

Japanese Comments on Draft SGE Reports

20 May 2009

1. H2SGE-IP-01

- Table 1 includes “H₂ & H₂O emissions” as an area that GTR should address for different vehicles. We would like to know the reason(s) for measuring H₂ and H₂O emissions from FCV. Also, it is desirable that such reason(s) be contained in the TR (report).

2. H2SGE-IP-02

- For fuel consumption, the following SAE standard exists:
SAE J2572: RECOMMENDED PRACTICE FOR MEASURING THE FUEL CONSUMPTION AND RANGE OF FUEL CELL POWERED ELECTRIC and HYBRID ELECTRIC VEHICLES USING COMPRESSED GASEOUS HYDROGEN (Revised October 2008)
- For hydrogen fuel quality, the following SAE standard exists: SAE J2719: Information Report on the Development of a Hydrogen Quality Guideline for Fuel Cell Vehicles.
- The second correction was made to ISO14687 in March 2008 (ISO 14687 Cor.2:2008).
- ISO/TS 14687-2 is currently being reviewed for international standardization in 2011.
- Table 1 contains ISO WD23274-2. However, FCHEV is not included in the scope of this standard.

3. H2SGE-IP-03

- Once the technology to produce and assure the quality of hydrogen fuel containing the minute amount of impurities as specified in the fuel standards is established and such reference fuel is made available, it will be possible to evaluate the effect of impurities on individual vehicles and thus be helpful in the development of FCV.
- Regarding the FCV fuel consumption measurement, the Weight Method, Pressure Method, and Flow Method, as specified in ISO and SAE standards, are currently considered practical. The reliability of the accuracy of these fuel consumption

measurement methods was verified by JARI at the time of developing ISO23828.

While the Hydrogen Balance Method and Oxygen Balance Method will be useful once they are put into practice, there are technical issues to be addressed. The Hydrogen Balance Method needs to take into account water inside the equipment of fuel cell system, and an issue with the water balance measurement accuracy is predicted. As for the Oxygen Balance Method, JARI conducted a verification experiment in the past but reported that the sufficient accuracy (within 1%) was not achieved.

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