

## 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.
- The gtr will cover fuel cell (FC) and internal combustion engine (ICE), compressed gaseous hydrogen (CGH2) and liquid hydrogen (LH2) in Phase 1. The application of the gtr is for passenger vehicles.
- Three main areas outlined in the Action Plan have been discussed: hydrogen storage system, integrity of the vehicle fuel system and electrical safety.
- The 10th meeting of the Subgroup on Hydrogen Safety (SGS) took place in September 2010 in San Francisco. A special Task Force meeting also took place in November 2010 in Berlin where the participants discussed and tried to resolve the outstanding issues. An agreement has been made in SGS that the Group will not rush to the completion at the expense of submitting a less-than robust gtr. Therefore, SGS asked for a half year extension of the activity to GRSP in December. The revised work plan is attached to this document.
- SGS would like to ask for AC.3's endorsement of half year extension in this WP29 session.
- The 11<sup>th</sup> meeting of the SGS took place in February 2011 in Brussels in order to finalize gtr text. The three co-sponsors held meetings to discuss fundamental questions and open issues prior to and after the 11th meeting.
- Overall, SGS has made a solid progress at the 11th meeting.
- Regarding vehicle fuel system and the compressed hydrogen storage system, discussion was almost finished except material compatibility issue.
- Because of the complexity, SGS is considering to propose that material compatibility be addressed in Phase 2.
- Otherwise, some countries expressed that they could accept the gtr that includes liquid hydrogen storage system part, however, they do not need/plan to implement it into national legislation at this time.
- The electrical safety portion was incorporated into gtr text. US has expressed that they are currently conducting a study on the barrier/enclosure option.,. The study is scheduled to be completed by the end of April or early May.
- The SGS has agreed to remove the provisions related to 'conformity of production' from the draft GTR. The requirements for container components, fuel receptacle, and RESS were deemed to be safety critical and were moved to the main sections of part B.
- Since several issues still remain to be discussed, SGS continues discussion by email. SGS is planning to have phone conferences if needed and to submit **the informal document to GRSP in May 2011.**

- The 12th SGS meeting will be held from 27th June to 30 June of 2011 in Tokyo, Japan. This meeting is planned to address comments from GRSP on informal document and to prepare the **formal (working) document to GRSP December 2011 session of WP.29.**
- 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

Action	Date	Duration	Location	Status
WP.29 AC.3	March 2010			Informal document No. WP.29-150-24
Drafting Task Force group meeting	June 2010	1 day	Korea	
9 <sup>th</sup> HFCV-SGS meeting	June 2010	3 days	Korea	
WP.29 AC.3	June 2010			
10 <sup>th</sup> HFCV-SGS meeting	September 2010	4 days	US	
Drafting Task Force group meeting	November 2010	3 days	Germany	
11 <sup>th</sup> HFCV-SGS meeting	February 2011	3 days	Belgium	
WP.29 AC.3	March 2011			status report
informal document to GRSP	May 2011			
12 <sup>th</sup> HFCV-SGS meeting	June 2011	3 days	Japan	Finalization of draft gtr for Phase 1
working document to GRSP (submission)	August 2011			
informal document in WP.29 AC.3	November 2011			
adoption of working document at GRSP	December 2011			
official document	12 weeks deadline			
final document adopted by WP.29 AC.3	March/June 2012			