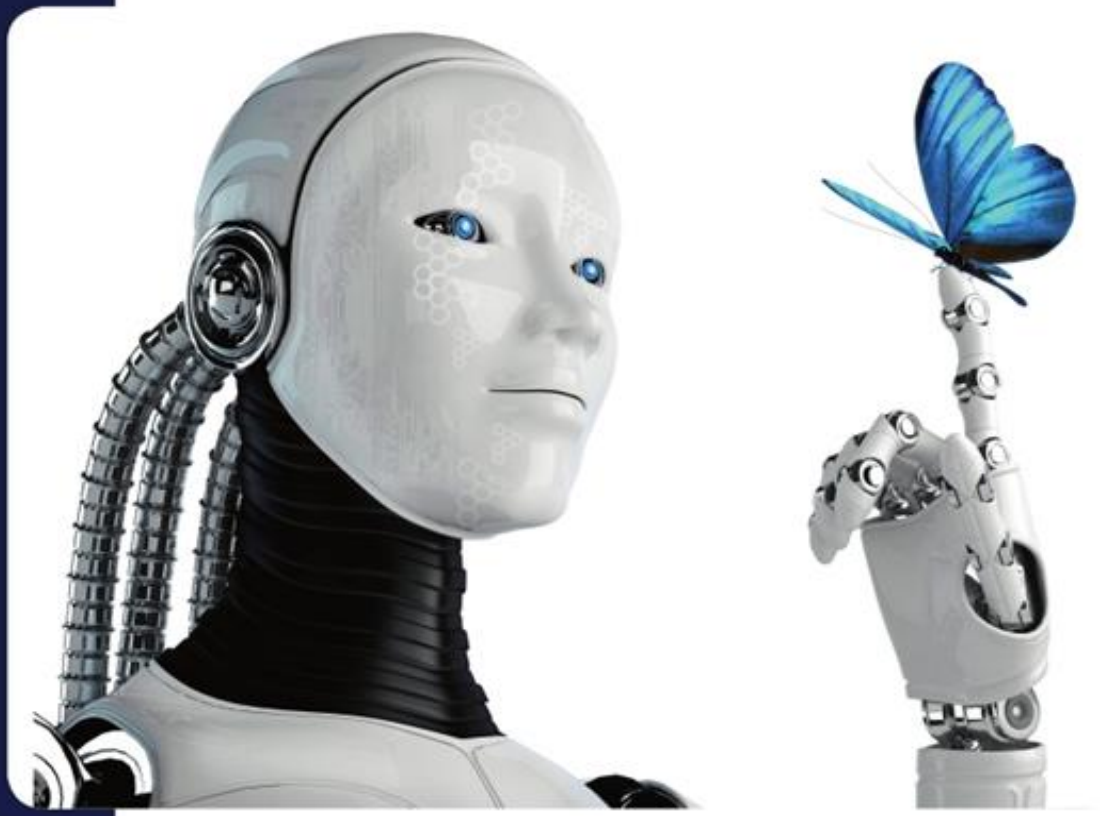
Newsletter
December, 2022

ICR



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Hot Issue

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5. Testing of 6.78 MHz wireless charger without Bluetooth technology

Porsche(Germany) AUDIT

▣ On 10/11 and 10/20, **engineers in charge of development and quality visited ICR at the Porsche headquarters in Germany.**

▣ This audit was to verify the capabilities of the testing institute in charge of testing the cluster and display parts of Porsche vehicles.

▣ **The Porsche representative evaluated that it had excellent testing capabilities compared to the testing institutes in Germany**, and asked them to take charge of the continuous testing of Porsche vehicle pars.

☎ **Inquiries**
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2022 4th Auditor Training Course Plan

- ICR International Certification Registrar Ltd. Is an auditor training provider directly registered to Exemplar Global.
- ICR plans to hold an **auditor training course in Dec 2022.**
- Through the AU, TL, QM, EM, OH and MD courses, all the trainees will be conducted so that the one's can be qualified for each module.
- Our training teaches auditors how to provide impartial audits based on objective evidence.

※ The detailed schedule of the auditor training course in December 2022 is as follows.

(Remote ZOOM training)

QM	Dec 05~06 (2days)	8 hours/1 day, total 16 hours (2 days)
AU/TL	Dec 07~09 (3days)	8 hours/1 day, total 24 hours (3 days)
EM	Dec 12~13 (2days)	8 hours/1 day, total 16 hours (2 days)
OH	Dec 19~20 (2days)	8 hours/1 day, total 16 hours (2 days)
MD	Dec 21~22 (2days)	8 hours/1 day, total 16 hours (2 days)

※ ***Training schedules may change depending on the Covid-19 situation.***

☎ Inquiries

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External training on SEMI standards

▣ ICR participated in **'Semiconductor Safety Management Capacity Enhancement, SEMI Education'** for Korea Gas Safety Corporation **and 'SEMI Online Education'** hosted by SEMI KOREA to introduce the requirements of SEMI standards based on professional knowledge and skills in **SEMI evaluation**.

