

Special PR Feature

Key messages by a leading company for the future of automotive industry

Management and Technology Strategy

UL Japan Offers Testing and Certification Services to Automotive Industry to Support its Technological Innovation and Globalization.

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UL Japan

Technological innovation is a vital element for the evolution of all types of industrial goods. However, it can also induce new and unexpected risks. The most important thing for automobiles is ensuring safety and security. Currently, consumers are requiring automotive industry to establish such framework that reliably and smoothly ensures safety and security and to improve its technology with innovation and globalization. Takuma Furusawa, General Manager of the Greater Asia, Consumer Technology Division of UL Japan, a subsidiary of UL (Underwriters Laboratories), which has promoted safety of industrial goods for over one century, talked about what UL has been done and will do for the automotive industry in Japan concerning testing and certification services.

The automotive industry is currently facing a period of significant innovation.

With regards to technology, basic functions such as drive, stop and turn are being controlled by electronic systems. Cars have already become “a computer that drives”. Autonomous cars, which used to be the stuff of fairytales, will be coming soon.

Electric vehicles (EVs) and hybrid cars are also getting steadily popular.

From now on, more different types of technology than that has been developed in the automotive industry will be applied to develop automobiles. Different and advanced knowledge and expertise are required to ensure safety and security, which is the most critical area of automotive manufacturing.

With regards to automotive business, the globalization of production bases and markets is expanding into emerging countries and also developing countries. Every country has every different attitude for safety.

UL Japan is supporting technological innovation and globalization being led by our customers in Japan with high quality testing and certification services (Figure). Our

knowledge and expertise cover a diverse range of technological fields including electricity and electronics, communication, machinery, materials, environment, energy and medical devices. We can also offer one-stop service ranging from information provision to creating test plans, testing and certification.

We protect electronic systems from radio waves as well as utilize radio waves in safe and secure manner.

UL is a world-leading third party laboratory which provides electromagnetic compatibility (EMC) and wireless technology testing and certification. We have outstanding knowledge and expertise to grasp phenomena caused by electromagnetic waves and solve difficult problems properly.

Automotive control systems are precision electronic devices that are easily affected by electromagnetic waves. The system may cause a major accident by an error which is occurred by electromagnetic wave interference. There are various electromagnetic waves in today's environment that could cause errors on mobile phones and devices with function of wireless LAN, which have become more familiar inside automobiles. Through design consideration and countermeasures for EMC are essential for computerization of automobiles.

Additionally, the interoperability that reliably links automobiles with devices and infrastructures by wireless devices is also important. The cars that are equipped with wireless charging function for smart phones and EVs of which in-vehicle electronic system is continuously updated through a data center are entering the market.

Helping Japanese customers to solve the problems and concerns by leveraging the state-of-the-art knowledge and expertise from all over the world

To ensure design consideration and countermeasures for EMC and interoperability, when setting the electronic system, must be incorporated into the relevant parts of automobile. However, it is getting difficult under the quality management systems of automotive manufacturers for two reasons. Firstly, as systems have become more intricate, it is particularly difficult to grasp phenomena occurring in each individual part. The second reason is that supply chains have changed and more parts are being procured from outside the affiliate companies ("KEIRETSU"). Those parts incorporated into automobiles must be ensured to meet the expected quality level. It is our role, as a third party testing and certification body, to ensure this.

UL employs a unique system called “Center of Excellence” to share world-class testing knowledge and expertise. Each region of the world has specific standards and different strong technological field. We gather knowledge and expertise from sites with high technological levels and strong demand for testing, and share these with all other testing sites to provide high-quality service throughout the world. We can perform faster and more reliable testing than our customers. Moreover, we can cope accurately with a problem detected based on the knowledge and expertise gathered from our global network. UL Japan has four EMC testing laboratories in Japan. Therefore, we can flexibly respond to urgent testing demands. We conduct tests in accordance with original standards specified by automotive manufacturers as well as international standards.

Acquiring certification in secured and smooth manner by leveraging abundant experiences and the latest local information

We also provide a certification agency services called “Global Market Access” utilizing our business experiences in approximately 200 countries and regions throughout the world and the latest local information.

For example, a car navigation system equipped with such wireless functions as Bluetooth and Wi-Fi or similar must comply with the Radio Law required in its destination market. However, it is more difficult than you would expect to complete the procedures for certification. When there are dozens of destination countries, the process of acquiring certification can impede global market access. In order to acquire such certification reliably and smoothly abundant experiences and the latest local information regarding evaluation criteria and procedures are indispensable.

In some countries the same punctual administrative service as offered in Japan cannot be expected. Even if, for example, an application is possible by submitting documents without using a proxy, such application might be rejected or take a lengthy period of time to be processed. In developing countries, unforeseen happenings may occur frequently. For example, an application has to be made to a home office with irregular holidays, or the application forms have not been updated on its web site.

We are continually gathering and updating the latest local information while building up good relationships with certification bodies throughout the world. We can offer a reliable and smooth certification whenever our customers require it.

UL Japan support our customers’ technological innovation and globalization in the

automotive industry through the provision of information in a wide variety of forms. Our services may start from the interpretation of the latest technological standards and the latest information on customer's target markets. We also offer guidance to ensure that testing and certification proceeds steadily and smoothly. In the future, we will expand our service range to testing and certification services in the fields of software, 3D printing and in-vehicle air quality by leveraging our current established business relationship through EMC and wireless related services. Entrust any testing and certification work to us, the experts.