

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

17 June 2011

Thirty-ninth session

Geneva, 20-24 June, 2011

Item 4 (e) of the provisional agenda

Electric storage systems: miscellaneous

Lithium battery marking

Transmitted by the expert from the United States of America

Background

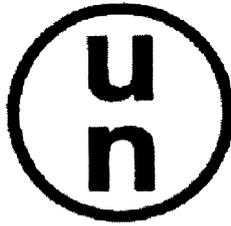
1. At its previous session, the Sub-Committee considered a document from France (ST/SG/AC.10/C.3/2010/80) in relation to a quality management programme for the manufacture of lithium cells and batteries. In response to this proposal, the United States submitted an informal document (UN/SCETDG/38/INF.21) supporting France's proposal and in addition proposing that the Sub-Committee consider (1) requiring retention of test documentation verifying battery designs have successfully passed the required design-type tests, and (2) requiring application of a marking on the battery to indicate that the battery design has successfully passed the applicable design-type tests. Based on the discussions resulting from the INF.21, the Sub-Committee adopted a requirement to retain test documentation and agreed to further consider a marking during the present biennium (see ST/SG/AC.10/C.3/76 para. 50).

2. As a follow-up to the discussions surrounding INF.21, the Sub-Committee is asked to consider requiring a visible mark to appear on the outside case of each lithium ion or metal cell or battery. This mark would be the manufacturer's certification that the battery design has successfully passed the required design type tests in a readily recognizable manner. Visible marks indicating compliance with defined standards on electronic devices are common. Examples include the "UL" symbol which identifies that a particular product has been evaluated and representative samples have been tested by Underwriters Laboratories and meet particular requirements for safety and quality. In addition, the well-recognized "CE" marking certifies compliance with certain European Union Directives. For the purposes of lithium design type testing, the mark could be specified to mean that each cell or battery so marked has met all of the applicable design type tests prescribed in the UN Manual of Tests and Criteria. In keeping with the applicability of the watt-hour marking previously adopted by the Sub-Committee, it is envisioned that certain cells and batteries would be exempted from the mark if adopted (for example button cells).

3. The benefits of such a mark would be threefold:

- Application of the mark would be the manufacturer's certification that the battery conforms to the applicable design type tests.
- Shippers involved in downstream distribution who repackage the batteries for transportation would be able to readily verify that the batteries have passed the applicable design type tests.
- Enforcement personnel would be able to easily determine whether the manufacturer has certified that the battery conforms to the applicable design type tests.

4. While historically the “UN” symbol has been used only in reference to packaging and not articles, it is suggested that an appropriate and recognizable mark may be the “UN” symbol, identical to the symbol currently required on UN packagings and UN cylinders:



5. It is recognized that the use of the “UN” symbol is currently limited in its application by 6.1.3.1(a) which states that “This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, or 6.7.” However this language could be expanded to include lithium batteries should the Sub-Committee determine the UN mark is appropriate. A major advantage of the existing “UN” symbol is that it is recognized globally and already associated with the requirements of the UN Model Regulations. As such it is believed that a “UN” marking has a considerable advantage over any potential marking not yet in use. However, the Expert from the United States is open to other views and suggestions as to what might be an appropriate mark should the Sub-Committee agree a mark has merit.

Proposal

6. The Sub-Committee is invited to come to a consensus on:
- Whether a marking has sufficient merit to be required by the UN Model Regulations; and
 - Whether the “UN” symbol is an appropriate mark.
7. Based on the Sub-Committee’s response, a detailed proposal could be presented at the Sub-Committee’s following session.
-