

**OUTSTANDING COMMENTS ON THE  
GRPE DRAFT ECE COMPRESSED GASEOUS HYDROGEN (CGH<sub>2</sub>) REGULATION  
Version 10 Dated 06.11.02  
AFTER THE GRPE CGH<sub>2</sub> EXPERTS MEETING IN MUNICH 23-24 JANUARY 2003  
(NON GRPE/ISO HARMONIZATION)**

**GRPE - 018**

17-02-2003

**Table 1: GENERAL COMMENTS**

Paragraph/ Annex	Organisation	Comments/Proposed Modification	Agreed	Final Modification Or Reason For Rejection
General/ 14.1.17	UTC	<p>The current draft requires a minimum factor of 1.3 between the nominal working pressure (NWP) and the maximum allowable working pressure (MAWP) with regard to components down-stream of the first regulator. This margin is necessary for thermal expansion only if the system can "trap" pressurized hydrogen between shut-offs as part of normal operation including start/stops (as we do not want the Safety Relief Valve to actuate as part of normal operation). A 1.3 factor is not required if the system has features to prevent the "trapping" and/or heating during all normal operating modes.</p> <p>My proposal is as follows: The MAWP shall be at least 1.3 times the NWP unless the system is configured and controlled to normally prevent the "trapping" of pressurized fuel without activation of safety relief devices. If the system is properly configured and controlled to normally prevent the "trapping" of pressurized fuel then the MAWP may be selected by the vehicle manufacturer to a value as low as 1.1 times the NWP.</p> <p>I recommended a value of 1.1 because typical safety relief systems require at least a 10% margin above normal</p>		<p>Not discussed.</p> <p>To be discussed at the Munich meeting on 5 March 2003</p>

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		operating levels so it shouldn't be overly prescriptive.		
General Annex 8	TUV	Add a burst pressure test for all components TUV proposal to have a hydrostatic burst test to 3 x NWP or 3xMAWP as appropriate On new components?	-	Add a hydrostatic burst test to 3 x NWP or 3xMAWP as appropriate on new components.  (4x based on infinite life, these components are based on 15/20 year life and then discarded. Higher BPRs for some types of containers are intended to give 2.35 at end of life.)  See document GRPE-013 for details of the TUV proposal, and GRPE-014 for a modified proposal To be discussed at the Munich meeting on 5 March 2003
Ann. 8: B2.2	TUV	The amount of acceleration during the ageing test should be discussed . If necessary change values for pressure, duration or temperature	-	To be discussed at the Munich meeting on 5 March 2003
General	-	Component marking		

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