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|  | **ExMC/1633/Inf**  **August 2020** |

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

## **Title: Revision of IECEx OD 233, Ex s**

**To: Members of the IECEx Management Committee, ExMC**

**Introduction**

During 2017 AdHoc WG Convened by Dr Munro from AU met and proposed a 2-stage revision to OD 233, an Immediate revision followed by Longer Term and more detailed revision.

The immediate revision was completed at the time with the current edition, Ed 2.0 being published at the time.

This document, contains the previous report from the AdHoc WG and is submitted for consideration by ExMC during the 2020 Remote meeting, where Members will be asked whether there is a need to proceed with a detailed revision of OD 233 and if so a work programme to move this forward.

**IECEx Secretariat**

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**INTERNATIONAL ELECTROTECHNICAL COMMISSION**

**IEC SYSTEM FOR CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

**IECEx ahg on IECEx OD 233**

**MEETING REPORT TO ExMC**

**Friday, 12 May 2017 at**

**CSA Group, Hawarden, UK**

**Main Purpose of the Meeting**

To consider review of OD 233 IECEx Certified Equipment Scheme - Assessment of Ex “s” Equipment.

Attendance:

Jim Munro Jim Munro International Compliance (Convenor)

Otto Walch R Stahl

Laurent Fischer GE Oil & Gas

Dave Stubbings CML

Gerhard Schwarz GSA Consulting

Martin Thedens PTB - Convenor TC 31 MT60079-33

Thierry Houeix Apology

Samir Boutahar Apology

**AGENDA**

1. **Opening and Welcome.**

Meeting commenced at 8:30 AM with introductory remarks from the ahg Convener, Jim Munro. An information document with relevant extracts from the last ExMC meeting minutes and decisions was considered.

1. **Apologies**

See attendance.

The US had originally indicated in the ExMC meeting that they would participate in the ahg WG. However, they later provided an apology as follows:

the National Electrical Code, a regionally adoptable standard for the safe installation of electrical wiring and equipment in the United States, does not recognize equipment protection by special protection “s”. Until such time the U.S. will not be able to recognize ExTRs, QARs and CoCs for Ex “s” equipment. Given the situation, the USNC/IECEx will not be able to participate on the ad hoc Working Group.

1. **Task**

The following task was given from the ExMC meeting in September 2016:

* Immediate review of OD 233
* A longer term revision of OD 233

1. **Immediate review of OD 233**

The immediate review is complete and the document has been issued. See OD 233 Edition 2.0.

1. **Longer term revision of OD 233**

The longer term revision of OD 233 will be the main task for the meeting. Prior to the meeting it was proposed that the following approach be taken:

1. The ahg group review the whole document together to discuss areas for possible change
2. The above review to take account of prior comments from members of the group
3. Consideration of comments from ExMC members - requested by 30 April 2017

Regarding 2. above, Otto Watch and Laurent Fischer provided some comments prior to the meeting.

Regarding 3 above, there were no comments submitted after the release of Edition 2.0.

The WG decided to take a strategic approach on the application of Ex s and OD 233. Therefore the main issues were discussed, in particular regarding independent verifiers, rather than consider the complete detail of the procedure.

**Ongoing role**

The group was of the opinion that there would be value in having an ongoing ExMC WG to look at the experience with application of Ex s certification, to maintain OD 233, particularly in relation to the next edition of IEC 60079-33, and to provide a avenue for discussions with MT60079-33. .

**Recommendation 1:**

**It is recommended that a new ExMC WG be formed to maintain OD 233 and that the ExTAG WG09 *Ex 's' requirements* which now has no members be disbanded and deleted from the IECEx website.**

**Independent verifier**

Extensive discussions were held on the role of the independent verifier. This is one of the most critical parts of the process but the OD does not make the role within IECEx clear.

The definition in IEC 60079-33 is:

**3.4**

**independent verifier**

person or organization, with the appropriate competency in the applied explosion protection methodology, responsible for the verification of design calculations, assessment and testing who are separate and distinct by management and other resources including financial, from the person or organizations responsible for all the activities associated with the design, manufacture or sales of the equipment

Thus an independent verifier can be a body, such as an ExCB, or person according to standard. The OD implies just a person. The OD also implies that the independent verifier is within the body but only when talking about the body's 'list'. For example in additional step 2a it states "The ExCB shall appoint independent verifiers from the ExCB’s internal ExCB / ExTL list". The definition in the standard does not address independence within the assessment process nor is this addressed in the OD.

The WG believes that OD needs to make clear that external ExCBs may be used as independent verifiers.

It was agreed that the 'internal list' of independent verifiers could include the following:

* Internal staff of the ExCB doing the certification;
* external ExCBs;
* staff members of the above external ExCB as independent verifiers;
* external contract staff as independent verifiers

However, it is expected that at least independent verifier (1) will be from with the body doing the work.

**Recommendation 2:**

**It is recommended that it be agreed that the independent verifier (2) or (3) may be another ExCB.**

The WG also discussed the possible relationship between the staff normally carrying out testing and assessment, and the independent verifiers. They agreed on the following principles:

* The test staff and the person compiling the report CANNOT be independent verifiers.
* The ExTL staff member who reviews and signs the report cover MAY, but does not have to be, an independent verifier (1) or (2), depending on the EPL.
* The ExCB staff member who reviews and approves the report MAY, but does not have to be, an independent verifier (1), (2) or (3) depending on the EPL.
* Thus only Ma, Ga and Da would ensure an ADDITIONAL verification step to normal processes. But other EPLs may still have additional verification steps.

**Recommendation 3:**

**It is recommended that the scenario proposed by the WG be agreed regarding the roles that may assumed by ExCB/ExTL and the relationship to independent verifiers.**

Currently the Ex s ExTR blank shows 'ExTL' after each of the possible independent verifiers. Since independent verifiers could be from the ExCB, it is recommended that reference to 'ExTL' after the independent verifiers be removed from the Ex s ExTR blank.

**Recommendation 4:**

**It is recommended that the Ex s ExTR blank be revised to remove reference to 'ExTL' after independent verifiers.**

The WG discussed the desirability of forming an informal group of ExCB with Ex s in their scope as a discussion forum.

**Recommendation 5:**

**It is recommended that ExMC discuss the possibility of forming an informal group of ExCBs with Ex s in their scope as a discussion forum.**

**Unit verification**

The WG agreed that unit verification should be feasible but that the OD needs to make this clear. The following are the proposed changes to address this:

* Additional step 9a - Confirm that for Unit Verification, the specific issues related to the quality verification are defined in the ExTR, which shall show they have been met in the units manufactured.
* Step 5 related to QAR to be modified or a note added indicating this step is not necessary for Unit Verification.

**Recommendation 6:**

**It is recommended that ExMC agrees that unit certification be permitted for Ex s.**

**6 Other Matters**

The WG discussed the potential content of a certificate to IEC 60079-33 using a recent certification issued by CML, IECEx CML 16.0099X as an example. The discussion centred on whether the certificate should describe how Ex s was achieved, as this was not very clear in the CML certificate. The WG came to the conclusion that insisting on this approach could reveal potentially commercial-in-confidence or even patentable information belonging to the manufacturer. Hence it will not be recommending that this approach be mandated.

The WG discussed the possibility of having a Scheme list of independent verifiers but came to the conclusion that such a list would be very difficult to maintain and might not provide a useful purpose.

**7 Close of Meeting**

JM closed the meeting at 1430 thanking all those present for their attendance and contributions, noting that once the ExMC position is clarified regarding the above recommendations, it should be possible to progress the next edition of OD 233.

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Convenor, adg on IECEx OD 233

24 June 2017