**INTERNATIONAL ELECTROTECHNICAL COMMISSION SYSTEM FOR CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

### Title: Report from Dr Martin Thedens, Chair of the IEC Technical Committee 31- EQUIPMENT FOR EXPLOSIVE ATMOSPHERES

To: Members of the IECEx Management Committee, ExMC

**INTRODUCTION**

This document contains a report from the IEC Technical Committee 31- EQUIPMENT FOR EXPLOSIVE ATMOSPHERES Chair, Dr Martin Thedens, to the 2022 ExMC meeting.

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**INTERNATIONAL ELECTROTECHNICAL COMMISSION**

**TECHNICAL COMMITTEE 31: EQUIPMENT FOR EXPLOSIVE ATMOSPHERES**

**Report from IEC TC 31 to IECEx ExMC Meeting 2022**

**Introduction**

This report covers the activities of IEC TC 31 since the last meeting of IECEx ExMC in September 2021.

**Activities during the past year**

The last plenary meeting of TC 31 was a virtual meeting in October 2021 followed by a hybrid meeting of the Chair’s Advisory Group (CAG) in May 2022 at BSI in London (UK) together with other meetings of several Working Groups, Maintenance Teams, Project Teams etc.

The following decisions of the TC 31 plenary are of interest to IECEx:

1. DECISION 5:
TC 31 recommends that each Ex Equipment document define the option (associated with a Specific Condition of Use) and the requirements for conveying the limitations to the party that must address the limitations. Each Specific Condition of Use must require that the manufacturer provide clear and practical guidance for mitigating the risk of ignition.
ACTION: Add this recommendation to the TC 31 Good Working Practice.
2. DECISION 6:
TC 31 recommends that WG 22 consider the recommendation from AG 55 and include wording in IEC 60079-0 which prohibits Specific Conditions of Use that restate the requirements for installation design, selection, erection, inspection, maintenance, repair, and overhaul of the IEC 60079 and 80079 series standards.
3. DECISION 8:
TC 31 decides to establish an ahG to review the different dielectric strength and insulation resistance tests in 60079-5, 60079-7, 60079-11, 60079-15, and 60079-18 and recommend text for the TC 31 GWP.
4. DECISION 16:
TC 31 supports the recommendation of the TC 31 CAG and decides to establish an ahG to review alignment of sealing concepts in IEC 60079-1, IEC 60079-2, IEC 60079-26, and IEC TS 60079-40.
5. DECISION 18:
TC 31 decides to circulate a Q document asking NCs if the draft of IEC TS 60079-44 (31/1573/CD) satisfies the intent of the new work item proposal (31/1304/NP), and whether it should proceed in this form.
6. DECISION 19 and 20:
TC 31 supports the recommendations of the TC 31 CAG to create a “general requirements document” as IEC 60079-29-0 for detection and measurement of flammable, toxic, and oxygen gases.
This document could also incorporate the performance requirements for different detectors as annexes.
TC 31 supports the recommendation of the TC 31 CAG to include requirements for the safety monitor aspects of oxygen and toxic gas detectors within the IEC 60079-29 series. Health monitor aspects should remain within the IEC 62990 series.
7. DECISION23:
TC 31 recommends that the next edition of IEC 60079-0 should promote higher ambient temperature requirements due to the impact of climate change.
TC 31 recommends that the ambient temperature range should always be identified and that the option to not identify the ambient temperature range for -20°C to +40°C be removed.

The following resolutions of the TC 31 CAG are of interest to IECEx:

1. RESOLUTION 4:
The TC 31 CAG thanks Mark Coppler (USA) for his exemplary service as TC 31 Chair, convenor of WG 32, IECEx liaison and his numerous other roles. We wish him all the best for the future.
2. RESOLUTION 7:
The TC 31 CAG recommends that requirements and guidance in IEC TS 60079-44 be limited to only those aspects of competence and competence management which are unique to work in (or associated with) explosive atmospheres. This is to ensure that the document remains within the scope of TC 31 and its subcommittees and does not cause conflict with ISO.
The document should be fit-for-purpose to use in conformity assessment schemes and achieve a level of safety not less than that established by IECEx OD 504.
3. RESOLUTION 9:
The TC 31 CAG supports the recommendation from AG 55 to remove, from IEC 60079-0, the option to include Specific Conditions of Use in the documentation without the “X” marking. Note that this has been actioned in the CD of IEC 60079-0.
4. RESOLUTION 12:
The TC 31 CAG supports the recommendation from MT 60079-7 and MT 60079-14 to establish an ahG for “ec” Ex Equipment enclosures. The ahG should have the following scope: *To coordinate the equipment requirements in IEC 60079-7 and the installation requirements in IEC 60079-14 for “ec” Ex Equipment enclosures, partially enclosed Ex Equipment, and their assembly and marking.*
5. RESOLUTION 13:
The TC 31 CAG recommends the inclusion of additional guidance in the GWP for the significance of changes table. Guidance is needed on a common approach for addressing changes which clarify an interpretation, equivalent to an ISH. Such changes could be considered a major technical change by some manufacturers, but are not considered a technical change by the MT.
Guidance should also be added which clarifies how the table is used in practice.

**Future TC 31 meetings**

The coming plenary meetings of SC 31G, SC 31J, SC 31M and TC 31 are scheduled for October/November 2022 as part of the IEC General Meeting in San Francisco (USA).

Next face-to-face meetings of Working Groups, Maintenance Teams, Project Teams of TC 31 and it’s SCs are planned for October 2022 in San Francisco (USA) and for March 2023 in Sydney (Australia) followed by a meeting of the TC 31 Chair’s Advisory Group (CAG).

As always, we invite IECEx to make a presentation to these groups as part of the agenda.

**Standards and associated documents issued recently**

The following are documents that have been published over the past 12 months through August 2022:

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| **Number** | **Ed.** | **Date** | **Title** |
| IEC 60079-31:2022 | 3.0 | 2022-01-17 | Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t" |
| IEC 60079-5:2015+AMD1:2022 | 4.1 | 2022-05-12 | Explosive atmospheres - Part 5: Equipment protection by powder filling "q" |

**Documents nearing completion**

The following documents were nearing completion (i.e. at FDIS or CDV stage complete and FDIS circulation soon), circulated since September 2021:

|  |  |  |
| --- | --- | --- |
| **Document Number** | **Date of circulation** | **Title** |
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**Matters likely to be of interest to IECEx**

* Tom Stack (BSI) is the new secretary of IEC TC 31 (as successor of Mick Maghar).
* Thierry Houeix (France) is the new Chair of SC 31M(as successor of Michael Beyer).
* New projects of TC 31 and it’s SCs:
	+ none
* Projects offered by CENELEC to IEC TC 31:
	+ EN 50303 “Group I, Category M1 equipment intended to remain functional in atmospheres endangered by firedamp and/or coal dust”
	(🡪 SC 31M/MT80079-38)
	+ EN 50628 “Erection of electrical installations in underground mines”
	(🡪 SC 31J/WG1)

**Conclusion**

This report summarizes the more significant events and standard developments of the past year. We welcome your guidance and suggestions for continued cooperation between TC 31 and IECEx.

Dr Martin Thedens

Chair IEC Technical Committee 31