



Every two months, Prof. Dr. Thorsten Arnhold, IECEx Chairman 2014-2019, provides an update on developments within the organisation.

**I am writing this text in Scotland from a magical old castle near Edinburgh. The castle now serves as a hotel in the middle of a beautiful golf course and is the venue for this year's IECEx Management Committee Meeting.**

During the meeting, and also within the accompanying industry conference, the topic of hydrogen played a prominent role. Particularly noteworthy is the now established liaison with ISO TC 197 and especially with SC 1: Hydrogen at scale and horizontal energy systems.

For this reason, it was particularly welcome that the chair of the subcommittee, Andrei Tchouvelev from the Hydrogen Council, was present as a guest and gave the participants of the meeting an overview of the ongoing work at ISO TC 197 and the Hydrogen Council.

During the IECEx September 2021 Management Committee Meeting, agreement was reached to establish a new IECEx Working Group, ExMC WG19 "Coverage of Standards dedicated to Hydrogen Technologies", noting ISO TC 197 "Hydrogen Technology" ISO Standards (ISO 22734, ISO 15916, ISO 19880) along with IEC TC 105 Standards on hydrogen fuel cells.

In addition to these WG19 meetings,

## The latest developments of IECEx's hydrogen activities

Officers of WG19, Chairs of IECEx and IEC TC 31, held collaborative meetings with officers and experts from ISO TC 197 "Hydrogen Technologies" and IEC TC 105 "Fuel Cells", which proved to be most successful in developing an understanding of the market needs of both the standards development and the Conformity Assessment sides.

As part of its work, IECEx WG19 conducted a business case analysis using the IEC CAB G01 Guideline for IEC market impact analysis/business case for new and existing IEC conformity assessment services. The group has also conducted a survey of IECEx certification bodies to gauge their level of interest in this area, noting that IECEx have been issuing certificates to equipment suitable for use in areas where hydrogen may be present since its inception. So, inclusion of the ISO TC 197 standards are a logical addition to the IECEx portfolio of standards covered by IECEx. Three special areas of work have been identified and appointed to task teams:

The work of Task Team 1 "Additional Unit to the IECEx CoPC Scheme for Hydrogen Safety" has included consultation with ExPCC (IECEX Committee dealing with the IECEx CoPC Scheme for Personal Competence) and developed a new Unit of competence 11 for the OD 504. The idea is that a candidate for a certificate of personal competence (CoPC) who is working in a hydrogen facility can be tested, approved and certified according to a certain competence profile consisting of a combination of Unit 01 and one or more other function specific Units plus the new Unit 11 which is adding the hydrogen specific competence requirements. For this, Unit 11 is closely linked to the ISO/TR 15916: Basic considerations for the safety of hydrogen systems. In the meantime, a couple of ExCBs got a scope extension for Unit 11 and the first CoPCs have been

issued. Another aspect is the extension of the training programs of many of the 35 IECEx recognized training providers (RTP), who added hydrogen specific content to their curriculums.

The work of Task Team 2 "Integration of ISO TC 197 Standards" has culminated in development and publication of a new OD 290 which is the basis for harmonized procedures for IECEx certification of equipment, components and systems associated with the production, dispensing and use of gaseous hydrogen. Together with the 36,000 equipment certificates for explosion group 'IIC', IECEx is providing a broad spectrum of explosion protected products and systems applicable for almost all kinds of hydrogen applications.

The work of Task Team 3 Integration of IEC TC 105 standards dealing with fuel cell technologies is on-going.

The IECEx Chair, WG19 Convener and IECEx Executive Secretary attended a workshop hosted by IRENA (International Renewable Energy Agency) on "Quality Infrastructure for Green Hydrogen". The IECEx Secretary was invited to participate as a panelist during the Workshop which enabled him to inform of the work within IEC, ISO and IECEx and to present a proposal that a global approach towards Quality Infrastructure for the Green Hydrogen Economy should be adopted, along with use of existing frameworks and systems such as IEC, ISO for standards development and IECEx for a global approach towards Conformity Assessment.

Immediately after the IECEx meeting in Edinburgh, I will have another opportunity to explain the IECEx activities in the field of hydrogen technology at the IRENA conference in Bonn, Germany before I go to Canada to present the same topic at the IECEx conference in Niagara Falls. ■