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|  | **ExMC/2102/INF****September 2024** |
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**INTERNATIONAL ELECTROTECHNICAL COMMISSION SYSTEM FOR
CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE
IN EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

## Title: IEC TC 31 Chair Report to the 2024 IECEx Meetings

To:

Members of the IECEx Management Committee, ExMC

Members of the IECEx Testing and Assessment Group, ExTAG

**Introduction**

This document contains a report from Dr Martin Thedens, Chair of IEC TC 31.

This report is to be considered during the September 2024 meetings of the ExMC and the ExTAG in Foz do Iguaçu.

**IECEx Secretariat**

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##### INTERNATIONAL ELECTROTECHNICAL COMMISSIONTC 31 Equipment for explosive atmospheres

**Introduction**

This report covers the activities of IEC TC 31 since the last meetings of IECEx in September 2023.

**Activities during the past year**

The last plenary meeting of TC 31 was a face-to-face meeting in November 2024 in Melville (USA) followed by a face-to-face meeting of the Chair’s Advisory Group (CAG) in March 2023 at in Split (Croatia), each session together with other meetings of several Advisory Groups, Working Groups, Maintenance Teams, Project Teams etc. of TC 31 and it’s SCs.

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

1. DECISION 2023/06: *IEC/TC 31 Vice Chairs*
TC 31 decides to reappoint Brad Zimmermann and Jason McGee as Vice Chairs for an additional 3-year term with the responsibilities outlined in 31/1728/INF.
2. DECISION 2023/8: *Title of MT 60079-29*TC 31 decides to change the title of MT 60079-29 to “Gas detection equipment”.

TC 31 decides to change the title of PT 60079-29-0 to “Gas detection equipment – General requirements and test methods, and any supplementary parts”

TC 31 supports the recommendation of MT 60079-29 to also change the title of the IEC 60079-29 series to “Gas detection equipment”.
3. DECISION 2023/9: *JTF Risk*TC 31 decides that the definition of risk from ISO/IEC Guide 51 is to be used for all documents produced by TC 31 and its subcommittees, except for ISO/IEC 80079-34.

TC 31 decides that the definition of risk from ISO 31000 is to be used for ISO/IEC 80079-34.

TC 31 recommends that this clarification on the use of “risk” and associated terms is included in the proposed Basic Safety Publication and in the TC 31 Good Working Practice.
4. DECISION 2023/11: *MT 60079-46* *Equipment assemblies*TC 31 supports in principle the proposed scope extension to IEC 60079-46 to address assemblies with an internal source of release and assemblies where only part of the assembly needs consideration for hazardous areas.
5. DECISION 2023/12 + 13: *WG 54 Basic safety publication*TC 31 decides to submit the application for a Horizontal Safety Function as prepared by WG 54, with modification to include mists in section 5 of the application.

If the Horizontal Safety Function is approved by SMB, TC 31 decides to initiate an NP for the basic safety publication with the development to be assigned to WG 54.

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

1. RESOLUTION 2024/2 + 3: *WG 27 Electric motors*
The TC 31 CAG recommends circulation of a call for an outgoing liaison to SC 22G. The call should include the specific role of this liaison – which is to monitor the activities of SC 22G/MT 12 to ensure consistency of their documents with the TC 31 standards.

The TC 31 CAG recommends circulation of another call for experts for WG 27. Specifically, WG 27 needs experts from motor manufacturers, motor repairers, and end users of motors, not necessarily explosion protection experts.

The call should include TC 2 and other relevant ISO/IEC committees (to be identified by WG 27) as committees of interest.
2. RESOLUTION 2024/11 +12 + 13: *AG 55 Specific Conditions of Use*The TC 31 CAG supports the recommendations from AG 55 and requests all convenors to review the list of Specific Conditions of Use to ensure any conditions permitted by their documents are included.

The TC 31 CAG requests that all convenors and project leaders supply the text of any new Specific Condition of Use allowed for in their document to AG 55.

The TC 31 CAG requests that convenors supply any IECEx certificates that they encounter with invalid or poor Specific Conditions of Use to AG 55, along with explanation of the issue with the Specific Condition of Use.
3. RESOLUTION 2024/14: *ahG 58 — “ec” & “tc” Ex Equipment enclosures*The TC 31 CAG recommends that ahG 58 continue working with MT 60079-7 and MT 60079-14 with the following approach:
 - Develop aligned requirements for both IEC 60079-7 and IEC 60079-14
 - Circulate a DC and an INF:
 # The INF should include background information on the proposed requirements and the reason
 for them.
 # The DC should contain the relevant requirements intended for IEC 60079-7 and IEC 60079-14
 so that NCs can see the complete picture.
 - Once comments have been resolved, the requirements can be included in the next CDV for IEC
 60079-7 and in a new amendment for IEC 60079-14.
 - The next edition of IEC 60079-7 and amendment to IEC 60079-14 should be published in parallel.

