

Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

20 June 2013

Forty- third session

Geneva, 24–28 June 2013

Item 4 (a) of the provisional agenda

Electric storage system: Testing of lithium batteries

Informal Working Group meeting on UN lithium battery testing requirements: (2-4 October 2013)

**Transmitted by Portable Rechargeable Battery Association (PRBA),
International Association for the Promotion and Management of
Portable Rechargeable Batteries (RECHARGE) and Council on Safe
Transportation of Hazardous Articles (COSTHA)**

Introduction

1. At the forty- second session, PRBA, RECHARGE and COSTHA offered to host an informal working group meeting to review and develop proposed changes to the current UN testing requirements applicable to large lithium batteries found at section 38.3 of the UN Manual of Tests and Criteria. This informal paper is intended to update members of the Sub-Committee on the meeting, which has been scheduled for 2-4 October 2013 at PRBA's office in Washington, DC located at 1776 K Street, NW.
2. As agreed at the forty-second session, the terms of reference for the informal working group meeting include:
 - (a) To review and contrast relevant testing requirements applicable to large lithium batteries in particular those used in the automotive, aviation, stand-by power (or industrial energy storage systems) and other major sectors of the industry;
 - (b) To consider the practicability of the test provisions for battery assemblies in 38.3.3 (f) of the Manual of Tests and Criteria and consider the need to review the existing definitions of large batteries;
 - (c) To identify means of harmonizing existing testing requirements or recognizing test equivalents;
 - (d) To develop proposals for regulatory text for inclusion in section 38.3 of the Manual, if needed.
3. The preliminary agenda items for the meeting are listed on the following page. Members of the Sub-Committee are welcome to offer additional agenda items for consideration during the meeting. Two agenda items unrelated to the UN testing requirements have been proposed for the meeting. They include the transport of energy storage containers and ICAO packaging proposals for large lithium ion batteries over 35 kg.
4. Individuals planning to attend the working group meeting should contact George Kerchner at PRBA at gkerchner@wileyrein.com.

Informal Working Group meeting on testing large lithium batteries in accordance with UN Manual of Tests and Criteria

**Location: Office of Wiley Rein LLP/PRBA
1776 K Street, NW
Washington, DC 20006**

Preliminary agenda

1. History of testing large lithium batteries and battery assemblies in accordance with UN Manual
2. Competent Authority discretion to dispense with tests, vary details, etc. (Section 1, Paragraph 1.1.2 of UN Manual)
3. Review of definitions applicable to “large battery” and “battery assembly” in UN Manual
4. Proposed definitions
 - (a) Battery assembly
 - (b) Battery module
 - (c) Battery pack
 - (d) Other
5. Challenges testing large lithium batteries and battery assemblies in accordance with UN Manual
 - (a) Shock
 - (b) Short circuit
 - (c) Battery assemblies less than 6200 Wh and 500 g Li metal
6. Review of test failure criteria?
7. Conditions in transport: What are shock and vibration forces on large lithium batteries in transport?
8. Industry standards for large lithium batteries and comparison to UN tests
 - SAE
 - IEC
 - UNECE Regulation No. 100
 - DO160/DO311
 - Others
9. Harmonization of industry and UN lithium battery testing standards for equivalency
10. Proposed changes to T.4 Shock test
11. Proposed changes to T.5 Short circuit test
12. Energy storage containers and dangerous goods regulations
13. ICAO packaging proposals for large lithium ion batteries over 35 kg