31/1377A/RVC

RESULT OF VOTING ON CDV (RVC)

PROJECT NUMBER:
IEC 60079-31 ED3

DATE OF CIRCULATION:
2018-11-09

REFERENCE NUMBER OF THE CDV:
31/1358/CDV

IEC TC 31 : EQUIPMENT FOR EXPLOSIVE ATMOSPHERES

SECRETARIAT:	SECRETARY:	CHAIR:
United Kingdom	Mr Mick Maghar	Mr Mark Coppler

OF INTEREST TO THE FOLLOWING COMMITTEES:

HORIZONTAL STANDARD: ☐

FUNCTIONS CONCERNED:

☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY

☒ SUBMITTED FOR CENELEC PARALLEL VOTING ☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

The CDV document was distributed to National Committees with a request that voting take place for circulation as a FDIS or publication as an International Standard.

P-MEMBERS VOTING

MEMBERS VOTING	P-MEMBERS IN FAVOUR	IN FAVOUR %	CRITERIA	RESULT
33	32	97	≥66,7 %	**APPROVED**

ALL VOTES

TOTAL VOTES CAST	TOTAL AGAINST	AGAINST %	CRITERIA	RESULT
35	1	2.9	≤25 %	**APPROVED**

The chair (in cooperation with the secretariat and the project leader) has taken the following course of action:

WHEN THE APPROVAL CRITERIA HAVE BEEN MET:

A1 ☒ THE COMMITTEE DRAFT FOR VOTE (CDV) WILL BE REGISTERED AS A FDIS BY 2018-11-30

A2 ☐ THE COMMITTEE DRAFT FOR VOTE (CDV) WILL BE REGISTERED AS AN IS BY

WHEN THE APPROVAL CRITERIA HAVE NOT BEEN MET:

B ☐ A REVISED COMMITTEE DRAFT FOR VOTE (CDV) WILL BE DISTRIBUTED BY

C ☐ A REVISED COMMITTEE DRAFT (CD) WILL BE DISTRIBUTED BY

D ☐ THE COMMENTS WILL BE DISCUSSED AT THE NEXT MEETING OF ON

A2 When proceeding directly to publication, no changes to the technical content of the enquiry draft shall be made.

In the case of a proposal B or C made by the chair, if two or more P-members disagree within 2 months of the circulation of this compilation, then the draft shall be discussed at a meeting.

TITLE:

Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

NOTE FROM TC/SC OFFICERS:

Annexes: Result of voting, Comments received

Voting Result on 31/1358/CDV	
Circulation Date: 2018-01-12	**Closing Date: 2018-04-06**
IEC 60079-31 ED3: Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"	

Country	Status	Vote	Comments	Received
Argentina	O			
Australia	P	Y	Y	2018-04-05
Austria	P	Y	-	2018-04-05
Belarus	-	Y	-	2018-04-06
Belgium	P	A	-	2018-04-04
Brazil	P	Y	-	2018-04-06
Bulgaria	O			
Canada	P	Y	Y	2018-03-29
China	P	Y	-	2018-03-28
Croatia	P	Y	-	2018-04-06
Czech Republic	P	Y	-	2018-04-05
Denmark	P	A	-	2018-03-07
Egypt	O			
Finland	P	Y	-	2018-04-05
France	P	Y	-	2018-03-30
Germany	P	Y	Y	2018-03-23
Greece	O	A	-	2018-04-03
Hungary	P	Y	-	2018-01-26
India	P	Y	-	2018-04-02
Indonesia	O			
Iran	P	Y	Y	2018-04-03
Ireland	P	A	-	2018-02-13
Israel	O			
Italy	P	Y	-	2018-04-03
Japan	P	Y	-	2018-04-03
Kazakhstan	P	Y	-	2018-04-04
Korea, Republic of	P	Y	-	2018-02-26
Malaysia	P	Y	Y	2018-03-29
Mexico	O	Y	-	2018-04-05
Netherlands	P	N	Y	2018-03-29
New Zealand	P	Y	-	2018-04-05
Norway	P	Y	-	2018-04-06
Pakistan	P	Y	-	2018-04-04
Poland	P	Y	-	2018-04-05
Portugal	P	A	-	2018-04-06
Qatar	-	Y	-	2018-04-04
Romania	P	Y	-	2018-04-05
Russian Federation	P	Y	-	2018-03-30
Saudi Arabia	P	A	-	2018-01-22
Serbia	O			
Singapore	O			
Slovakia	O			
Slovenia	P	Y	-	2018-03-06
South Africa	P			
Spain	P	Y	-	2018-04-03
Sweden	P	Y	Y	2018-04-04
Switzerland	P	Y	Y	2018-03-28
Thailand	O			
The Former Yugoslav Rep. of Macedonia	P	Y	-	2018-04-05
Turkey	O	Y	-	2018-04-03
Ukraine	P	Y	-	2018-04-05
United Kingdom	P	Y	Y	2018-04-05
United States of America	P	Y	Y	2018-03-27

