

GRPE/ISO **N 37** 22/01/03

*Meeting of the GRPE/ISO CGH₂ Experts
on 22 January 2003 in Munich*

**Cooperation Between:
UN-ECE/GRPE Ad-hoc Working Group
(Hydrogen Vehicles – Onboard Storage
Systems)
&
ISO**

Proposed Agenda



- 1. Chairperson**
- 2. Brief introduction to the role of the group**
- 3. Resolve harmonisation issues between GRPE & ISO (N035: Tables 1 & 2)**
- 4. Comments that may affect harmonisation between GRPE & ISO (N035: Table 3)**

1st Phase of the European Integrated Hydrogen Project (EIHP)



- **Development of two drafts for new ECE regulations:**
 - **One for liquid hydrogen onboard storage systems**
 - **One for gaseous hydrogen onboard hydrogen systems**

123rd Session of WP.29 6-9 March 2001 in Geneva



- **The EIHP draft regulations were presented by Germany to the World Forum for Harmonization of Vehicle Regulations (WP.29)**
- **WP.29 agreed to examine the interest in establishing these new draft regulations and forwarded the information to one of its subsidiary bodies, the Working Party on Pollution and Energy (GRPE)**

GRPE Meeting June 2001 in Geneva



- **GRPE made the decision to form an ad hoc WG to write ECE regulations for on-board hydrogen storage systems (liquid and gaseous) based on EIHP drafts**

1st Meeting: GRPE Ad Hoc WG 29 November 2001 in Bonn



The ad hoc WG :

- **Started working towards the completion of the draft regulations which would be presented as ECE regulations first and then as Global Technical Regulations (GTR) as a second step**
- **Agreed to try to develop closer relationship with ISO**

2nd Meeting: GRPE Ad Hoc WG 19 February 2002 in Munich



The ad hoc WG:

- **Made request to ISO to study the differences between draft regulations and the following ISO drafts standards:**
 - **ISO 13985 Liquid hydrogen – Land vehicle fuel tanks**
 - **ISO 15869 Gaseous hydrogen and hydrogen blends – Land vehicle fuel tanks**

3rd Meeting GRPE Ad Hoc WG 4-5 June 2002 in Nabern

- **ISO/TC 22 and ISO/TC 197 prepared an ISO report that was submitted to the GRPE ad hoc WG prior to the meeting.**
- **This report was comprised of seven parts. Parts 1 and 2 were the comparison between the EHP draft regulations and the ISO drafts standards with technical input provided mainly by the USA.**

3rd Meeting GRPE Ad Hoc WG 4-5 June 2002 in Nabern



- **The ad hoc WG recognized the need to resolve the differences between the EIHP draft regulations and the ISO draft standards**
- **No decision was made on whether the ISO standards will be called out in the GRPE regulations**

1st Meeting
GRPE/ISO Group of Experts
30 July 2002 in Munich

- **The purpose of the meeting was to resolve the technical differences between the EIHP draft regulations and the ISO draft standards**
- **Experts from both the GRPE ad hoc group and the ISO/TC 197 working groups were invited to participate**
- **Experts from ISO/TC 22 *Road vehicles* and the Society of Automotive Engineers (SAE) were also invited to participate for wider consensus**

*1st Meeting
GRPE/ISO Group of Experts (GH₂)
30 July 2002 in Munich*

- **The meeting resolved the majority of technical differences between the EIHP draft regulations and the ISO draft standards**
- **A 2nd meeting was called**

2nd Meeting
GRPE/ISO Group of Experts (GH₂)
24-25 October 2002 in Vancouver



- **The purpose of the meeting was to resolve:**

Outstanding technical differences between the GRPE draft regulations and the ISO draft standards

Proposals regarding the comments received on Rev.9 that may affect harmonisation between the draft regulations and the ISO draft standards

2nd Meeting
GRPE/ISO Group of Experts (GH₂)
24-25 October 2002 in Vancouver



- **The meeting resolved all of the known technical differences between the GRPE draft regulations and the ISO draft standards**
- **At the end of the meeting a major discrepancy was found relating to Type 1 (all metal) containers. The issue was not resolved.**

4th Meeting GRPE Ad Hoc WG 14-15 November 2002 in Cologne



- **The Ad Hoc WG recognized the need to resolve the few remaining differences between the GRPE draft regulations and the ISO draft standards, primarily the Type 1 (all metal) container issue.**

3rd Meeting
GRPE/ISO Group of Experts (GH₂)
22 January 2003 in Munich



- **The primary purpose of the meeting is to:**
 - Resolve outstanding harmonisation issues between the GRPE draft regulations and the ISO draft standards (N035: Tables 1 & 2)**
- **If possible:**
 - Address comments that may affect harmonisation between GRPE & ISO (N035: Table 3)**
- **N035: Table 4 contains editorial comments that only affect the GRPE regulations and it is suggested that they should be left to the discretion of the editor.**

22 January Documents to Be Used



- **The GRPE draft regulation on gaseous hydrogen onboard storage systems, rev.10, dated 6 November 2002**
- **The ISO/CD 15869-1 to ISO/CD 15869-5 draft standards, dated June 2002**
- **GRPE/ISO Doc. No. 035 (Outstanding Issues) dated 17 January 2003**
- **ISO7866, 9809-1 & 9809-2**

What Needs to Be Done During This Meeting?



- **Resolve the technical differences based on a consensual approach**
- **In order to do so, work through all the items listed on working documents**

Results of the Meeting



- **The decisions made during the meeting will be recorded in working documents**
- **The decisions made during the meeting will be circulated for comments among the GRPE and ISO members that could not attend the meeting**

Preparation for the Next GRPE Ad Hoc WG Meeting



- **The following documents should be made available for the next meeting of the GRPE Ad Hoc WG on 13-14 February 2003**
 - **The working documents incorporating the agreements that were made by the GRPE/ISO group of experts,**
 - **The revised GRPE draft regulations (CGH₂ Rev.11)**

Ultimate Goal



- **After this meeting, the technical content of the GRPE draft regulations and the ISO draft standards should be identical.**