

SGS-4-05

**Current Status of Discussion on
New Standards for High-Pressure Hydrogen
Containers in Japan**

Japan Automobile Standards Internationalization Center (JASIC)

24-26 September, 2008

UN/ECE/WP29/AC3 GRSP HFCV-SGS 4th meeting

Current Status of Discussion on New Standards for Containers

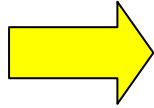
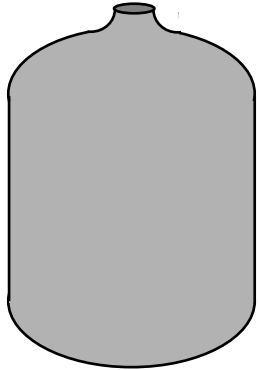
- * Japan has been discussing the new standards according to the original schedule.

In future, Japan plans

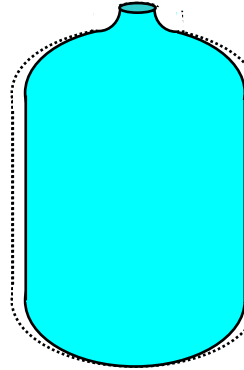
- * To develop the draft Japanese standards by Oct. 2008 by focusing on standardization in Japan, with a view to issuing the standards in Mar. 2010 (a change to be made to the standards: from the current 35 MPa to 70 MPa);
- * To shift the focus of activities on international harmonization after completion of development of the draft Japanese standards in Oct. 2008 so that Japan can contribute to development of the draft GTR during 2009 in collaboration with ISO, SAE, etc.

Outline of New Standard for Containers

Current (JARI S 001)



New Standard



Current standard applied

New standard applied
(Inner volume the same; CFRP reduced)

- Safety guaranteed
- Lighter weight and Lower cost
(reduced CFRP and used lower grade)

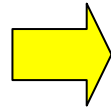
-Maximum Working Pressure **35 MPa**

-Strength guaranteed in a brand-new cylinder = Independent Loading Tests

-Burst Pressure > Working Pressure x **2.25**

-Fatigue Life > **11,250 Cycles**

-Materials Designated (A6061-T6,SUS316L)



-Maximum Working Pressure **70 MPa**

-Durability strength guaranteed in consideration of Vehicles Usage and Lifetime.

= Sequential Loading Test (scratch/over fill/low and high temperatures/stress rupture/chemical exposure/fatigue/proof pressure/burst)

-Burst Pressure Working Pressure **reduced (After Durability Test)**

-Fatigue Life cycles **reduced**

-Expansion of materials selection future standardization of materials evaluation method.

Draft Schedule with International Harmonization

at Sep.2008

