



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

A retrospective

Although I am still gainfully employed as I write this article, I will have retired by the time you read it. For many people, retirement brings mixed emotions, and it certainly does for me. For nearly 50 years, I have been working in Ex product certification. It has become my life's work and, in many ways, my life's passion.

I have been incredibly fortunate in that all the jobs I have done have had a strong bias towards being both fascinating and worthwhile. I started life, after graduating, as an electric motor designer, but not on "standard" induction motors. My company, Laurence Scott and Electromotors, in Norwich, made several designs of specialised motor.

My own speciality was the patented "NS" design for large ac commutator motors, many of which went into the new coal-fired power stations, particularly along the banks of the River Trent. All except Drax have now been decommissioned, and that is no longer burning coal!

In 1975, my interest was attracted to an advert for a certification engineer at the UK Health and Safety Executive's Buxton Laboratory for its expanding Baseefa certification activity. I had worked on the design of some motors that were required to meet the then "Division 2" requirements, but I was astonished to realise the breadth of products that were covered. However, because of my background, I did, initially,

see more than my fair share of hazardous area motors.

As time passed, I branched out from my original stream (what we would now call Ex eb and Ex ec) and lead the team for intrinsic safety for a few years. I had also started attending BSI standards meetings, a task I found particularly fulfilling. Shortly after I was confirmed as Deputy Director of Baseefa, HSE decided to close the certification service, and send all those over the age of fifty on their way with an enhanced pension package.

With the support of most of the existing staff, I was able to negotiate an early release, and put in place the hub of what became Baseefa Ltd. We were extremely fortunate, in that most of our existing customers did not want to lose the ethos we had built up as part of HSE, and were prepared to put their money where their mouth was, by transferring their existing ongoing work contracts from HSE to the new Baseefa Ltd. If we had misjudged the level of support, we might have fallen flat on our faces, but we achieved the virtually impossible, with only a capital outlay of £20,000 before sufficient money had transferred with the contracts.

We transformed what HSE had seen as a loss-making business into a healthy private sector enterprise making reasonable profits. We used a bank mortgage to fund the building of our new laboratory and were able to clear this entirely with accrued profits over seven years. We were able to start giving healthy dividends to our staff (the only shareholders) and when we decided that we needed to partner with a larger organisation to achieve sales across the whole of the world, we selected SGS from among 11 possible contenders.

So, how do we fit into the world of Ex-certification today? Over the last few years, I have been trying to wind down

the number of national and international activities that I am undertaking. It is time for new blood to take over. This happened naturally when I finished my second six-year stint as chair of an IECEx committee a couple of years ago. I had been chair of IECEx ExTAG (the group where all the testing laboratories and certification bodies within the IECEx Product Certification scheme meet in order to thrash out decisions on how to proceed in specific circumstances). After a break of one year, I became chair of the group looking after the Service Facility Certification scheme. In this scheme, IECEx certification bodies issue certificates to those companies working in the inspection, repair and maintenance fields, an area with a different set of standards from product certification.

My work in both areas was recognised at the IECEx MC dinner in Edinburgh, in September, and I was very proud to receive a number of tributes. In accepting anything of that nature, I consider myself as the figurehead, with the full support of all my colleagues in Buxton, who have assisted me in providing information to allow me to fulfil those roles.

The same applies to the international standards work. Buxton colleagues have supported me technically in attending, and contributing to, several maintenance teams for standards in the IEC 60079 series, as well as the plenary meetings of IEC TC31.

Both sets of meetings, standards and certification, have enabled me to travel the world, and to see places that I would never have dreamed of adding to a holiday itinerary. But more importantly, I have become personal friends with many fellow attendees, and I shall miss meeting up with them in the years to come. The Ex-community is sufficiently small that it is possible to get to know many of the people from different countries that have

helped to shape the standards, and the certification schemes using those standards. A privilege indeed.

In Europe, we have an additional layer of bureaucracy sitting on top of the CEN and Cenelec standards committees. I was chair of Cenelec committee TC31 for several years. However, at the time of Brexit, it was deemed politically necessary that the chair of a European committee should come from a member country of the European Union. In many ways, that actually came as a relief, because the system used to “harmonise” standards supporting EU directives was beginning to fall apart.

