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31/1434/RM

2018-11-16

INTERNATIONAL ELECTROTECHNICAL COMMISSION

TECHNICAL COMMITTEE 31 EQUIPMENT FOR EXPLOSIVE ATMOSPHERES

Report of the TC 31 meeting held in Busan, Republic of Korea
2018-10-25 to 2018-10-26

1 Opening of the meeting and welcome from the Chairman

The delegates were welcomed on behalf of the hosts by Mr Kang Jeong-il. The Chair in turn thanked the hosts and declared the meeting open.

Decision 2018/01

TC 31 wishes to express its appreciation to The South Korean National Committee of the IEC and especially to Mr. Jeong-il Kang and his colleagues from KOSHA for the excellent organization and hospitality during the TC 31 and associated meetings.

Decision 2018/02

TC 31 congratulates Mr John Sheppard Allen for receiving the "IEC 1906 Award".

The Chair welcomed the delegates, guests from the IECEx Executive and IEC Affiliate Country programmes. He reminded delegates that the meeting will be held in the spirit of the IEC Code of Conduct, which can be found at http://www.iec.ch/about/brochures/pdf/tools/IEC_Code_of_Conduct.pdf.

Those present

Coppler	Mark	Chair
Thedens	Martin	Vice-Chair
Maghar	Mick	Secretary
Amos*	Mark R.	IEC CO
Dennis	Neil	Australia
Dona	Mario	Australia
Munro	Jim	Australia
Parmar	Bipin	Australia
Wigg	Jason	Australia
Wigg	Ralph C.	Australia
Bulgarelli	Roberval	Brazil
Chateauneuf	Hugues	Canada
Cole	Martin	Canada
Lim	James	Canada
McVeigh	Jay	Canada
Sun	Zhaojun	China
Wang	Qiaoli	China
Xu*	Yuanfeng	China
zhang	gang	China
Akoussi	Kouassi Jacob	Côte D'Ivoire
Boto	Eugène Boto	Côte D'Ivoire
Boure**	Wepie Kevin	Côte D'Ivoire

Sachtleben	Anke	Germany
Brehm	Konrad	Germany
Voegborlo*	Alphonse Xonam	Ghana
Mudgal	Meghna	India
Fallon	Kieran	Ireland
Budinich*	Michele	Italy
Carciofi	Carlo	Italy
Decorte*	Cristiano	Italy
Esposito	Francesco	Italy
Momma	Jun	Japan
Noda	Kazutoshi	Japan
Aimusheva	Assel	Kazakhstan
Kang	Jeong-il	Korea, Republic of
Kim	Yong-Tae	Korea, Republic of
Lee	Jaewon	Korea, Republic of
Wong**	Choong Onn	Malaysia
House	Garry	New Zealand
Adewumi*	Richard	Nigeria
Egeland	Ingulf	Norway
Porshina	Anna	Russian Federation
Tikhonenko*	Yulia	Russian Federation
Zalogin	Alexander	Russian Federation

Ebagnitche**	Hippolyte	Côte D'Ivoire
Kouakou Lataille**	Yao	Côte D'Ivoire
Sanogo**	Abdoulaye	Côte D'Ivoire
Kelava	Marino	Croatia
Persic	Predrag	Croatia
Zamrsky	Martin	Czech Republic
Linderød*	Gert	Denmark
Hussien**	Doaa	Egypt
Sulonen	Risto	Finland
Hasni**	Dihia	France
Houeix	Thierry	France
Le Guennec**	Anne	France
Vignolles	Carine	France
Alt	Steffen	Germany
Beyer	Michael	Germany
Fuchs	Elmar	Germany
Gabriel	Guenter	Germany
Kaiser	Manfred	Germany
Klotz-Engmann	Gerold	Germany
Krebs	Philipp	Germany

Alharbi	Faisal	Saudi Arabia
Ghazwani	Hassan	Saudi Arabia
Meanwell	Paul	South Africa
Nhlapo	Jabulani	South Africa
Schlessinger	François	Switzerland
Thurnherr	Peter	Switzerland
Hristovski*	Vilijam	FYR Macedonia
Al Ali*	Budoor	United Arab Emirates
Jones	Roger	United Kingdom
Sinclair	Ron	United Kingdom
Winship	Phil	United Kingdom
Ankele	Donald	USA
Edwards	Glen	USA
Engler	Al	USA
Franca**	Eric	USA
Lawrence Jr	William	USA
Massey	Evans	USA
Scheller	Jim	USA
Woods	Tonya	USA
Zimmermann	Brad	USA

* Day 1 only

** Day 2 only

Formal apologies were received from the Belgian National Committee, along with their comments on the agenda items.

