ISO/TC 197
Hydrogen technologies

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ISO FDIS 22734 Collated Comments

Document type:	FDIS ballot
Date of document:	2019-09-24
Expected action:	INFO
Background:	Here are the collated comments on the FDIS ballot for the 22734 document. The ballot results are available in N1090.
Committee URL:	https://isotc.iso.org/livelink/livelink/open/tc197

Template for comments and secretariat observations

Date:2019-09-06	Document:	Project:

MB/ NC[1]	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment[2]	Comments	Proposed change	Observations of the secretariat
US-001	084			Ed		At bottom of page add: [2] To be published.	
US-002	133			Ed		...requirements of Clause 9 of ISO 18190:2016 apply.	
US-003	162			Ed	Annex A numbering and lettering need attention. If it's Annex A, it should be A.1, A.2, etc. Also there are two B.2s.		
AR-004			Bibliography	Ed	In the final version of the normative document, all bibliographic references must be ordered numerically and alphabetically and in this case they are not. Therefore it is suggested to perform such an order	Order numerically all the references	
US-005	203		Figure B.1	TE	There are no dimensions or numbers in the figure.		
US-006	205		Figure B.2	TE	There are no numbers in the figure.		
AU-007		2		ge	There is a large number of normative references. Is it reasonable to expect a user of ISO 22734 to familiarise themselves with all these other documents?	Consider reducing the number of normative references.	
AU-008		3.4		ed	The term "laymen" seems redundant, and could be considered condescending. According to the rest of the definition, a "non-layman" could use a hydrogen generator for a commercial purposes.	Delete "by laymen" from definition.	
CA-009		3.24		te	The definition "…part subject to positive internal pressure of 100 kPa or greater." is not totally clear that this is with respect to atmosphere	Suggest revision: "…part subject to positive internal pressure (I.e. gauge pressure) of 100 kPa or greater."	

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AU-010		3.24		te	For clarity, it would be worth stating whether 100 kPa is absolute, gauge or differential.	Clarify the type of pressure that should be measured.	
AU-011		3.26		ge	It is foreseeable to have a “portable” hydrogen generator attached to something with wheels. In this case, it would still be portable but not meet the requirement of being easily carried by a person.	Clarify if “portable” implies “carried by a person”, or “not intended to be used only in one location”.	
JP1-012		3.26		ed	Use the defined term of hydrogen generator instead of generator to define the portable hydrogen generator.	Insert “hydrogen before generator” in line 1 of the definition	
CA-013		3.32		te	In the definitions section (3.32) Standard Conditions are noted as 273,15 K (0 °C) and 100 kPa absolute. The accuracy of these two numbers is inconsistent, since temperature is given to five significant digits and pressure to three; and the pressure is not a standard atmosphere (101,325 kPa). It should be noted that IUPAC uses 100 kPa as standard pressure (for thermodynamic properties), but NIST, ISO/TR 15916 and most industries use standard atmosphere 101,325 kPa.	suggest using 273,15 K (0 °C) and 101,325 kPa	
AU-014		3.33		ge	It is not explicit that this definition refers to an *electrical* supply cord.	Replace “flexible cord, for supply purposes” with “flexible electrical cable, for supply of electricity”.	
JP2-015		4.1.5.3	Last paragraph	ed	Use the term “pressure relief device“ defined under 3.23 instead of “pressure-relief device”.	Replace a hyphen between “pressure” and “relief” at the beginning of line 1 with a space.	
JP3-016		4.1.6.2	Note	ed	A reference to EIGA Doc 211/17 made at the end of Note may be a reference to Doc EIGA-IGC, 211/17, the document listed under [23] of the Bibliography.	Rearrange the reference using the correct name to the referenced document.	

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JP4-017		4.1.6.3	2nd paragraph	ed	“1%” in line 2 is not a correct expression under the Directives 2.	Insert a space between “1” and “%”.as is correctly expressed in the 1st paragraph.	
JP5-018		4.1.8		ed	“Equipment” after commercial in line 1 shall be “hydrogen generator”.	Replace “equipment” in line 1 with “hydrogen generator”.	
JP11-019		4.1.8	1st para	Ed	“hydrogen temperature range” in line 2 shall be “oxygen temperature range”.	Change “hydrogen temperature range” into “oxygen temperature range”.	
es-020	2	4.1.8	Paragraph 1	Ed, te		"oxygen” instead "hydrogen"	
JP6-021		4.3.1	3rd paragraph on page 10	ed	“or” after “Portable equipment” in line 1 shall be “and”. Otherwise the requirement under this paragraph is not applicable to both the portable equipment and the equipment not installed by the manufacturer.	Replace “or” after “Portable equipment” in line 1 with “and”.	
JP9-022		4.3.11	1st paragraph	ed	A term such as “having” appears to be missing between “or” and “a failed liquid line” at the end of line 1.	Insert “having” before “a failed liquid line” or otherwise make the sentence in a proper form.	
JP7-023		4.3.3.3	2nd paragraph	ed	The reference to 6.1.8 made in line 2 is not correct. Clause 6.1.8 does not exist in this document.	Make the reference to a proper clause or delete the phrase containing 6.1.8 between commas.	
AU-024		4.3.3.8		ge	It is not explicit that the terminal refers to an *electrical* connection.	Replace “ A terminal connected” with “A terminal that is electrically connected”.	
AU-025		4.3.4.1		ed	The last line of the first paragraph of 4.3.4.1 contains an extraneous symbol after MAWP.	Delete extraneous symbol after MAWP.	

