



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

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the Additional Information section for each standard.

There were three technical discussions which are worth noting:

## Temperature control of heating devices

It was agreed that not all concept standards require specific control of temperature to the same degree. Increased Safety (60079-7) and Trace Heating (60079-30-1) have the most comprehensive requirements, but others, such as Flameproof (60079-1), leave much more to the installer of the equipment to decide how to limit temperature, particularly of immersion heaters. An ad-hoc WG of the MT convenors for the relevant standards will be convened, to attempt a more common approach.

## Digital marking of equipment

Industrially, more and more use is being made of the ability of equipment to identify itself electronically, whether by the use of QR Codes on the label, or RF identification tags. Logically, this must come for Ex Equipment, but there are problems in ensuring that device readers are both universally available and also suitable for use in hazardous areas.

We discussed the potential of two German standard QR type codes (carrying different amounts of information) and the problems of readability when the code has been subject to damage in a harsh environment. At this time, the decision was that, if such electronic identification was to be used, it must be in parallel with the minimum amount of information in hard text form that is required by our standards (I may be willing to embrace modern technology, but I grew up in a world and industry where the norm was the use of cast brass for marking plates, and I can still see the benefits!).

## Lithium Ion batteries

It does not seem that long ago that we were hearing of battery fires in Boeing 787 Dreamliners and exploding Samsung phones. Battery technology continues to develop at an

incredible pace, and although those problems were solved, new chemistry creates additional problems. Yet there is a desire to be able to employ some of the latest designs in hazardous areas. There would be significant environmental benefit in being able to remove all diesel engines from underground mines and replace such mobile equipment with high powered battery equivalents.

We learnt of a number of experiments that had taken place, demonstrating how difficult it would be to contain an explosion from the latest high energy density batteries in a flameproof enclosure. It should be stated that the experiments seem to have been conducted with cells and batteries that are not permitted by the current flameproof standard – IEC 60079-1 – but the pressure of the needs of industry will be driving a potential change to the standard. If you want to see the potential disaster that might await, there is a video available at [bit.ly/3rvj7AZ](http://bit.ly/3rvj7AZ). But do remember that the current standard puts significant limitations on the type of cell that can be used in a flameproof enclosure. For traction duties in Europe, we typically use batteries housed and tested to the Increased Safety standard (60079-7) which is strictly limited to lead-acid, nickel-iron, nickel-metal hydride or nickel-cadmium types.

If technology never changed, we need never change our standards, but technology does change, and we do have to modify our standards to cope. The 44 people that met electronically in November are part of that ongoing process. ■

**The first full week of November was taken with a remote meeting of the IEC TC31 Chair's Advisory Group, spread over three days. We had been scheduled to meet face to face at the UL facility in Northbrook over two full days, but the three much shorter days, using Go-to-Meeting, worked well.**

The Chair's Advisory Group (CAG) is a forum in which those who play a leading role in the creation of standards in the Ex field can get together and provide advice to the chairman of TC31 on the direction of the Committee, its Sub-Committees, Working Groups (WGs) and Maintenance Teams (MTs). There is also an opportunity to talk through problems created by new technological developments. On this occasion 44 people joined the meeting, most for all three days.

Although a number of WGs and MTs have managed remote meetings over the past year, progress has been slower than originally planned, so the Stability Dates for quite a few standards were advanced by one or more years.

Although perhaps not as well appreciated by the average reader of a standard, the Stability Date can be a vital tool for product developers. The date gives an absolute indication of the earliest date on which a new edition of the standard can be published, and therefore the minimum life of a product designed to the current standard before it is necessary to review the design against the next edition. Stability dates are published, in the IEC Webstore, in

### About the author

SGS Baseefa's Technical Manager Ron Sinclair MBE is a vice-chair of the European Notified Bodies Group for ATEX (ExNBG), as well as Chair of the IECEx Service Facility Certification Committee and a member of the IECEx Executive. He is chair of the UK Standard Body operating in this area for electrical equipment, and recently retired as chair of the European committee.