UN 3480 Lithium-Ion Batteries

A new common standard for safety and transparency
-- BATSO & TUVdotCOM mark for Lithium-Ion batteries

The international project for certified safety in the supply chain and value chain, BATSO (Battery Safety Organization), marks a new international benchmark and offers transparency regarding the marking of Lithium-Ion batteries on a global scale. Compliance certificates can be downloaded from the Internet.

New: Marking for batteries complying with UN-T and BATSO 01

BATSO is an industry standard created in collaboration with TÜV Rheinland, the Industrial Technology Research Institute (ITRI), Underwriters Laboratories (UL), and Extra Energy. It is based on state-of-the-art technical rules, which have been defined by renowned technical bodies with input from the industry.

The service has now been realized -- Lithium-Ion batteries can have their qualification according to BATSO as well as UN-T tests indicated, this marking demonstrating their battery life. "Now there is finally transparency about the validation of a battery type, and it is indicated by the marking over the full life of the battery. Deutsche Lufthansa or other clients, for instance, may validate the type of Lithium-Ion battery used even after many years of service by a simple click on the Internet -- checking to see if the type has been approved. The call for more transparency has finally been answered," says Tim Schäfer, Head of Strategic Coordination at German manufacturer Li-Tec Battery GmbH in Kamenz, Saxony, a joint venture between Evonik and Daimler.

Li-Ion batteries for electric mobility are showing strong market growth and a steady stream of new applications. According to market experts, an above-average increase in the usage of Li-Ion batteries is expected.

This prediction is supported by a 2008 Takeshida/JP report, which estimates the Lithium-Ion battery market will grow by around 80% in the period from 2009 to 2017 (from 10 billion US$ to 18 billion). The share of these batteries in the automotive sector will continuously increase over this period, rising from 1% to 25%.

The industry trends is toward higher energy content and longer battery life, while at the same time reducing cost and providing maximum safety -- a truly electrifying field for all parties involved.

The trend is irreversible, as the Eurobike Friedrichshafen World Fair and IAA Frankfurt have demonstrated quite clearly. Germany is proving an important base in the drive to push forward these innovative technologies for electric mobility, and the Lithium-Ion battery is a key technology. A strong joint effort by industry, government, academia and utilities will be necessary to set up the appropriate infrastructure.

TÜV Rheinland's TUVdotCOM mark and Internet service gives manufacturers and distributors a unique opportunity to present their products and business services to an international market at a glance: quickly, persuasively, straightforwardly and transparently – and what's more, all this is only one click away!

BATSO is an international project that refers to this idea and has already generated global interest. Key companies are lending their support. One goal unites all market participants: the wish to guarantee safety in transport and application. BATSO is thus a step in the right direction.

In Taiwan, BATSO 01 has been put in place with a governmental program for the development of electric mobility as a prerequisite for participation.

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Precisely Right.

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References:

Lin, B.-M. and J.-S. Tsai: *Test Method and Technique of Safety Test for Light Electric Vehicle (LEV) Battery Packs*. EVS 24 Stavanger, Norway, May 13-16, 2009.

Takesida, H.: *Pre-Seminar Tutorial II - Worldwide Market Update on NiMH, Li Ion and Polymer Batteries for Portable Applications and HEV'S*. 25th International Battery Seminar & Exhibit, Fort Lauderdale, USA, 2008.

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