

Latest topics on the CTIA Battery Certification

In our last issue of the Battery Testing newsletter we reported about the CTIA Battery Certification Program which, at that time, was still in the evolving phase. In the meantime, the members of the CTIA working groups have finished the developing stage and brought the CTIA Battery Certification Program into full life.

To provide some background information: during the past years, following several incidents where cell phone batteries have burst serious safety concerns about the robustness of cell phone batteries have risen. In response to such consumer concerns as well as cellular network provider demands, the CTIA has created the 'Battery Certification Program'. This program is based on the 'IEEE 1725 Standard for Rechargeable Batteries for Cellular Telephones', which was approved by the IEEE-SA Standards Board in March 2006.

The **IEEE 1725 standard** establishes criteria to ensure rechargeable batteries used within cell phones to be stronger and more reliable. This standard applies to all types of rechargeable lithium ion (Li-Ion) and lithium ion polymer (Li-Ion polymer) batteries and battery packs for use in cell phones or other host devices with mobile functionality. IEEE 1725 is limited to battery packs consisting of single Li-Ion cell or battery packs with multiple Li-Ion cells connected in parallel. Battery packs with cells connected in series are outside the scope of this standard. Because of the nature of the interactions between the battery and the host device, IEEE 1725 includes also the validation of the adapter, the host device and the manufacturing process.

What's new?

According to the current status, PTCRB will not declare the CTIA Battery Certification Program as a mandatory requirement for release to the U.S. In spite of this decision, given the high safety risks several North-American network operators such as Verizon and AT&T have taken the CTIA Certification on board as a pre-condition to accept products having Li-Ion or Li-Ion-Polymer battery packs implemented. This implies that manufacturers can only supply their respective products to these network operators, if their system has been certified according to the CTIA Battery Certification Program.

Subsystem certification

To effect a System certification all affiliated Subsystems (cells, battery packs, adaptors) must firstly be certified separately. This means that each Subsystem is required to undergo compliance testing and may include an on-site manufacturing audit by a CTIA Authorized Testing Laboratory (CATL). The recognition requests are to be submitted by the respective Subvendors.

System certification

The certification request for a System is to be submitted by the System Vendor. The System will be certified based on the host and must be comprised of recognized Subsystems. By means of evaluation tests by a CTIA Accredited Test Laboratory (CATL) it must be ensured that the functioning of all components together - Subsystems and Host - fulfill the specific requirements to IEEE 1725 and the CTIA Battery Certification Program.

CATL

Subsystem compliance testing and audits, as well as the final System Certification have to be conducted by a CATL or CTIA Accredited Test Laboratory. These independent laboratories have been approved for testing to CTIA certification requirements for Battery System Compliance to IEEE 1725. The purpose of this accreditation is (1) to ensure labs have a quality system and are technically competent to perform testing, and (2) to ensure ongoing lab compliance with Program requirements and industry standards.

CETECOM ICT Services: CTIA Authorized Testing Laboratory (CATL) for Battery Testing

As an established international consultancy, testing and certification organization, our battery expert team can provide a fast and cost effective gateway to CTIA Battery Certification registration. CETECOM ICT Services has been approved for testing to CTIA certification requirements for Battery System Compliance to IEEE 1725, IEC 62133, UL 1642, UL 2054, UN ST-SG-AC10-11 REV4 cl. 38.3, IEC/EN/UL 60950-1.

The accreditation refers to the complete testing program including Cell, Battery Pack, AC/DC-DC/DC Adapter and Host Device validation, as well as audits of cell manufacturing sites.

CETECOM ICT Services has implemented the necessary test and inspection services to fully support manufacturers of Systems and Subsystems in the CTIA Battery Certification process. And as a unique speciality world-wide, CETECOM is able to provide customers with all the necessary services from one single entity, including battery safety testing, factory inspection, electrical safety, environmental testing, etc.

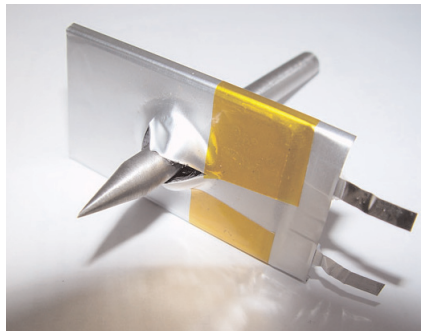
For more information on the battery test procedure, price quotes or consulting services: don't hesitate to contact CETECOM ICT Services in Saarbrücken directly or any other CETECOM location all over the world. We will be pleased to advise you!

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Automotive: CETECOM ICT Services enhances its service portfolio for car batteries

In the world of mobility - may it be for mobile communication or electrical cars - batteries play a major role. Not only the capacity of batteries is vital for its success in this world, but also the weight and the charging process are extremely important. Less weight means less load when driving a car with electrical energy. But there is another aspect which must be focussed on when thinking of batteries being used in cars namely: the charging speed. In this respect Li-Ion and Li-Ion polymer batteries show optimal characteristics. Provided that the right charging technology is applied, the charging of these batteries doesn't take longer than a normal gas filling process with conventional cars. However, considering the risks of using Li-Ion or Li-Ion-Polymer batteries (see former page) it must be ensured that only thoroughly tested cells and battery packs are admitted into the market, especially when capacities are requested which are even much higher than those of mobile phones.

By recognizing the huge importance of battery security in various application areas, CETECOM ICT Services has started enhancing its laboratory capability in this particular field. By means of additional lab space in separate secured premises, state-of-the-art temperature shock chambers, combined shaker and temperature benches as well as extended size vacuum cells CETECOM is on its way to establish one of the world's best equipped battery test facilities. This expansion will bring CETECOM into position to safely test high capacity batteries as they are used in laptops, cars, tools and others.



New laboratory leader for battery testing

CETECOM ICT Services is pleased to introduce **Mr. Andreas Wagner** as its new laboratory manager for battery testing. Andreas Wagner will be responsible for the set up and operation of the new accredited battery test facility according to the high requirements set by the Automotive Industry as to modern testing environment and critical safety investigations.



Before joining CETECOM ICT Services the 48-year-old electrical engineer has been in charge of the safety laboratory of VARTA Microbattery for many years. His extensive know-how and experience in the field of the testing of all sorts of lithium batteries will be a strong asset to the further development of CETECOM's specialized safety laboratory and the testing of high capacity batteries.

New and renewable energy technologies

New and renewable energy is a hot topic everyone is talking about. Up to the end of the 20th century, the industrialised countries have enjoyed inexpensive and plentiful energy supplies. It is only recently that the need has been recognised to further promote renewable energy. Triggered by the ever rising prices of fuel, gas and electricity, governments and industries all over the world are now promoting energy efficiency and renewable energy technologies such as hydroelectric, wind or solar.

Whether the new energy is used for hybrid electric vehicles, wind turbines or solar photovoltaic applications, the battery always plays a central role since it must store the power generated and discharge the power as needed. In addition it must also be able to store and reutilise the excess energy.

In spite of the strict safety standards referring to small battery applications the safety procedures for renewable energies technologies on large scale are still under development. CETECOM ICT Services is the right partner to assist you with the implementation of new and renewable energies, while ensuring that the national and international safety standards are respected.

Contact CETECOM ICT Services to ensure the successful implementation of renewable energies!