		Approval Criteria	Result
P-Members voting: 33			
P-Members in favour: 32 = 97%		>=66.7%	APPROVED
Total votes cast: 37	Total against: 1 = 2.7%	<=25%	APPROVED
Final Decision:			**APPROVED**

Notes

Vote: Does the National Committee agree to the circulation of the draft as a FDIS:
Y = In favour; N = Against; A = Abstention.
Abstentions are not taken into account when totalizing the votes.
P-members not voting: South Africa(1).

*Comments rejected because they were not submitted in the IEC Comment form.
**Vote rejected due to lack of justification statement.

Date	Document	Project Nr.
	31/1358/CDV	

MB/NC	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment	Comments	Proposed change	Observations of the secretariat
AU				Ge	AU support a positive vote with the following comment.		Noted
CH1				ge	The Swiss National Committee accepts the CDV. Though we vote with “yes” we would like you to consider the following comments, some of them are assumed to serious points.		Noted
NL					Based on our comments, the National Committee of the Netherlands casts a negative vote to this CDV.		Noted
CH2	104	Foreword	Table	te	We do not consider the requirement of 4.3.1 to be a major technical change. The way it is written it can be read as a relaxation. Equipment suitable for a short circuit current not greater than 10 kA (requirement of previous edition) can still be used. Equipment which was required to be marked in accordance with the previous edition due to lower short circuit ratings still needs to be marked when below 1.5 kA. We wonder if the reduction of the short circuit current from 10 kA to 1.5 kA has to be seen as a installation requirement. As said above, Equipment suitable for 10 kA is suitable for 1.5 kA.	Please be so kind to consider the deletion of clause 4.3.1 as major technical change.	Accepted. 4.3.1 was revised to be shown as an extension. 6.1.1.1 was added to the Major technical changes column with 4.4.1. A Note was added to 6.1.1.1 to give guidance regarding when to consider short circuit testing based upon the effects that occur on “tb” and “tc” electrical enclosures such that it is possible to document prior testing that demonstrates that the ability of the “tb” or “tc” enclosure to maintain the required IP.
CH3	104	Foreword	Table	te	The previous edition has not foreseen a fault current requirement for “tb” and “tc”. Clause 4.4.1 of the CDV adds requirements for fault currents above 10 kA for “tb” and “tc”. We would appreciate to find an information, that	Please be so kind to consider the major technical change to be limited to equipment designed for short circuit currents above 10 kA.	Accepted.

