New beginnings

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

Ron Sinclair has retired. Since I started working in the area of explosion protection, almost 30 years ago, Ron has always been there. I did my PhD on Intrinsic Safety protection and my first business trip abroad as part of a research project took me – of course – to Ron in Buxton.

After moving to the PTB laboratory responsible for the "Flameproof Enclosure" type of protection, I began my first "hobby" in 2004: conformity assessment. I started as the PTB representative in ExNBG, the European Notified Body Group for the ATEX Directive 94/9/EG which is now the Directive 2014/34/EU. In 2008 the election of a new Chair was forthcoming, and Ron said to me: "You do it. I will retire in one year. I will be one of the Vice-Chairs to support you." What can I say – after my resignation in 2020, Ron was still Vice-Chair!

In 2007, I began my second "hobby": standardization. Of course, I looked to Ron as a role model! I am now Chair of the IEC TC 31 "Equipment for explosive atmospheres". In 2013, I moved from the electrical to the non-electrical department at PTB and, again, Ron supported me in many research projects on the safety of ignition sources.

Since 2021, I've been the head of the PTB department responsible for "Intrinsic Safety" and "Electrical Machines" and the head of the Sector "Explosion Protection and Shooting Devices" of PTB's conformity assessment body. Ron has been retired since the end of 2023 (yes, he's actually retired now!). Thank you, Ron, for so many fruitful and enjoyable years of cooperation; I learned a lot from you – enjoy your well-deserved retirement!

I have now inherited this column from Ron, a great honour for me and also a pleasure to give you an insight into the world of IEC TC 31 and it's three Subcommittees (SC) every two months, with all the associated tasks, work and results. Looking to our project plan on the IEC TC 31 dashboard (www.iec.ch/tc31), I think that the Maintenance Teams (MT) and Working Groups (WG) are very active again. There was plenty of work done during the pandemic and we learned that some tasks could be solved remotely. However, for issues identified during coffee breaks or evening beers, face-to-face meetings are still recommended.

We have restarted our meeting session plan during the last year. A typical meeting session lasts two weeks with up to four different groups in parallel meetings and takes place twice a year: one session in March/April in conjunction with the Chair Advisory Group (CAG) meeting of the IEC TC 31 and the other one in October/November in conjunction with the plenary meetings of IEC TC 31 and it's SCs. Further meetings of individual groups are held in between as face-to-face or as remote meetings. The coming meeting session is end of March in Split, Croatia followed by the meeting session end of October in London, England with the plenary meetings in Edinburgh, Scotland in conjunction with the General Meeting of the IEC.

All the major equipment standards, such as IEC 60079-0 "General Requirements", IEC 60079-1 "Flameproof Enclosure", IEC 60079-2 "Pressurization", IEC 60079-7 "Increased Safety" or IEC 60079-18 "Encapsulation" are under revision with an expected publication in 2025. Please have a look to the related activities of your National Committee. Everybody is invited to comment on the standards and to propose changes. Your contribution for the development of the standards is appreciated but has to be done via your National Committee only.

Another group is active as well – the IEC TC 31 WG 42 "Safety Devices Related to Explosion Risk". This group has the task: "To develop a standard for safety devices used in conjunction with equipment for explosive atmospheres to reduce the risk of ignition". In April 2019, Edition 1 of IEC TS 60079-42 was published. This Technical Specification (TS) provides guidance for equipment manufacturers where electrical safety devices are used to reduce the likelihood of potential ignition sources becoming effective in Ex Equipment located in explosive atmospheres. Electrical safety devices perform a safety function to control potential ignition sources from both, electrical or non-electrical Ex Equipment.

This TS may also be applied to a combination of elements performing a safety function, for example: Sensor, Logic system, Final element. A safety device can be a measure to achieve a required Equipment Protection Level (EPL) of the Ex Equipment with respect to a potential ignition source. The combination of the safety device and the Ex Equipment could then comply with the relevant standards of the IEC 60079 series and the ISO 80079 series with respect to the EPL. The TS is currently under revision to become a full standard as Edition 1 of IEC 60079-42. The comments on the first Committee Draft (CD) will be discussed at the upcoming meeting of WG42 in Split. You can comment on this project again when the next period of commenting begins later this year. Take advantage of the opportunity to participate in standardisation! ■