Although there were a limited number of native Cenelec standards under the control of TC31, most were the EN version of a document published by IEC at the international level. TC31 therefore took responsibility for preparing any necessary European Annex that was necessary to supplement the basic IEC standard.

There are many reasons why it is sensible to avoid any unnecessary technical divergences between the European and the international versions of a standard, not least so that manufacturers only have to manufacture one version of a product, for sale across much of the world, as well as in Europe. It also helps if a single test report can be used to support two different forms of certificate, IECEx and ATEX. We achieved that with the latest edition of EN IEC 60079-0, by placing the few differences in an Annex, so that the body of the standard, and the Annex could clearly have separate reporting.

In practice, the only change applicable to most equipment is in the requirements for marking where, at IEC level, a manufacturer’s trademark is sufficient, but in the EN Annex, this is expanded to require the manufacturer’s name and a physical address. This latter requirement comes out of the need for the EU to operate a surveillance system in the market, not just in the factory. To this is added the very specific requirements of the use of the “Ex hexagon” and related marking string, indicating the nature of

compliance with the ATEX Directive.

A number of standards were in the pipeline for harmonisation, when the EU Commission failed to reach agreement on new contracts for its HAS consultants and no harmonisation activity took place for nearly a year.

There is now an impasse on the latest edition of the flammable dust protection standard 60079-31, where the HAS consultant for ATEX is effectively saying that he knows better than the standard maintenance team and insists that he wants a stall test introduced for electric motors. Since the same argument would also see stall tests introduced for flameproof and purged motors, I am happy that the current team at Cenelec TC31 have decided to fight this. Part 31 (dust protection by enclosure), Part 1 (flameproof) and Part 2 (purged and pressurised) are all based on meeting the relevant limiting temperature on the enclosure, rather than on the internal surfaces of the equipment. The stall test is quite rightly imposed on Ex eb motors, as the gas is assumed to have total access to the internal surfaces of the motor.

It will be very interesting to see how this plays out. In the meantime, Cenelec TC31 have decided to publish EN IEC 60079-31 without it being harmonised. I fully support this action as it can be brought into use immediately in Europe, by invoking the preamble text of the Essential Health and Safety requirements of the directive. These state, “Technological knowledge, which can change rapidly, must be taken into account as far as possible and be utilized immediately.”

That is a very powerful statement, and it can be said to overrule the presumed need for harmonisation of a standard, before it is brought into use. It will be the market that will decide the way forward.

In the UK, at the time of writing, my replacement as chair of the BSI standards committee EXL 31, responsible for the UK input to both IEC and Cenelec in respect of Ex Equipment, has not yet been found. BSI have been advertising for applicants

for many months. The problem is that industry, as a whole, does not seem to see the value of the standards making process, and is not prepared to support their staff in taking on these roles. I hope my successor is in post by the time you are reading this.

I first started writing articles for Hazardex in 2004. I still have most of my articles in a folder on my computer. It is interesting to read what was happening at that time. I wrote about the recent publication of BS EN 60079-0 replacing EN 50014, and what that would mean for manufacturers. I also wrote about the new enhanced ambient explosion transmission testing for flameproof equipment.

I wrote about the relevance of the three year overlap in the harmonisation process. This lasted until just a few years ago, when the EU Commission decided to reduce it to 18 months, thus putting pressure on both manufacturers and certification bodies alike to get recertification work completed on time. It is comparatively easy to justify using a new edition of a standard not yet harmonised, but the use of an older standard that has been replaced is not so easy. In both cases, the manufacturer has to make the justification in their Declaration of Conformity.

I have thoroughly enjoyed writing about standards and certification in Hazardex magazine every two months. I just hope that those who have read it have found some information of use to them. So, my final sign off... ■

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, as well as attending the equivalent UK Approved Bodies Group in the UK. He has recently retired as Chair of the IECEx Service Facility Certification Committee and as 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.