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 TECHNOLOGIES DE L'HYDROGÈNE
 HYDROGEN TECHNOLOGIES
 Secretariat: Canada (SCC)



TECHNICAL ADVISORY BOARD (TAB)

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TAB Recommendation: Proposal from France to revise ISO 16111:2008 “Transportable gas storage devices – Hydrogen absorbed in reversible metal hydride” within its original scope

Preamble

This recommendation takes into account the preceding NWIP submission from France (recently withdrawn), its review and the original recommendation by TAB, consecutive discussions and the action items taken by the chair at the ISO/TC 197 plenary meeting in Fukuoka, Japan. These action items included intensive consultations with various stakeholders that resulted in the new proposal worked out in close collaboration with the French mirror committee. In summary, this recommendation is based on significant due diligence performed to ensure the standard revision does not affect its compliance with UN Model Regulations and, at the same time, enhances its contents to be in line with the-state-of-the-art of the technology.

Note: Since the current proposal from France covers the standard revision within its original scope, a formal NWIP and associated ISO process are not required. Hence, this proposal is submitted to a one month Committee Internal Ballot (CIB) requiring a simple majority approval by P-members as per consultations with our ISO program manager.

Recommendation

Based on the above mentioned considerations, ISO/TC 197 Technical Advisory Board (TAB) recommends to the ISO/TC 197 P-members to approve the following:

- Revise ISO 16111:2008 within its original scope on a 24-months track (please refer to the Rationale document and the existing Table of Contents for recommended changes provided by the French mirror committee and attached to this ballot);
 - Note: the standard revision within its original scope assures its continued reference in UN Model Regulations.
- Create a new WG for this purpose and nominate experts:
 - A Joint Working Group (JWG) with ISO/TC58/SC3 should be requested, since the original document was developed by a JWG with ISO/TC58/SC3,

Address reply to:



Mr. Jim Ferrero, Secretary of ISO/TC 197
 Bureau de normalisation du Québec
 333, rue Franquet
 Québec (Québec) CANADA G1P 4C7
 Tel: + 1 418 652 2238 (ext. 2920) Fax: + 1 418 652 2292 E-mail: jim.ferrero@bnq.qc.ca



- Collaboration with European CEN/TC 268 may be considered under the Vienna Agreement (similar to what is being set up for WG24) to facilitate the future standard adoption within the EU,
- Mandate should be given to the WG to develop a solution how best to address larger than 150 L systems for further TAB review and TC approval;
- Appoint Dominique Perreux as Convenor of the new WG for a 3-year term (please refer to Mr. Perreux's CV attached to this ballot).

Background:

The chair and the secretary have been actively interacting with the French mirror committee in regards to the revision of ISO 16111:2008 since July 2014. The chair expressed concerns in regards to the potential impact of the revision on UN Model Regulations and the French mirror committee provided a response that satisfied the chair. Several options were discussed in this regard. In October 2014, France submitted for TAB review a formal NWIP for revision of 16111 within its original scope, but also recommended expanding the scope beyond 150 L volume. The TAB agreed with this recommendation solely based on the market needs well aware that systems available today already exceed 150 L volume. The chair then suggested to the French mirror committee to revise the NWIP to include the expansion of the scope beyond 150 L. The revised NWIP was then posted for a vote as per ISO requirements in November 2014.

The comments on the NWIP received from stakeholders during the period before the Fukuoka meeting clearly indicated that there was significant sustained opposition to the standard revision beyond its scope including some strong opinions that the standard should not be revised at all. These concerns were driven by an assumption and perception that any revision of the current standard will affect its reference in UN Model Regulations.

This issue was extensively discussed at the ISO/TC 197 plenary meeting in Fukuoka. Although no final decision was taken, the discussion was very useful and allowed to vent the above mentioned concerns. The chair took two action items: to continue consultations with stakeholders and clarify with a certainty the effect of the standard revision on UN Model Regulations, and to prepare the TAB recommendation with the detailed account of related events.

Looking deeper into UN Model Regulations process and historical evidence, and particularly thanks to instrumental insights from the chair of ISO/TC 58 Chris Jubb, the chair established one undeniable truth: we can revise ISO 16111:2008 within the same scope without fear of compromising its reference in UN Model Regulations. A revised standard will be easily “plugged-in” to UN Model Regulations along with the existing ISO 16111:2008, which will then be phased out within a set period of time (5 years is typical) after the publication of the new revision.

This process is well established and spelled out in the Guiding Principles of UN Recommendations on Model Regulations on TDG (Transportation of Dangerous Goods), 18th revision. For reference, according to Chris Jubb, at the last count there are 42 ISO/TC 58 standards currently being referenced by UN Model Regulations and about 90% of those have been revised while being referenced by UN



Model Regulations, including the key normative references in ISO 16111:2008, namely ISO 9809, 7866, 11114-4 and 11119-1 and –2.

Based on the above, the chair has concluded with certainty that the standard revision within its original scope will not compromise the existing compliance with UN Model Regulations. This information and opinion were shared with concerned stakeholders and TAB. To the best of my knowledge, there is a general agreement that the above is true and it is safe to proceed with the standard revision within its original scope.

At the same time, both TAB and various stakeholders realize that there is real market need to address systems with volumes exceeding 150 L. Consultations conducted by the chair, however, indicated that there are too many divergent opinions at the moment to select the best pathway on how to do it.

It is thus the opinion of the chair and TAB that the best course of action right now is to start the work on the standard revision within the same scope. This will give needed time and confidence to the WG not only to enhance the contents of the standard bringing it in line with the state-of-the-art of the technology, but also to develop a solution how best to address storage systems larger than 150 L in volume. This is thus recommended as one of the formal mandates of the WG.

Speaking of the proposed convenor, Mr. Dominique Perreux from Mahytec, France, seems like an excellent candidate for this project. Mr. Perreux has deep knowledge and understanding of the metal hydride technology and technical issues related to packaging MH-based systems. His presentation at the plenary meeting in Fukuoka demonstrated his deep familiarity with the subject, good spirit, positive and upbeat attitude and a desire to do this work. He also has managerial experience. We thus recommend approving Mr. Dominique Perreux as the convenor for the new WG.

Acknowledgements

I'd like to express my sincere gratitude to the French mirror committee, particularly to Frederic Solbes (AFNOR) and Dominique Perreux (Mahytec), for their openness, patience and great team spirit that made this tricky task resolution a productive and enjoyable affair. I'd like to recognize critical input by Chris Jubb (ISO/TC 58 chair), Glenn Scheffler (US TAG chair), Andy Webb (EIGA deputy general secretary) and Anna Stukas (formerly with Angstrom Power) that was instrumental in finding the right path. Last but not least, my many thanks go to the TAB members for their continued collaboration that helped to finalize this revised proposal and recommendation.

Prepared by Andrei V. Tchouvelev

Sent out by: J. Ferrero