



Every two months, SGS Baseefa Technical Manager Ron Sinclair MBE gives his perspective on the latest developments in the world of standards.

The work continues

In my previous article in the May issue, I trailed the upcoming IEC TC31 meetings that were due to be held in the UK in May. I did not get my second Covid booster jab in time to feel safe in heading south to London and Maidenhead, so opted for remote attendance. Probably a wise decision as one of the meetings became a “super-spreader” event.

The technology worked well and those of us on the remote end did not suffer any disadvantage. I would also judge that partly to do with the good preparation on behalf of the convenors.

The ability to participate remotely allows a greater representation, particularly for one day meetings where travel to London from as far afield as Australia makes the economics of personal participation very difficult.

Two months ago, I highlighted how some of the maintenance teams had made excellent use of shorter remote meetings to make progress with new editions. A hybrid meeting means longer days and fixed times to suit those present in person, rather than spread the time shift misery, but the UK is a good compromise location for this, even if a nine-hour day, with breaks, is hard work tethered to the computer.

In the TC31 WG22 meeting, we concentrated on our role as maintenance

team for IEC 60079-0. One of the major decisions was to remove the option not to mark an ambient temperature range for the existing default -20°C to +40°C. It is believed that more and more equipment is having to go into severe climates, partly related to global warming, such that not marking the ambient range can lead to false assumptions. It is easier, as an installer, to ignore an ambient restriction that is not marked, so always marking will more likely ensure routine attention to the problem.

We had a long discussion about the meaning of “Continuous Operating Temperature” (COT) for a material, as it is not a fully defined property. Nonetheless, it is an extremely useful concept for when a fully defined property such as “Temperature Index” (TI) is not appropriate. In many cases the COT is just a value assigned by the manufacturer of the material, but there are many safety factors built into the system, so it is agreed to be reasonable to accept the material manufacturer’s statement.

There was also a lengthy discussion related to cyber security as a risk factor in explosion safety. The main conclusion was that, although some aspects may relate to the electronic circuits in specific equipment, the problem really had to be addressed at the site system level, and that it would not be appropriate to build anything into our Ex Equipment standards. It was also recognised that the current expertise in equipment certification did not overlap with the expertise necessary to handle cyber security.

In the maintenance team for IEC 60079-7 one major topic was the desire to increase the maximum permitted voltage for Ex eb from 11kV to 15kV. IEC TC31 has two horizontal working groups that are being asked for advice: WG32 on Clearances and Creepage Distances, and WG43 on High Voltage. This will be particularly relevant for increased safety

motors, but there is concern that some of the voltage breakdown mechanisms start to change at around these voltage levels.

For many years, it has been tacitly accepted that Ex ec equipment can be certified with an “X” certificate number and a Specific Condition of Use covering the need for a further outer enclosure that provides the final environmental protection. This has been allowed (as opposed to the more rigid Component Certification route) to meet a market need. However, experience shows that not all “IP54 Enclosures” are as well controlled as is intended. Therefore, it is proposed to introduce a very specific set of requirements for an “Ex ec Enclosure”, to be sold separately from its intended contents and which can be used for this purpose. Unlike an Ex eb component certified enclosure, it can be sold with marking visible from the outside.

The devil will be in the detail about how, for example, panel mount displays fit into this new regime. Aperture cutting in the outer enclosure must be carefully controlled to ensure the correct IP fit at the mechanical interface.

The next TC31 meetings are scheduled for San Francisco, during September and October. If remote participation is permitted, will my working day easily adjust to a 17:00 start? ■

About the author

SGS Baseefa’s Technical Manager Ron Sinclair MBE will continue to attend the European Notified Bodies Group for ATEX (ExNBG), although representing SGS Fimko, their partner EU Notified Body, now that the UK bodies are excluded. He is Chair of the IECEx Service Facility Certification Committee and a member of the IECEx Executive. He is chair of the UK Standards Committee operating in this area for electrical equipment, and recently retired as chair of the European committee.