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					the major technical change in 4.4.1 is only to be applied to equipment designed for short circuit currents above 10 kA.		
IR	202	3	Page 8	te	Description of Difference between T_b & T_c shall be added to terms & conditions		Noted. See Clauses 4 to 7.
MY	20 213	3.1		ed	Line 209 Unexpected line spacing Lne 213 no decimal point.	To standardise the format	Not accepted. The format is per template for both line 209 and line 213.
AU	213	4	All	te	Changes made to sections of Clause 4 due to comments given in 31/1335/CC appear to now restrict Level of Protection "ta" to electrical equipment only.	Clarify if this document is intended to cover all equipment or just electrical. If all then suggest Clause 4 be re-worked to clearly show application for non-electrical equipment.	Not Accepted. The Scope does not excluded non-electrical equipment.
US	221	4.1		ed	The existing text is not clear whether 4.2 applies or not.	The construction requirements of Clause 5 and the marking requirements of Clause 7 apply to all Ex Equipment and Ex Components. ~~and in~~ In addition to the general requirements of 4.2, the requirements for "ta" as given in 4.3 and the requirements for "tb" and "tc" as given in 4.4 apply.	Accept.
GB		4.3.1		te/ed	The text related to fault withstand appears confusing as the phraseology tends to lead to the conclusion that the equipment only needs to be marked if the value is greater than 1.5 kA. For example, equipment suitable for connection to a circuit with a prospective fault current of 4 kA would need to be marked as such. Equipment rated for connection to a circuit with a prospective fault current not greater than 1.5 kA (e.g. 1 kA) would not need to be marked. It is only when reading clause 7 that the real requirement becomes evident. It would prevent misunderstanding if the form of words used at clause 7 were to be used at 4.3.1	Delete: Ex Equipment shall be rated for connection to a circuit with a prospective short circuit current of not greater than 1,5 kA, unless marked according to Clause 7. Replace with: Ex Equipment having Level of Protection "ta" shall be suitable for a maximum rated prospective short circuit current at the supply connection point of at least 1.5 kA unless marked according to Clause 7.	Accept in principle. Clause 4.3.1 was revised for Ex Equipment to be marked per Clause 7 only when rated less than 1.5 kA.
DE1	235-237	4.3.1		te	There is no reason mentioned and also no standard that requires a reduction of the fault current to 1,5 kA	Back to the 10kA requirement of Ed.2	Not accepted. It is intended that for Edition 3, Level of Protection ta be limited to 1.5 kA or less. Level of Protection tb and tc are intended to be

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							considered for testing when rated above 10 kA.
IR	248	4.3.2	Page 9	te	Range of few watts shall be clarified.		Noted. Testing has shown that about 3 watts is the limit to get a reasonable Temperature Class number. Note 2 was revised to give more detail.
MY	249 to 253	4.3.3 4.3.4		te	4.3.3 and 4.3.4 should be combined because it is the same test (dust exclusion test).	Combine 4.3.3 and 4.3.4	Accepted.
MY	250 251	4.3.3		te	(1) Pressure test as specified in 6.1.1.3 should be part of 6.1.1 dust exclusion test (not prior to). (2) Does Positive internal pressure of 4 kPA referring to design or test requirement?	Recommend: (1) Combine pressure test under dust exclusion test. (2) Provide further explanation that is not an operating requirement but test requirement only.	Accepted in Principle. 4.3.3 and 4.3.4 were combined and reference is made to 6.1.1. With respect to a positive internal pressure of 4 kA, it is the Type test for ta Ex Equipment.
SE	254-281	4.3.5		te	If the maximum surface temperature of the enclosure is based on fuses as thermal protection devices, a continuous current of $1,7xI_n$ (where I_n is the rated current of the fuse) through the fuse shall be considered, in the same way as for "m" according to IEC 60079-18.	Clarify the text accordingly, in line with the comment. Clarify also how to verify maximum surface temperature when it is limited by protective devices e.g. by testing with most onerous power dissipation at representative places in the equipment.	Not accepted. The 1,7 is related to electrical protection, not necessarily maximum surface temperature.
SE	254 313	4.3.5 4.4.5		ed	What justifies using different titles in the headings, considering similar requirements on same subjects? ("Protective devices" and "Thermal protection")	Use the same title.	Accepted.
SE	256-257	4.3.5		te	The wording "under expected malfunction or for rare malfunction conditions" does not add any value. It confuses rather than clarifies, considering that relevant malfunctions to be considered (and how to consider them) are specified in 6.1.2, to which the sentence refers to.	Delete "under expected malfunction or for rare malfunction conditions"	Accepted in principle. Requirements restructured and clarified.