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CA-026		4.3.4.2		te	In line with the comment on 3.24, it is not clear that the phrase "…vessels for fluids that may exceed 100 kPa in normal operation…" is inferring gauge pressure.	Suggest revision: "…vessels for fluids that may exceed a pressure with respect to atmosphere (i.e. gauge pressure) of 100 kPa in normal operation…"	
AU-027		4.3.4.5		ge	Removal of 10 micron particles: how is this requirement determined?	Consider changing the requirement to a recommendation.	
JP8-028		4.3.4.6	Note	ed	Use "fuelling" instead of "fueling" to be consistent with the Directives Part 1.	Replace "fueling" with "fuelling".	
AU-029		4.4.1.4		te	It is unclear whether the 1% volume fraction of hydrogen is the average throughout the enclosure, or at any point within the enclosure.	Clarify whether all locations within the enclosure need to be below 1% hydrogen, or whether it is an averaged value.	
AU-030		4.4.1.9		te	It is stated that detector(s) shall be installed in "optimum" location(s). However, what is technically the "optimal" location may not be possible or feasible. Removing "optimum" will not change the intended meaning of the statement.	Delete "optimum".	
AU-031		4.4.1.9		ge	It is stated that the manufacturer needs to ensure that the "use and maintenance" of gas detectors are in accordance with IEC 60079-29-2. How can the manufacturer ensure this? Once installed, the manufacturer has no control over "use and maintenance".	Either remove the requirements relating to "use and maintenance", or change this requirement to a recommendation.	
AU-032		4.4.2.4		ge	The "applicable" parts of IEC 60335 are normative: but it is open to interpretation what parts are "applicable". It is plausible for the user of ISO 22734 to deem critical parts of IEC 60335 to not be applicable.	Either need to be specific about what parts of IEC 60335 are applicable, or change from a requirement to a recommendation.	
AU-		4.7		ge	There is no mention of interlocks: is this clause deliberately only passive control methods?	Consider including the potential for active safety control measures.	

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033							
JP 10-034		5.2.6.3.1	2nd paragraph	ed	The use of the term “test fluid” in line 1 and line 3 is confusing as the same term is used in 5.2.6.2 and 5.2.6.3.	Replace “test fluid” in line 1 and line 3 with “leak detection liquid”, which is used in 1st paragraph of 5.2.6.3.1, for clarity.	
AU-035		6		ge	It is not stated what language should be used for the marking and labelling.	Consider adding a statement that the labels should be in the language of the targeted end-user(s).	
AU-036		6.2 (i)		ed	Dot point (i): There is an extraneous symbol between “maximum” and “hydrogen”. Also note that the comma preceding “per unit of time” is underlined.	Delete extraneous symbol.	
AU-037		6.2 (p)		ge	Presumably, the label should only reference ISO 22734 if the hydrogen generator is compliant to ISO 22734.	Add “If compliant”.	
US-038	155	7.2	c)	Ed		...the patient’s oxygenation (e.g. a pulse oximeter) and the inspired oxygen (e.g. ,an oxygen monitor) should be used.	
AR-039		7.3.1	b)	Te	In clause 7.3.1 The term earthling is generally referred to a mortal inhabitant of the Earth not to the protective action in electrical systems. Originally the standard ISO 22734 included a reference to the standard IEC 60364-5-54, Electrical installations of buildings — Part 5-54: Selection and protection of electrical equipment - Earthing arrangements, protective conductors and protective bonding conductors. According to definitions from IEC, “earthing	Replace the term “earthling” by “earthing” in the installation instruction to be read as follows: b) instructions for protective earthing;	

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					arrangement" refers to all the electric connections and devices involved in the earthing of a system, an installation and equipment. Therefore the term "earthling" in this subclause should be replaced by the proper "earthing" in the instruction for installation to be read as follows: b) instructions for protective earthing;		
US-040	061	1 Scope		ed		...in other standards (e.g. emergency lung ventilators, humidifiers, nebulizers, etc.).	
US-041	063	2 Normative references		ed		*Clause 2 of ISO 18190 is replaced...*	
US-042	067	2 Normative references		ed	Used in Line 118.	Add ISO 5356-1:2015.	
US-043	068	2 Normative references		ed		ISO 15002:2008 + Amd 1:2007...	
US-044	084	2 Normative references		ed	Used in Line 23.	Add EN13544-3:2005 Amd 1:2005	
US-045	094	4 General requirements		ed		...requirements of Clause 4 of ISO 18190:2016 apply.	
US-046	096	5 Materials		Ed		...requirements of Clause 5 of ISO 18190:2016 apply.	
US-047	102	6 Design requirements		ed		...requirements of Clause 6 of ISO 18190:2016 apply.	

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US-048	162	Annex A		Ed		...manufacturer's...	
AU-049		B.1		te	It is not the vapour concentration that will cause the mixture to ignite.	Replace "flammable mixture that will ignite" with "flammable mixture that could be ignited".	
US-050	042	Introduction		ed		...Venturi...	
US-051	203	Title	Figure B.1	Ed		Figure B.1 T-piece	
US-052	205	Title	Figure B.2	Ed		Figure B.2 Schematic of test setup	

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