigating the risk of ignition. Many of the sub-parts currently do not specify exactly what "specific condition of use" needs to be conveyed to the user through the "X" marking."

Thus, we as the standard writing party have to draft our standards in a way that the intention and need for each Specific Condition of Use is clear for manufacturers and certification bodies; in some cases Specific Conditions of Use are used to inform the user of additional actions that may be needed to supplement the requirements in order to achieve the required Level of Protection. It is required that some 'guidance' be provided within the standards. This is also one reason for IEC TC 31 regularly updating the standards: to improve the standards for better reading and to avoid misunderstandings and misinterpretations.

The user part is easy: they have to follow the requirements given in the Specific Conditions of Use. On the other hand, it's not so easy for the user to find these requirements. They are included in the manual and part of the certificate, but it's important to know these requirements for the design and selection prior to the installation; and in some cases, it's hard to get the required documents prior to purchase.

The critical task is now for manufacturers and certification bodies to transfer the requirements for an "X" marking to Specific Conditions of Use which can be understood and realised by users. To support this, IEC TC 31 created AG 55, an advisory group with the tasks:

- To review and identify references to Specific Conditions of Use in the

IEC 60079 and ISO/IEC 80079 series and to maintain a list of Specific Conditions of Use;

- To provide support and guidance to other TC 31 groups on the development of requirements for Specific Conditions of Use; and
- To consult with Ex conformity assessment systems as appropriate.

The third task is the most challenging.

Since a few years ago, AG 55 together with the IECEx Secretariat have been looking for examples of Specific Conditions of Use in Ex Certificates:

- Where it's not clear for users what they have to do;
- Where general manufacturer's instructions are listed as Specific Conditions of Use;
- Where requirements of user standards such as IEC 60079-14 are duplicated;
- Where Specific Conditions of Use are not required by a standard; or
- Where Specific Conditions of Use alter requirements of a standard.

Based on discussions within AG 55 and together with IECEx, a proposal will be drafted to update procedural documents of the IECEx Equipment Scheme. This proposal will include clear guidance for certification bodies – and thus also manufacturers – to avoid the wrong use of Specific Conditions of Use as listed above and to create Specific Conditions of Use which are correct, clear and easy to be understood. ■

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