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SE	255-281	4.3.5.1-4.3.5.2		te	According to 4.3.5.1 protective devices are required under certain specific conditions, while 4.3.5.2 (first sentence) requires Ex Equipment always to be protected by one or more integral thermal protective devices.	To avoid confusion or different interpretations, clarify if protective devices are required under certain specific conditions according to 4.3.5.1, or required always according to 4.3.5.2.	Accepted in principle. Requirements restructured and clarified.
CH4	264	4.3.5.1		ed	In our understanding the type of cell or battery to be used is not well related to the head line "Protective devices" as we do not assume the battery to be a protective device. Additionally, it is a new requirement which should not be hidden.	Please be so kind to consider the creation of a new subclause. **4.3.7 Cells and Batteries** Only sealed cells or batteries shall be used.	Accepted.
DE2	269-281	4.3.5.2		te	170% max. value was deleted. The over current value refers to IEC 60127. Fuses of IEC trip at an overcurrent compared to the rating . Fuses of ANSI/UL 248 have a totally different tripping characteristic. They trip at the rating of the fuse. This will lead to totally different principles and totally different handling at different certification bodies. Transparency and is not given and the results of testing can not be compared.	Delete the UL Standard and go back to the 170% criteria until better definitions for testing under the different fuse principles are made. "The overcurrent protective device used in this way shall conform to IEC 60127, IEC 60691 series and shall be rated at not more than 170 % of the maximum rated current of the electrical equipment . (Less than 170% is also possible)	Not accepted. Text was revised to align to the other Type of Protection standards.
IR	292	4.3.6	Page 10	te	COT description shall be added to terms and conditions.		Not accepted. The term is defined in IEC 60079-0. This standard supplements IEC 60079-0. See Clause 1 and Clause 3.
MY	292	4.3.6		te	No definition given of what is COT anywhere.	Recommend to add the definition of COT	Not accepted. The term is defined in IEC 60079-0. This standard supplements IEC 60079-0. See Clause 1 and Clause 3.
GB		4.4.1		te	Because IEC 60079-14 does not distinguish installation rules for the interruption capability of switching devices in Ex tb or Ex tc in respect of the stated borderline at 10 kA, this clause, as worded, could lead to problems when the switch has an industrial rating of 25 kA, but it has been	Delete: For Ex Equipment having Level of Protection "tb" or "tc" which is intended for mains connection and intended to interrupt fault current above 10 kA, the equipment shall have a rated maximum short circuit current, be tested according to 6.1.1.1, and	Not accepted. Appropriate markings are provided.

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					derated to 10 kA for Ex t purposes, in order to avoid conducting the test of 6.1.1.1 which requires specialist equipment that is not always available. It would seem that marking a rating on all equipment intended to interrupt fault currents would solve this problem.	be marked accordiing to Clause 7. Replace with: For Ex Equipment having Level of Protection “tb” or “tc” which is intended for mains connection and intended to interrupt fault current, the rated maximum short circuit current shall be marked in accordance with Clause 7. If the rated maximum short circuit current is greater than 10kA, the equipment shall be tested in accordance with 6.1.1.1. Adjust clause 7 accordingly.	
DE3	299-303	4.4.1		te	There is no reason for marking and testing of fault current above 10kA here . The fault current in general has nothing to do with dust protection. Only if it is mentioned in the relevant standard as a possible cause of high temperature but then include it in the table and not here. Or see comment under 6.1.1.1 426-429	Delete 4.4.1	Not accepted. A Note was added to 6.1.1.1 to give guidance regarding when to consider short circuit testing based upon the effects that occur on “tb” and “tc” electrical enclosures such that it is possible to document prior testing that demonstrates that the ability of the “tb” or “tc” enclosure to maintain the required IP.
MY	307 to 312	4.4.3 4.4.4		te	4.4.3 and 4.4.4 should be combined because it is the same test (dust exclusion test).	Combine 4.4.3 and 4.4.4	Accept.
SE	313-341	4.4.5		te	If the maximum surface temperature of the enclosure is based on fuses as thermal protection devices, a continuous current of $1,7xI_n$ (where I_n is the rated current of the fuse) through the fuse shall be considered, in the same way as for “m” according to IEC 60079-18.	Clarify the text accordingly, in line with the comment. Clarify also how to verify maximum surface temperature when it is limited by protective devices e.g. by testing with most onerous power dissipation at representative places in the equipment.	Not accepted. The 1,7 is related to electrical protection, not necessarily maximum surface temperature.
SE	314-341	4.4.5.1-4.4.5.2		te	According to 4.4.5.1 protective devices are required under certain specific conditions, while 4.4.5.2 (first sentence) requires Ex Equipment always to be protected by one or more integral thermal protective devices.	To avoid confusion or different interpretations, clarify if protective devices are required under certain specific conditions according to 4.4.5.1, or required always according to 4.4.5.2.	Accept in principle. Restructured and clarified.