The requirements for “tc” Ex Equipment enclosures can then be developed with WG 28 for IEC 60079-31. It is expected that these will be a subset of the “ec” requirements since the electrical spacing issues will not need to be addressed.
4. RESOLUTION 2024/17: *ahG 60 AI tools for the application of Ex standards*The TC 31 CAG recommends the establishment of an ahG on the use of AI tools in the application of ISO/IEC 60079/80079 series standards. NCs will be requested to propose additional members with expertise in AI.
5. RESOLUTION 2024/18: *MT 60079-46* *Equipment assemblies*The TC 31 CAG recommends that for an equipment or assembly which exists across a boundary between a hazardous area and a non-hazardous area, the symbol “-” should be used. For example: Gc/-

The TC 31 CAG recommends that WG 22 include an additional definition for EPL “-” for “no level of explosion protection” in the CDV of IEC 60079-0. The definition needs to exclude associated apparatus and Ex associated equipment.

The TC 31 CAG recommends that the relevant standards require the certificate and instructions to include a description of the different parts of the assembly/equipment which are suitable for the different Equipment Protection Levels (including no protection level).
6. RESOLUTION 2024/20: *ahG 61 Robotics (including drones)*The TC 31 CAG recommends the establishment of a horizontal ahG on the use of robotics (including drones) in or above hazardous areas. The ahG should examine the requirements in the existing standards and propose additional or different requirements to address the unique requirements for this type of equipment. The ahG can also consider separate guidance on the use of robotic equipment (including drones) in hazardous areas under safe work procedures. The ahG should consider the work of ISO/TC 299 and ISO TC 20/SC 16. The ahG should also consider the proposed questionnaire. NCs will be invited to propose other experts to the ahG.

**Future TC 31 meetings**

The coming face-to-face plenary meetings of SC 31G, SC 31J, SC 31M and TC 31 are scheduled for October 2024 in Edinburgh (UK).

Next face-to-face meetings of Advisory Groups, Working Groups, Maintenance Teams, Project Teams of TC 31 and it’s SCs are planned for October/November 2024 in London and Maidenhead (UK) and for April 2025 in N.N. (Canada) 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 2024:

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| **Number** | **Ed.** | **Date** | **Title** |
| IEC 60079-31:2022/COR1:2023 | 7.0 | 2023-10 | Corrigendum 1 - Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t“ |
| IEC TS 60079-44:2023 | 1.0 | 2023-11 | Explosive atmospheres - Part 44: Personal competence |
| IEC 60079-17:2023 | 6.0 | 2023-12 | Explosive atmospheres - Part 17: Electrical installations inspection and maintenance |
| IEC TS 60079-48:2023 | 1.0 | 2023-12 | Explosive atmospheres - Part 48: Portable or Personal Electronic Equipment – Guide for the use of equipment without a certificate for use in Hazardous Areas |
| IEC 60079-11:2023/ISH1:2024 | 7.0 | 2024-05 | Interpretation Sheet 1 - Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" |
| IEC 60079-11:2023/ISH2:2024 | 7.0 | 2024-05 | Interpretation Sheet 2 - Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" |
| ISO/IEC 80079-49:2024 | 1.0 | 2024-05 | Explosive atmospheres - Part 49: Flame arresters - Performance requirements, test methods and limits for use |
| IEC 60079-14:2024 | 6.0 | 2024-08 | Explosive atmospheres – Part 14: Electrical installation design, selection and installation of equipment, including initial inspection |

**Documents nearing completion**

The following documents were nearing completion (i.e. at FDIS or CDV stage complete and FDIS circulation soon), circulated since September 2023:

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| **Document Number** | **Date of circulation** | **Title** |
| 31/1748/CDV | 2023-12-08 | IEC 60079-7 ED6: Explosive atmospheres - Part 7: Equipment protection by increased safety "e" *rejected* |
| 31J/363/CDV | 2024-03-22 | IEC 60079-19 ED5: Explosive atmospheres - Part 19: Equipment repair, overhaul and reclamation *approved* |
| 31/1763/CDV | 2024-04-05 | IEC 60079-18 ED5: Explosive atmospheres - Part 18: Equipment protection by encapsulation "m" *approved* |
| 31/1764/CDV | 2024-04-05 | IEC 60079-2 ED7: Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p" *approved* |
| 31/1768/CDV | 2024-05-17 | IEC/IEEE 60079-30-1 ED2: Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements *approved* |
| 31/1769/CDV | 2024-05-17 | IEC/IEEE 60079-30-2 ED2: Explosive atmospheres - Part 30-2: Electrical resistance trace heating - Application guide for design, installation and maintenance *approved* |
| 31G/396/CDV | 2024-05-17 | IEC 60079-25/AMD1 ED3: Amendment 1 - Explosive atmospheres - Part 25: Intrinsically safe electrical systems *approved* |
| 31/1776/CDV | 2024-06-28 | IEC 60079-45 ED1: Explosive atmospheres - Part 45 - Electrical Ignition Systems for Internal Combustion Engines |
| 31/1781/CDV | 2024-07-05 | IEC 60079-0 ED8: Explosive atmospheres - Part 0: Equipment - General requirements |
| 31/1782/CDV | 2024-07-05 | IEC 60079-7 ED6: Explosive atmospheres - Part 7: Equipment protection by increased safety "e" *approved* |

**Matters likely to be of interest to IECEx**

* New projects of TC 31 and it’s SCs:
	+ see above, new ahG 60 and ahG 61
	+ 31/1786/NP: Explosive atmosphere – Part 101: Principles of explosion protection *approved*

**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