2 Approval of the draft agenda

The draft agenda as circulated in document 31/1396A/DA was approved without change. Some of the items will be dealt with out of the stated order.

3 To note and confirm the minutes of the meeting held in held in Vladivostok in 2017 and to review the actions from this report not covered elsewhere in this agenda

The report of the last meeting distributed as 31/1353/RM was accepted as a true and accurate record of the proceedings with the following correction:

Decision 9 was wrongly recorded, although it was correctly carried out. The correct decision was:

Decision 2017/09

TC 31 decides to add a note 3 to the scope of WG 47:

Note:

3) Gc motors are addressed by WG27, Gc luminaries are addressed by WG40 and Gc trace heating is addressed by MT60079-30 as these are horizontal Working Groups and product specific groups.

The actions from the meeting were reviewed. Decision 2017/04 is still open until the publication of IEC 60079-31. Decisions 2017/20 and 2017/21 are still in progress.

4 Report from IEC CO

The secretary presented the report from ISO CO which is in 31(Busan/IEC CO)1.

The Chair reminded all convenors to adequately document decisions on the comment sheets.

5 To appoint the members of the editing committee

With the approval of the Subcommittees it has been decided to have only one Editing Committee for the TC and all three SCs.

Decision 2018/03

TC 31 confirms the membership of the Editing Committee responsible for TC 31 and it's SC as the Chair, the Vice-Chair, the Secretary, the Chairs and Secretaries of SC 31G, SC 31J and SC 31M, Mr

Bill Lawrence, Mr Jason Wigg, Mr Jim Munro, Mr Hugues Châteauneuf, Mr Nick Ludlam and Mr Thierry Houeix and to establish an “EG” so that the use of the Collaboration Platform will be possible. The Project Leader for the document in question will be involved finally via email.

6 Reports from TC 31

6.1 Report from the secretary

The secretary presented his report which is in 31/1429/INF.

6.2 To note the report of the Chairman's Advisory Group meeting held in Split, Croatia,

The report 31/1384/INF was reviewed. The name of Mr Munro has been spelled incorrectly in items 5.2.8, 5.2.20 and 10.4. Otherwise it was accepted as a true and accurate record of the proceedings.

The resolutions and action items from the meeting were reviewed. All items have been completed except resolution 3, which is waiting for FDIS and resolution 8, which would be addressed in this meeting.

7 To discuss and note reports from TC 31 Working Groups, Maintenance Teams and Project Teams

7.1 Report from WG 22 — Responsible for MT 60079-0, maintenance of IECV 60050.426 and other specific tasks assigned by TC 31 **William G. Lawrence Jr**

The convenor presented his report which is in 31(Busan/WG 22)2.

Bill Lawrence reminded all convenors to coordinate definitions through wg22.

Decision 2018/04

TC 31 request that WG 22 prepare an I-SH regarding combined electrical / non-electrical marking for Ed. 7 of IEC 60079-0.

7.2 Report from WG 27 — Electric Machines **Evans Massey**

The convenor presented his report which is in 31(Busan/WG 27)3.

7.3 Report from WG 28 — Dusts **Ralph C. Wigg and Don Ankele**

Mr Ankele presented his report which is in 31(Busan/WG 28 and MT60079-31)4.

The secretary was asked to send out a call for experts for the WG.

Decision 2018/05

Currently, TC 31 does not support WG 28 request to expand the permitted entry threads to permit local installation without adapters. TC 31 establishes an AHG with the following members Mr Neil Dennis, Mr Roger Jones, Mr Phil Winship, Mr Francesco Esposito, Mr Bill Lawrence, Mr Don Ankele, Mr Jeong-il Kang, Mr James Lim, Mr Mark Amos and Mr Jason Wigg as the Convenor with Mr Zhang Gang as co-Convenor to recommend firstly to the TC 31 CAG about the use of other entry types with a final vote at the next plenary meeting of TC 31.

Action: Chair and Secretary to prepare an INF to inform NC and to contact IECEx

7.4 Report from WG 30 — Equipment Process sealing **Ted H Schnaare**

The chair presented the report on behalf of the convenor which is in 31(Busan/WG 30)5.

7.5 Report from WG 31 — Gas/dust hybrid mixtures **Martin Thedens**

The convenor presented his report which is in 31(Busan/WG 31)6.

7.6 Report from WG 32 — Creepage and clearance distances **Mark Coppler**

The convenor presented his report which is in 31(Busan/WG 32)7.

7.7 Report from WG 37 – Electrochemical cells and batteries **Falk Thürmer**

Mr Edwards presented the report on behalf of the convenor which is in 31(Busan/WG 37)8.