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US	315-318	4.4.5.1	1st	te	For “tb”, in addition to a thermal protective device, a thermal monitoring and control circuit could also be used. This would provide the protection, but would allow other methods to meet this requirement. Also, this should also be an option for “tc”	For Level of Protection “tb” or “tc”, if the Ex Equipment is capable of exceeding the marked maximum surface temperature as a result of the temperature test of 6.1.2, either a thermal protective device per 4.4.5.2 or thermal protective circuitry per 4.4.5.3 is required. The thermal protective device per 4.4.5.2 may be directly integrated into the Ex Equipment or be external to the Ex Equipment.	Accept in principle. See 4.4.4.2.
CH5	326	4.4.5.1		ed	In our understanding the type of cell or battery to be used is not well related to the head line “Thermal protective devices” as we do not assume the battery to be a thermal protective device. Additionally, it is a new requirement which should not be hidden.	Please be so kind to consider the creation of a new subclause. **4.4.6 Cells and Batteries** For Ex Equipment having Level of Protection “tb” or “tc”, only a sealed cell or battery shall be used where there are sparking contacts or hot surfaces.	Accepted in Principle. A new 4.4.4.4 was added to address cells and batteries.
DE4	329-341	4.4.5.2		te	Fuses of IEC trip at an overcurrent compared to the rating . Fuses of ANSI/UL 248 have a totally different tripping characteristic. They trip at the rating of the fuse. This will lead to totally different principles and totally different handling at different certification bodies. Transparency and is not given and the results of testing can not be compared.	Delete the UL Standard and use the 170% criteria until better definitions for testing under the different fuse principles are made. “The overcurrent protective device used in this way shall conform to IEC 60127, IEC 60691 series and shall be rated at not more than 170 % of the maximum rated current of the electrical equipment . (Less than 170% is also possible)	Not accepted. The wording is consistent with other Part standards under IEC 60079-0.
US	330-333	4.4.5.2	1st	te	Update wording to reflect that this would be an option if thermal protective circuit is accepted	If The Ex Equipment is to be protected by a thermal protective device, it shall be protected by one or more integral thermal protective devices. Thermal protective devices shall not be of a self-resettable type and shall be duplicated unless conforming to the IEC 60127 series, IEC 60691, or ANSI/UL 248 series, in which case only one device is necessary.	Accepted in principle. Now 4.4.4.2 was revised to apply when required by 4.4.4.4.
US	After 341	4.4.5.3 (new section)		te	Need new section to detail the requirements for thermal control circuitry as an alternate to a thermal protective device.	If the Ex Equipment is to be protected by thermal protective circuitry, it shall be protected by thermal protective circuitry with one or more thermal sensing locations.	Accept in principle. Restructured and clarified in 4.4.4.2.

