



ISO/TC 197
Hydrogen technologies

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Interview with ISO TC 197 Chair 2017-05

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Background: Here is another in the series of interviews with the Chair of ISO/TC 197 prepared by Karen Quackenbush.

This interview deals with the importance of the harmonization of national and international codes, standards and regulations.

All of the interview articles have been published in the Hydrogen and Fuel Cell Safety Report that is prepared by the Fuel Cell and Hydrogen Energy Association (FCHEA).

Committee URL: <http://isotc.iso.org/livelink/livelink/open/tc197>

Interview with ISO TC 197 Chair

By Karen Quackenbush, FCHEA

In this seventh installment of FCHEA's "Interview with the ISO/TC 197 Chairman" series of articles, Dr. Andrei V. Tchouvelev shared his thoughts on the importance of harmonization of national and international codes, standards, and regulations. The discussion comes in the wake of a recent meeting, which addressed North American hydrogen codes and standards.

On March 22, 2017, the CSA Group, with the support of Natural Resources Canada (NRCan) pulled together 34 key stakeholders in Ottawa for a North American Hydrogen Codes and Standards Forum. This event focused on alignment of codes and standards between the US and Canada, but also discussed the importance of international standards.

During the forum, Dr. Tchouvelev presented the ISO/TC 197 activities highlighting the active Working Groups currently developing 15 international standards. He suggested that for hydrogen component standards to be successful, they must be supported by comprehensive certification programs, because all major global regional regulatory structures – European EC regulations, KHK regulations in Japan and regulations in Canada and the US – require components to be either listed or approved, which means they need to be certified to meet component standards requirements.

The forum noted there are differences between the US and Canadian model codes for hydrogen installations. "In the US there is NFPA 2, and in Canada we have the Canadian Hydrogen Installation Code (CHIC)", Dr. Tchouvelev explained. "Advocates of CHIC point out that simply adopting NFPA 2 would take control of the installation requirements inside of Canada away from Canadians. CHIC is an appropriate place to reflect Canadian specifics such as climatic conditions. Also, CHIC has already been adopted into a number of provincial regulations and is thus the law of the land in various Provinces of Canada. So while harmonization of requirements is important, there is still a need for distinct national documents, where the country regulators are directly involved in the development of the requirements. The key is that International standards for components, where they exist, should be referenced in national codes. Having said that, there may be a significant benefit in the development of a compendium for each national code", he suggested. "Perhaps a document that explains where the national codes are harmonized, and where differences may remain, might be useful for harmonization within North America, as well as more broadly internationally", he added.

The North American Hydrogen Codes & Standards Forum was simply the first step in looking at opportunities to harmonize requirements between the US and Canada. A similar activity might be useful internationally at some point. "In fact", Dr. Tchouvelev exclaimed, "working through ISO is one significant way we can achieve the level of harmonization that industry is looking for. As an example, many North American standards were used as seed documents for ISO standards. Once published, these standards can be adopted back in North America and elsewhere (with appropriate national deviations where necessary), resulting in

harmonized requirements which have had the benefit of feedback from experts throughout the world”, Dr. Tchouvelev noted.

The minutes will be posted to the CSA Communities of Interest (<https://community.csagroup.org/groups/hydrogen-forum-codes-standards>) by the end of May.