7.8 Report from WG 39 – Adverse service conditions **Alexander Zalogin and Wang Jun**

Mr Zalogin presented his report which is in 31(Busan/WG 39)9.

7.9 Report from WG 40 – Luminaires **Steffen Alt**

The convenor presented his report which is in 31(Busan/WG 40)10.

Decision 2018/06

TC 31 supports to establish a Liaison with TC 34 "Lamps and related equipment" with Mr Steffen Alt as Liaison officer.

7.10 Report from WG 42 – Safety devices related to explosion risk
Otto Walch and Gerold Klotz-Engmann

Mr Klotz-Engmann presented his report which is in 31(Busan/WG 42)11. A report on the WG 42 liaisons was distributed as 31/1427/INF

Decision 2018/07

TC 31 agrees to cancel the Liaison to IEC CAB WG 17.

7.11 Report from WG – 43 High voltage
Frank Lienesch

The chair presented the report which is in 31(Busan/WG 43)12. Mr Wigg expressed concern that if the comments received at CDV are accepted it would result in the FDIS draft being very different to the CDV.

The Secretary was asked to send out a call for further experts.

Decision 2018/08

Based on comments received on the CDV, TC 31 recommends an additional call for experts with expertise in Types of Protection "d" and "p" as used for connection to type "o" equipment to assist WG 43 with resolving the comments.

7.12 Report from WG 47 – Gc equipment
Paul T. Kelly

The chair presented the report on behalf of the convenor which is in 31(Busan/WG 47)13.

7.13 Report from MT60079-1
Paul T. Kelly

The chair presented the report on behalf of the convenor which is in 31(Busan/MT 60079-1)14.

The stability date of IEC 60079-1 is 2019, not 2017 as stated in the report.

Decision 2018/9

TC 31 requests that MT60079-1 assist with a Decision Sheet draft that suggests the proposed testing may be used as allowed by IEC 60079-0 for alternative tests used as justification for not running a test and not to issue an Amendment at this time in order to not impact of progress of Ed. 8 of IEC 60079-1.

7.14 Report from MT60079-2
Al Engler and Ryan P. Brownlee

Mr Engler presented his report which is in 31(Busan/MT 60079-2)15.

7.15 Report from MT 60079-7
William G Lawrence, Jr and Brad J. Zimmermann

Mr Zimmerman presented his report which is in 31(Busan/MT 60079-7)16.

7.16 Report from MT60079-15
Al Engler

The convenor presented his report which is in 31(Busan/MT 60079-15)17.

7.17 Report from MT60079-18
Günter Gabriel/Otto Walch

Mr Gabriel presented his report which is in 31(Busan/MT 60079-18)18.

The secretary will issue a corrigendum as requested.

Decision 2018/10

TC 31 decides to issue a corrigendum to IEC 60019-18 Ed. 4 to correct a typo in the reference in Figure 1: "Solid insulation according 7.2.4.2" the section number needs to be corrected to 7.2.4.3

7.18 Report from MT60079-26
Gerold Klotz-Engmann

The convenor presented his report which is in 31(Busan/MT 60079-26)19.

Decision 2018/11

TC 31 agrees to change the title and scope of IEC 60079-26.

Title: Explosive atmospheres – Part 26: Equipment with separation elements or combined Levels of Protection

The scope will indicate that part 26 applies to equipment with separation elements mounted into boundary walls of hazardous areas requiring different Equipment Protection Levels and equipment having combined Levels of Protection.

Note: Seals that are intended to address the risk of process fluids entering the premises wiring are covered under IEC TS 60079-40.

Decision 2018/12

TC 31 supports the recommendation of MT60079-26, that an extension of the systematics of combining two Types of Protection to achieve an EPL Da, Db or Gb may provide no real benefit in the application of IEC 60079-26.

7.19 Report from MT60079-28 Martin Thedens

The convenor presented his report which is in 31(Busan/MT 60079-28)20.

7.20 Report from MT60079-29 and JWG 45 Jon Miller

Mr Munro presented the report on behalf of the convenor which is in 31(Busan/MT 60079-29)21.

7.21 Report from MT60079-30 Ben C. Johnson

The chair presented the report which was circulated in 31/1430/INF. CLC/TC 31 wish to adopt any future editions of these standards as EN IECs directly without any changes. However, this would not be possible if there is reference to divisions in the body of the standard. A solution to this problem is still under discussion.

Decision 2018/13

TC 31 requests MT60079-30 review IEC/IEEE 60079-30-2 Ed.1 and determine if it is acceptable to change to non-mandatory text as it is a guidance document.