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						In the case of Level of Protection "tb" the circuitry shall consider expected malfunctions of both the sensing method and the control for power removal of the Ex Equipment or portion of the Ex Equipment that is intended to be protected by circuitry. Thermal protective circuitry shall not be of a self-resettable type, but can be resettable based on a power cycling of the Ex Equipment. All components that are integral to the function of the thermal protection circuitry shall be properly sized based on their use in the circuitry to be working within their ratings. The service temperatures of the circuitry location within the Ex Equipment shall be taken into account. The tests of 6.1.2 shall be used to confirm that the response time of the thermal protective circuits is adequate to provide over temperature protection.	
US		5.1.2		ed	Replace first paragraph with the clarification and additional details for threaded joints with and without gaskets, and tapered threads.	**5.1.2 Threaded joints** Joints employing parallel threads without an additional seal or gasket shall have a tolerance class of medium or fine according to ISO 965-1, and have not less than five threads engaged. Joints employing parallel threads with an additional seal or gasket have less than five threads. In this case, a specific tolerance class is not required. Joints employing tapered threaded joints without an additional seal or gasket shall engage no less than 3½ threads.	Accept in principle. Tolerance quality is the correct term. The text with seals and gaskets was added.
CH6	351	5.1.2		te	The requirements in clause 5.1.2 seem to be	Please be so kind to consider the limitation of	Not accepted.

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					interpreted as a general requirement for all level of protections (ta, tb and tc). We assume that the requirement does not reflect the different relaxations of Table 1. For level of protection tc, we assume the test in accordance with clause 6.1.1 to be sufficient.	clause 5.1.2 to level of protection ta and tb. **5.1.2 Threaded joints for level of protection ta and tb**	Requirements apply to all Levels of Protection.
NL	359 361	5.1.3		Te	In line 359 is stated "All gaskets and seals shall be of one-piece continuous construction, i.e. with an uninterrupted periphery". But this requirement is followed by a relaxation in the following paragraph starting in line 361.	Combine the two paragraphs to a single paragraph with following proposed text: "All gaskets and seals shall be of one-piece continuous construction, i.e. with an uninterrupted periphery. This includes gaskets and seals that have been permanently joined to form an uninterrupted periphery while maintaining the mechanical properties of the gasket or seal material."	Accepted in principle. Refer to the resolution of the US comment on 5.1.3.
CH7	372	5.1.3		te	It might be considered if a one-time use of gaskets/seals is another exception to be addressed.	Hinges shall not be used as a means of maintaining a seal unless the correct compression of the gasket is achieved without causing undue movement, stress or distortion to the gasket or one-time use of seals or gaskets is defined by the manufacturer.	Not accepted. There is insufficient justification for the proposal.
NL	376	5.1.3		Te	We agree that the requirements of 5.1.3 do not apply to internal seals of cable glands. But what are the requirements for external seals of cable glands and blanking elements? External sealing rings of metal or non-metal cable glands and blanking elements, that are an integral part of these devices, must comply with 6.1.1.1 (see A.3.1 and A.3.2), thus must be subjected to endurance tests, while for threaded entries constructed to 5.2.2.2, 3rd bullet, an X-condition or advisory marking is sufficient to indicate that a seal or gasket is required. This is not logical and not consistent with 6.1.1.1. All seals and gaskets, internal or external, that contribute to the type of protection, should comply with the same set of requirements and tests.	Reword the text of 6.1.1.1, A.3.1, A.3.2 and 5.2.2.2. to provide consistency regarding the requirements and tests applicable to external sealing rings of all devices that are in the scope of Annex A.	Accept in principle. The wording of A.3.1 and A.3.2 was revised to refer to IEC 60079-0 Appendix A as modified by 6.1.1.
US	After 363	5.1.3	After 3nd	te	For gaskets that are not one piece, but interlock so that under compression there is no gap, this should be acceptable for "tb" and "tc" without being permanently joined.	One-piece construction also includes gaskets and seals that have been permanently joined to form an uninterrupted periphery while maintaining the mechanical properties of the gasket or seal material. Alternately, for "tb" or "tc", gasket joints	Accepted in principle. The addition of the proposal was not limited to "tb" or "tc".

