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

**TITLE: Report of IECEx discussions with TC 31 AG55 regarding Specific Conditions of Use as listed on IECEx Certificates**

**Circulation to: Members of the IECEx Testing and Assessment Group (ExTAG)**

**INTRODUCTION**

IEC TC 31 AG 55 was formed by IEC TC 31 to review the various Special Conditions that exist throughout the suite of IEC TC 31 standards. This work is on-going at this time with AG 55 producing a list detailing

* Standards
* WGs and MTs with responsibilities
* Each of the “Special Conditions”

During this work, AG 55 also raised “conditions” listed in some IECEx certificates that some AG Members felt were difficult for end users to implement.

During December 2022, the AG 55 Convener passed an email to the IECEx Secretariat with a list of 33 IECEx Certificates for which some members of AG55 raising as “*Certificates containing Special Conditions of Use for which are considered difficult for End Users to implement*”.

In response the IECEx Secretariat undertook the following action:

1. The IECEx Compliance Manager, Geoff Slater, reviewed each “Condition” listed in each of the 33 IECEx Certificates presented *(****166 Conditions listed across the 33 nominated IECEx certificates****)*, to determine
	1. Is the Special Condition in line with the provisions of the specific standard(s) as listed on the IECEx Certificate itself
	2. Does the Condition alter the requirements of the standard
	3. Is the listed Condition clear and able to be understood
	4. Does the condition actually relate to the end user
	5. The findings on each condition was graded and tabulated into a report table
2. Upon completion of step a) an independent peer review of the findings was undertaken by both Chris Agius, IECEx Executive Secretary and Mark Amos, IECEx Business Manager and fine tuning/adjustments made to the report table.
3. The findings were then shared with the IECEx Testing and Assessment Committee (ExTAG) Officers of Dr Frank Lienesch from PTB DE and Jasmin Omerovic of UL DEMKO (DK) and the IECEx Chair Mr Paul Meanwell of KOMATSU (ZA)

These findings were shared/presented at the Sydney meeting of TC 31 AG 55 Sydney meeting on 20th March 2023, and a further on-line meeting held on 15th May 2023. These meetings also led to broader discussions on the subject of Special Conditions of Use.

The following summary and proposed action is provided for discussion at the 2023 ExTAG Meeting.

**IECEx Secretariat**

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**BACKROUND**

IECEx provides the framework for a single Global Certification Scheme dedicated to Equipment, Services, Persons relating to Equipment for use in explosive atmospheres, by establishing a single set of Certification Scheme Rules, Standard Operating Procedures, Standardised Reporting forms and a single On-Line Certificate System, that provides for a consistent approach to Certification by all Test Labs and Certification Bodies.

IECEx Certificates are issued by IECEx approved Certification Bodies, ExCBs according to IECEx Scheme Rules and Documents and done so according to international best practice as reflected in the ISO/IEC 17XXX series of International Standards. Certification Bodies and Testing Laboratories seeking to participate in IECEx are qualified and then monitored/re-evaluated according to the following:-

* Initial peer assessment and acceptance by voting of members
* Annual surveillance
* Mid-term Assessment 2.5 year intervals
* Re-assessment on 5 yearly intervals
* IECEx Proficiency Testing Program (run by PTB of Germany on behalf of IECEx)
* Constant monitoring by the IECEx Secretariat via “Back Office“ of IECEx On-Line Certificate System

One of the primary rules of the IECEx Certification schemes is that Certification is granted to show compliance with IEC or ISO International Standards. This means that ExCBs do NOT have the ability to vary the requirements nor the provisions of IEC or ISO Standards and must apply the Standards as they are published. Hence where an IEC TC 31 Standard provides for Special Conditions, then the ExCB must allow for this provision.

IECEx does, however provide for common decisions to be taken by ExCBs on matters where Standards may not be clear via the issuing of ExTAG Decision Sheets BUT this cannot be used to change requirements nor provisions of Standards. IEC TC 31 is involved in the formal ExTAG Decision Sheet development process. Given that in the 24 years of IECEx operation a total of 117 ExTAG Decision Sheets have been issued and hence not considered a major issue. The long-standing cooperation between IECEx and TC 31 has been instrumental in this process.

IECEx Certificates commenced being issued in 2003 as an On-Line (IECEx CoC) centralised system, where the electronic On-Line version acts as the master controlled version. The IECEx on-line CoC system was first introduced in 2003 and since that time the CoC system is now at its 3rd generation, these are broadly known as follows:

* 2003 – **1st Gen** with CoC and manual entries for test report and audit report numbers + one file for all issues
* Cira 2006 – **2nd Gen** with Registration of ExTR and QAR Summaries with linking to CoCs introduced
* 2019 – **3rd Gen**, major replacement with new platform and greater search and additional features for “Back Office” review + Monitoring by the Secretariat

The first Gen. included a field “*Certification Conditions*” and provided for the recording of both Conditions of safe use + conditions imposed on manufacturers. This was deliberate at the time to ensure transparency as there were no provisions for recording QAR information at that time. Introduction of 2nd Gen, saw Conditions of Certification field changed to “*Specific Conditions of Use*” with other certification conditions now to be kept within the QAR details (instructions via ExTAG/485/INF + ExTAG/485A/Inf were issued to ExCBs to explain these changes along with training at ExTAG meetings).