Decision 2018/14

TC 31 requests MT60079-29 review IEC 60079-29-2 Ed.2, IEC 60079-29-3 Ed.1 and the draft of IEC 62990-2 and determine if it is acceptable to change to non-mandatory text as these are guidance documents.

7.22 Report from MT60079-31 Don Ankele

The report for this MT was covered under item 7.3 and is in 31(Busan/WG 28 and MT60079-31)4.

7.23 Report from MT60079-33 Martin Thedens

The convenor presented his report which is in 31(Busan/MT 60079-33)22.

7.24 Report from MT60079-35 George Lobay

The convenor for this MT has only recently been appointed. There is nothing currently to report.

7.25 Report from PT 60079-44 Marty Cole

The convenor presented his report which is in 31(Busan/MT 60079-44)23.

7.26 Report from PT 60079-45 Dave Burns

An early draft to start the discussion has been circulated to the group. The first meeting of the PT is planned for May 2019.

7.27 Report from PT 60079-46 Paul T Kelly

The Chair presented the report on behalf of the Convenor which is in 31(Busan/MT 60079-46)24.

7.28 Report from JWG 29 : JWG with TC 101 — Electrostatics Graham Ackroyd

There was nothing to report.

7.29 Report from TC 61/SC 61J JWG 1 with TC31/WG28 Particular requirements for vacuum cleaners and dust extractors providing equipment protection level Dc Charalambos Freed/Don Ankele

This was covered in the WG 28 report, 31(Busan/WG 28 and MT60079-31)4. The issue of IECEx being able to certify to IEC 62784 will be solved by the imminent publication of the amendment.

The JMT is requested to monitor the use of this standard and if possible its certification to see the effects of this change.

7.30 Report from AG 49 – Portable and personal equipment Manfred Kaiser

The convenor presented his report which is in 31(Busan/AG 49)25.

7.31 Report from JWG 50 – Liaison with IECEx Mark Coppler

The convenor presented his report which is in 31(Busan/JWG 50)26.

7.32 Report from AHG 51 - Reference point for TC 31 standards as a basic safety publication Neil Dennis

The convenor presented his report which is in 31(Busan/AG 51)27.

Decision 2018/15

TC 31 supports the development of a safety publication with a preference for a BSP but accepting a GSP, subject to further discussion with ACOS.

Decision 2018/16

TC 31 decides to establish a new WG with Mr Neil Dennis as Convenor to progress early work of AHG 51 on a proposed safety publication. This may need to be considered as a horizontal WG to include the TC 31 subcommittees. With a title and task to be defined by the TC 31 CAG.

Decision 2018/17

TC 31 decides to extend the work of AHG 51 until the new WG is established.

Decision 2018/18

TC 31 allows AHG 51 or the new WG to finalise any proposal to ACOS and make formal contact with other TCs/SCs of IEC as needed to obtain necessary support.

Subcommittees SC 31G, SC 31J and SC 31M have all expressed their support for this approach.

8 Report from SC 31G – Intrinsically safe apparatus, and its Working Groups and Maintenance Teams

The chair of SC 31G presented the report which is in 31(Busan/SC 31G)28.

9 Report from SC 31J – Classification of hazardous areas and installation requirements, and its Working Groups and Maintenance Teams

The chair of SC 31J presented the report which is in 31(Busan/SC 31J)29.

Decision 2018/19

TC 31 decides to withdraw IEC 79-16:1990 Ed.1 upon publication of the next edition of IEC 60079-13.

Decision 2018/20

TC 31 agrees to transfer the Liaison to IEC/SC 65B to SC 31J.

Decision 2018/21

TC 31 supports the concerns of SC 31J that the content of 81/603/FDIS Annex C is considered inappropriate for hazardous areas and an immediate amendment is needed.

Action: SC 31J Chair to contact TC 81.

Decision 2018/22

TC 31 agrees for Mr Roger Jones (UK) to become the Liaison officer to TC 18 Electrical installations of ships and of mobile and fixed offshore units following the resignation of Mr Thore Andersen (NO)

Decision 2018/23

TC 31 thanks Mr Thore Andersen for his service as the Liaison officer to TC 18.

10 Report from SC 31M – Non-electrical requirement and protective systems for explosive atmospheres, and its Working Groups and Project Teams

The chair of SC 31M presented the report which is in 31(Busan/SC 31M)30.

The TC 31 report to SMB will include the details of the delay of IEC 80079-41.

11 General matters

11.1 Good Working Practice GWP

The secretary summarised the changes to the GWP document which were:

- The addition of advice on Specific Conditions of Use
- Changes to accommodate the new official status of IECEx in TC 31
- The addition of advice to national committees on the selection of experts
- The addition of the SC31M workflow

11.2 Confirmation of meeting Schedules for Waldenburg

The meeting schedule for Waldenburg was finalised.