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						that interlock (not a butt joint) and are designed such that under the intended compression no gap between the pieces exist so that an uninterrupted periphery is formed, these joints do not need to be permanently joined.	
MY	393 to 395	5.2 5.2.1		ed	Spacing of paragraph is inconsistent with others (double spacing)	To standardise the format	Not accepted. The text is in accordance with the template.
US	399	5.2.2.1	1st	te	Why specify the specific maximum diameter for the hole for the entry when the ability to seal the hole is a function of the fitting going into the hole, and the hole size that is proper for the fitting may change based on the fitting used.	The clearance holes for plain entries shall ~~have a diameter not more than 0,7 mm greater than the nominal diameter of the~~ be specified in the instructions to allow the proper selection of a ~~entry thread~~ gland or fitting. The inside of the enclosure shall be provided with sufficient room to attach a locknut to the gland or fitting.	Accepted.
US		5.2.2.2		te	Clarify only 1 of the following list is needed	Threaded entries are considered to meet the requirements for Levels of Protection “ta”, “tb” and “tc” Ex Equipment if they are one of the following:	Accepted.
CH8	402	5.2.2.2		te	The requirements in clause 5.2.2.2 seem to be interpreted as a general requirement for all level of protections (ta, tb and tc). We assume that the requirement does not reflect the different relaxations of Table 1. For level of protection tc, we assume the test in accordance with clause 6.1.1 to be sufficient.	Please be so kind to consider the limitation of clause 5.1.2 to level of protection ta and tb. **5.2.2.2 Threaded joints for level of protection ta and tb**	Not accepted. A proper entry is required for Level of Protection “tc” for installation to IEC 60079-14.
CH9	408	5.2.2.2		te	As far as we understand the requirement the additional seal or gasket might compensate either the lower number of threads or the lower tolerance class.	Please be so kind to consider the following change: • parallel threads with less than five threads or a tolerance class lower than 6H according to ISO 965-1 and are provided with an additional seal or gasket.	Not accepted. The intent is to not limit the threads as they are only there to compress the gasket.
CH10	408	5.2.2.2		te	Might it be necessary to address 6H and 6g?		Not accepted. The entry is not an external thread.
DE5	408-413	5.2.2.2		te	If a gland is used the seal is predominantly not part of the enclosure but the use of a seal is described in the documents of the gland. It makes no sense to put an X marking on the box if	Include: “except a gland with a seal or gasket is used where the seal or gasket belongs to the	Accept in principle. Third bullet revised to refer to “X” condition when the entry is intended to be used with a

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					you use a gland with a seal. That's part of the gland certificate.	gland.	gasket.
DE	424-425	6.1.1.1		te	It Makes no sense to test in general all samples with pressure. Worst case sample or samples are sufficient. (or even better) What will be decided if 4 samples are tested and 3 pass and one fail the test? Many tests that cause time delay and additional costs. The sample that fails is predominantly the worst case sample.	Modify: After conducting the tests of enclosures in accordance with IEC 60079-0, **one (or more if necessary)** of the samples shall then be subjected to the pressure test of 6.1.1.3 followed by the IP test of 6.1.1.4.	Not accepted. The requirement to subject all enclosures in the set to the IP testing is a requirement of IEC 60079-0.
US	426	6.1.1.1		te	The current text only applies to a circuit breaker or fuse that is likely to "interrupt" a short circuit. This section also needs to address equipment that may be required to "withstand" a short circuit, but is not the device that is expected to "interrupt" the short circuit. The marking of Clause 7 already addresses both situations.	~~For~~ Ex Equipment having Level of Protection "tb" or "tc" which is intended for mains connection and intended to interrupt or withstand fault currents above 10 kA, shall be subjected to short circuit interrupting tests or withstand tests in accordance with the relevant industrial standard after the pressure test of 6.1.1.3 and prior to the IP tests of 6.1.1.4.	Accepted.
DE	426-429	6.1.1.1		te	A short circuit interrupt test for currents higher than 10ka has at the moment nothing to do with type tests for dust exclusion by enclosure. If such tests might be relevant for the future it needs to be defined more clearly under which circumstances and requirements.	Delete this paragraph.	Not accepted. Venting of plasma gases and the magnetic forces generated during an interruption or withstand of a fault must be determined to not be detrimental to the type of protection.
MY	458 -464	6.1.2	Table 2	te	Overload and malfunction conditions are specified for "ta" and "tb" as specified in Table 2. No conditions explanations are specified for "tc".	Recommend to provide explanation for "tc".	Accepted in principle. The determination of surface temperature for "tc" was clarified.
DE	460-463	6.1.2		te	The measuring of the max. surface temperature is not in line with 4.3.2. 6.1.2 says surface of the external enclosure. Internal components under rated conditions. This is not correct. The additional fault occurs at the components and causes high temperatures at the internal components or the internal enclosure.	Modify paragraph: This test is carried out as described in IEC 60079-0 and with one additional fault applied to the electrical equipment.	Not accepted. The determination of surface temperature for "tc" was clarified.
DE	472-477	7		te	See comments 4.3.1 and 4.4.1	Delete marking for tb	Not accepted. The marking requirement is