**SUMMARY OF RESULTS**

The IECEx Secretariat wishes to acknowledge the excellent collaboration and good spirited discussions held within TC 31 AG55 and the IECEx Secretariat during both meetings and appreciates the opportunity afforded by both the AG55 Convener and Members for the IECEx Secretariat to participate in the discussions.

One of the key conclusions arising from discussions at both AG55 meetings in March and then May 2023, was and acceptance and an understanding that Standards include both requirements and provisions of which cannot be arbitrarily altered by an ExCB when processing for an IECEx Certificate of Conformity.

Therefore, if there are any concerns with the contents of a Standard then the usual pathway for seeking changes / amendments exist within the IEC TC 31 Standards development process.

In this context the IECEx Secretariat would urge experts to support for the work of AG55 in their review of Special Conditions that currently exist through the TC 31 suite of Standards.

In terms of the review of certificates raised by AG55 members as containing Special Conditions that various AG55 members felt were in appropriate the review by the Secretariat and shared with AG55 revealed the following:

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| **No** | **ITEM** |
| **33** | Number of IECEx Certificates (CoCs) reviewed, as presented by AG 55 |
| **166** | Total number of conditions listed on CoCs presented |
| **11** | CoCs where reported problem not found/not clear |
| **10** | CoCs where reported problem not found/unclear but agree specific wording of the special conditions could be better |
| **9** | CoCs where reported problem and found but not in conflict with Standard but wording could be better |
| **3** | CoCs where reported problem is clear and agreed with action being taken to rectify |

**CONCLUSION AND ACTION FOR ExTAG**

In understanding the background to the IECEx On-Line CoC System, and upon detailed reviewing of the IECEx CoC samples provided by TC 31 AG55 with the issue raised that some CoCs contain conditions that are difficult for the end user to implement, the following points are noted:

1. The Secretariat agrees that there are some but very limited number of CoCs where correction may be warranted and has and is being been dealt with by the IECEx Secretariat in cooperation with the ExCB concerned, as part of the on-going monitoring and surveillance of the On-Line CoC system undertaken as routine work by the IECEx Compliance Manager.
2. The Secretariat supports TC 31AG55 work to identify and review all “Specific Conditions of use” that exist in the various TC31 and SC 31 standards, noting that IECEx Certification Bodies ExCBs, do not have the authority to overrule nor change the requirements or provisions of Standards.
3. The Secretariat and ExTAG Officers agree that there is always room for improvement when it comes to the issuing of IECEx Certificates, as it was noted that a number of the conditions of use listed on the sample CoCs provided by AG 55 could perhaps have been better worded to assist with an easier understanding by the end user**. It was agreed that this matter be raised at the 2023 ExTAG Meeting as a timely reminder to all ExCBs**.
4. In light of 3. Above, the ExTAG Officers have agreed to include an agenda item on this topic at the 2023 ExTAG Meeting, assuming that by then AHG 55 will have completed its review of the identified standards to specify certificate content and will invite the TC 31 AHG55 Convener to report on the status of this work. As such this matter is to be reported as an ExTAG Meeting document for discussion at the September 2023 Edinburgh ExTAG meeting.
5. Question raised on guidance for ExCBs when issuing Certificates covering assemblies, according to IEC 60079-46 and whether or not Specia Conditions of use contained on certificates covering parts of the assembly warrant being also included on the Assembly certificate itself.

**In line with the above ExTAG are requested to support the following action**

* 1. Greater emphasis should be placed on the correct inclusion of Specific Conditions of Use by the IECEx Secretariat when conducting reviews of Certificates as part of their monitoring process;
	2. IECEx peer assessments to consider content in certificates with respect to inclusion of Specific Conditions of Use when reviewing files during the peer assessments;
	3. Suggest adding a spell checker feature to the On-Line certificate system;
	4. IECEx Secretariat to remind ExCBs to NOT include general manufacturers instructions in “Specific Conditions of Use” field, noting that in some circumstances the ExCB may feel that certain instructions warrant inclusion as Conditions;
	5. IECEx Secretariat to advise all ExCBs of the need for them to require manufacturers to review Draft Certificates prior to issuing Certificates. To this point the Secretariat to consider adding a reminder in the Desk Top Review Report (DTR) provided to IECEx peer assessors to check whether the ExCB has a process for sharing draft CoCs with the client before issue.

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