Mr Zimmerman gave a short introduction on the facilities for the CAG and WG meetings in Waldenburg in April 2019.

11.3 Draft meeting Schedule for 2019 onwards

- 2019 CAG Waldenburg Germany March 25 to April 5
- 2019 Zhengzhou China October 21 to November 1
- 2020 CAG Northbrook April 20 to May 1
- 2020 Plenary Sweden September 28 to October 9
- 2021 CAG Split (date TBD)
- 2021 Plenary UAE October 3 to 14
- 2022 Plenary San Francisco USA October 24 to November 1

2023 Plenary Egypt

11.4 Thermo Catalytic Sensors

Alexander Zalogin

Mr Zalogin gave a presentation on Thermocatalytic sensors which is in 31(Busan/Zalogin)31

11.5 Research Funding contacts

Jim MunroM

Mr Munro presented his paper on applied research to support requirements to be included in TC 31 standards which was circulated as 31/1417/INF.

12 To discuss any future work.

There were no proposals to discuss.

13 Liaisons

a) IEC/TC 2 Rotating machinery

Frank Lienesch

The report was circulated in 31/1428/INF.

b) IEC TC 18 Electrical installations of ships and of mobile and fixed offshore units

Thore Andersen

The report was circulated in 31/1428/INF.

c) IEC/SC 22G Adjustable speed electric drive systems incorporating semiconductor power converters

Evans Massey

The report was circulated in 31/1428/INF.

d) IEC/TC 27 Industrial electroheating and electromagnetic processing

Terry Aymes, John Turner

The report was circulated in 31/1428/INF.

e) IEC SC 65A Industrial process measurement and control - System aspects

Hassan El-Sayed

The secretary presented a short report which is in 31(Busan/SC 65A)32

f) IEC/SC 65B Industrial process measurement and control - Measurement and control devices

Vacant

This liaison has been transferred to SC 31J (see item 9).

- g) IEC/TC 101 Electrostatics** **Graham Ackroyd**
There was nothing to report.
- h) IEC/TC 105 Fuel cell technologies** **Vacant**
There was nothing to report.
- i) IEC/TC 109 Insulation co-ordination for low-voltage equipment** **Mark Coppler**
Mr Coppler presented the report which is in 31(Busan/TC 109)33
- j) IEC/SC 121A Low-voltage switchgear and controlgear** **Otto Walch**
There was nothing to report.
- k) ISO/TC 45 Rubber and rubber products** **Vacant**
There was nothing to report.
- l) ISO/TC 45/SC 1 Hoses (rubber and plastics)** **Vacant**
There was nothing to report.
- m) ISO/TC 67/SC 8 Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries - Arctic operations** **Alexander Zalogin**
Mr Zalogin presented his report which is in 31(Busan/ISO TC 67 WG 8)34
- n) ISO/TC 197 Hydrogen technologies** **Giacomo Frigo**
There was nothing to report.
- o) EEE PCIC P1713 — MT60079-7** **Paul Hamer**
There was nothing to report.
- p) IEC CAB WG 17, Cyber Security** **Otto Walch**
Decision 2018/06 ended this liaison (see item 7.10).
- 14 Update the Program of Work of TC 31 as displayed on the IEC website**
Extension of target dates for IEC 60079-11 and ISO/IEC 80079-41 will be requested in the RSMB.
- 15 Review of stability dates**
No stability dates were changed.
- 16 To agree a position on any “Questions of Principle” on the TC31 report (RSMB) to be posed to the SMB**
There were no questions of principle.
- 17 Update of business plan**
The Strategic Business Plan has been updated by the Chair, Vice Chair and Secretary and the changes were presented to the meeting. The SBP will be submitted to IEC SMB for their approval.
- 18 Update on the IECEx System**
Mr Amos gave a presentation from IECEx which is in 31(Busan/IECEx)35
- 19 Any other business**
There was no other business to discuss.
- 20 Review of the 2018 Plenary Decisions**
Decisions 2018/01 to 2018/24 were reviewed and formally approved.
- 21 Date and location of the next meeting**
The next meeting will take place in Zhengzhou, PRC on 31st October and 1st November 2019.
- Decision 2018/24**

TC 31 confirms to have the next plenary meeting on 31.10.2019 to 01.11.2019 in Zhengzhou (China)

22 Close of meeting

The Chair thanked the delegates for all their work and once again thanked the hosts. He then formally declared the meeting closed.

The annexes to this report are being circulated as 31/1435/MTG.