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						Modify Where the electrical equipment is only suitable for a maximum rated prospective short circuit current for “ta” electrical equipment at the supply connection point to the electrical equipment of less than 10 kA, the prospective short circuit current shall be marked	correct as written.
NL	479	A		Ge	Except for cable glands (clause 5.2.1, line 396), there is no reference from chapters 1 to 7 to this Annex for cable transit devices, conduit sealing devices, blanking elements and thread adapters.	Add reference to Annex A in chapters 1 to 7, as applicable	Not accepted. The calling clause is located in 5.2.1 and is used in conjunction with A.1 in IEC 60079-0.
NL	485 486	A.1		Ge	Cable transit devices and conduit sealing devices are not mentioned in chapters 1 to 7	Add requirements for cable transit devices and conduit sealing devices in the relevant clauses of chapters 1 to 7	Accepted. 5.2.1 was revised to include cable transit devices.
NL	485	A.1		Te	Conduit sealing devices are not defined in chapter 3 (terms and definitions) of this standard, nor in IEC 60079-0 : 2017, nor in Electropedia, nor in the Terms and Defintions section of the ISO OBP.	Add a definition of a conduit sealing device in chapter 2 of IEC 60079-31.	Noted. No proposal provided.
NL	491	A.2.2		Ge	The title of A.2.2 makes reference to thread adapters, but these are not further dealt with in the text of A.2.2	Add requirements for thread adapters	Accepted.
CA-01	506	A.3.1		ed	“to the” is repeated twice.	Thereafter, both samples and the representative enclosure shall be submitted to the ~~to the~~ pressure test…	Accepted in principle. A.3.1 was restructured.
NL	506	A.3.1		Ed	“to the” is shown twice	Delete once “to the”	Accepted in principle. A.3.1 was restructured.
DE	506 and 509	A.3.1		ge	Missing “the”	Modify: Thereafter, both the samples and the representative enclosure….	Accepted in principle. A.3.1 was restructured.
NL	515	A.3.2		Te	A.3.2 (see title) covers blanking elements and thread adapters. However in line 515 the text refers to “the entry device”	Replace “entry device” with “blanking elements”. Add requirements (if any?) for thread adapters since these cannot be tested according to 6.1.1.3 (pressure test) and 6.1.1.4 (IP test) as required	Accepted in principle. A.3.2 was restructured.

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						currently in this clause A.3.2.	
NL	517	A.3.2		Te	In case of a range of cable glands or blanking elements it should not be required that a sample of each thread size shall be tested to 6.1.1.3 and 6.1.1.4, since this is also not the practice for a range of Ex t enclosures.	Change the wording such that in case of a range, samples shall be selected that are representative for the whole range.	Accepted in principle. A.3.2 was restructured.