

Status Report of Hydrogen/Fuel Cell Vehicles (HFCV)-Subgroup on Safety (SGS)

1. CURRENT STATUS

- Work of the SGS is progressing after AC.3's consent to extent the activity until the end of 2011. Revised work plan from the Action Plan (ECE/TRANS/WP.29 /2007/41) is attached to this document.
- The gtr will cover fuel cell (FC) and internal combustion engine (ICE), compressed gaseous hydrogen (CGH2) and liquid hydrogen (LH2) in Phase 1. The requirements for LH2, however, have not yet been submitted to the group.
- The application of the gtr is for passenger vehicles.
- Three main areas outlined in the Action Plan have been discussed: fuel system, electrical safety, and hydrogen storage system.
- The 8th meeting of the SGS took place in January 2010 in Geneva. The three co-sponsors held a meeting to discuss fundamental questions and open issues prior to 8th meeting.
- SGS has drafted requirements for the fuel system/leakage. The draft includes requirements addressing the concern with over-pressurization of the system downstream of the pressure regulator. The issue of the air-tightness test of the fuel lines has been settled in principle, but the specific language will be developed by co-sponsors and OICA. Regarding the hydrogen storage system, discussion was started in the 6th SGS meeting using OICA's document as a starting point of discussion. ISO has also submitted a proposal for the fuel container-related requirements, including, for example a recommendation that only the currently used four types of tank be addressed by the gtr. SGS is seeking feedback from the contracting parties and other participants and will study this and other issues carefully.
- Overall, SGS has made a solid progress at the 8th meeting, but several issues still remain to be discussed.
- One of the fundamental issues is whether supplemental requirements for countries which use type approval could be included in Part A and still be considered binding.
- The electrical safety portion has been developed under the Electric Safety Subgroup (ELSA), in parallel on amending UNECE Regulation No. 100.
- The ELSA group intends to finalize the draft of electric safety requirements for both in-use and post-crash, based on proposal from OICA. The ELSA group finalized in-use requirements and will discuss the post-crash requirements in spring 2010. HFCV gtr has to reflect the outcome of the discussion.
- SGS continues to benefit from increased and very active participation and cooperation among Contracting Parties, industry and standard-setting organizations, namely ISO and SAE. In particular, OICA has been working actively with the co-chairmen and the Secretariat on the drafting of the gtr.
- The 9th SGS meeting will be held from 14th to 18th of June 2010 in Seoul, Korea and the 10th SGS meeting is planned to be held in September 2010 in the US.

- The co-sponsors will continue to discuss key issues and, if necessary, bring any unresolved issues to the attention of AC.3 at the WP.29 session in June 2010.
- SGS would like to thank the Secretariat of WP.29 for its continued excellent support, including the timely posting of SGS documents on the HFCV – SGS website.

Updated work plan and next steps

Action	Date	Duration	Location	Purpose
co-sponsors meeting	January 2010		Geneva	
Drafting Task Force group meeting for storage	January 2010		Geneva	
8 th HFCV-SGS meeting	January 2010	3 days	Geneva	
WP.29 AC.3	March 2010			
Drafting Task Force group meeting	June 2010	1 day	Korea	
9 th HFCV-SGS meeting	June 2010	3 days	Korea	
WP.29 AC.3	June 2010			guidance concerning fundamental issues, decision on ELSA if necessary
Drafting Task Force group meeting	September 2010	1 day	US	
10 th HFCV-SGS meeting	September 2010	3 days	US	Finalization of draft gtr for Phase 1
Editorial group meeting				If necessary
informal document to GRSP	December 2010			
SGS meeting	Jan 2011			
working document to GRSP (adoption)	May 2011			
informal document in WP.29 AC.3	June 2011			
official document	12 weeks deadline			
final document adopted by WP.29 AC.3	November 2011			