▣ ICR conducted training on the requirements of **SEMI S2, S6 and S23** and on the differences between the **Chemical Substances Control Act** and the requirements **within the SEMI standards.**

External training on SEMI standards

▣ ICR engineers are conducting SEMI evaluation and testing of semiconductor manufacturing facilities, such as **SEMI S2 (Environment, Health and Safety Guideline for Semi conductor Manufacturing Equipment), SEMI S6 (Tracer Gas Test), SEMI S23 (Energy saving), SEMI F47 (Voltage Sag Test) etc.** If you have any questions, please feel free to contact us.

☎ **Inquiries**

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UN 38.3 Rev.7, Amend.1

▣ **The latest version of UN 38.3** is Rev.7 and Amend.1.

A summary of **test items** is as below.

<Test items for Lithium Ion Cells and Batteries>

Lithium Ion Cells and Batteries					
Test item	**Cell**	**Battery**	**Battery assembly ≤ 6.2 kWh**	**Single cell battery**	**Component cell**
T.1 Altitude Simulation	X	X		X	
T.2 Thermal test	X	X		X	
T.3 Vibration	X	X	X	X	
T.4 Shock	X	X	X	X	
T.5 External short circuit	X	X	X	X	
T.6 Impact/Crush	X			X	X
T.7 Overcharge		X*	X*	X*	
T.8 Forced discharge	X			X	X

* In case of DUT with overcharge protection circuit

UN 38.3 Rev.7, Amend.1

<Test items of Lithium Metal Cell and Batteries>

Lithium Metal Cells and Batteries					
Test item	**Cell**	**Battery**	**Battery assembly ≤ 6.2 kWh**	**Single cell battery**	**Component cell**
T.1 Altitude Simulation	X	X		X	
T.2 Thermal test	X	X		X	
T.3 Vibration	X	X	X	X	
T.4 Shock	X	X	X	X	
T.5 External short circuit	X	X	X	X	
T.6 Impact/Crush	X			X	X
T.7 Overcharge					
T.8 Forced discharge	X			X	X

▣ Tests T.1 to T.5 shall be conducted in sequence on the same cell or battery. Test T.6 and T.8 are for cells only. Test T.7 is for rechargeable batteries only.

UN 38.3 Rev.7, Amend.1

▣ Noted items

- Always consider what will be transported.

- Component cell: This is only qualified for transportation within the battery and cannot be shipped separately from the battery.

- Singled cell battery: Test as cell-level

- Overcharge protection: Does not apply just because the battery does not include overcharge protection, or if the design relies on an external charger to provide protection.

▣ If you have any inquiry about **battery testing and certification service** as well as **UN 38.3 test**, please feel free to contact our Battery Testing Center.

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Testing of 6.78 MHz wireless charger without Bluetooth technology

▣ Through the **2018 Technical Review (Serial Number: KOTTA-Wireless-18-004)**, I received a reply as follows about the 6.78 MHz wireless charger that does not use Bluetooth technology.

Reply
It seems appropriate to follow Option 3 out of the 3 above. If there is only a wireless power transmission function, it should be interpreted as one of radio wave application equipment, and then the conformity assessment method of radio wave application equipment is applied. In other words, I think it is reasonable to apply the electric field strength tolerance standard for domestic radio wave application equipment (Article 4, Paragraph 2, Item 4 of the technical standard for radio wave application equipment). However, this is an opinion on the radio wave application equipment standard, and it is thought that additional review on other fields of opinion is necessary.

Division	[Appendix 2] Equipment subject to conformity registration	Electromagnetic compatibility	Radio	EMC	SAR
Classification	1. High-frequency equipment used for industrial, scientific or medical purposes or 4. Household electric and electric equipment	O	O		
Technical standards	EMC+ Radio(Radio Application Equipment Technical Standard)				

Testing of 6.78 MHz wireless charger without Bluetooth technology

▣ Classified into high-frequency equipment used for industrial, scientific or medical purposes, or household electrical equipment and electric equipment, but both the fundamental wave and unwanted emissions comply with electromagnetic compatibility (EMC) standards and technical standards for radio application equipment. Apply the technical standards of Article 4, Paragraph 2 (including fundamental wave)

▣ In this case, it is judged that there is a problem matter how it proceeds only with the current standards, so guidelines for the classification of equipment and application methods should be prepared. However, it proposes a method to solve an urgent problem by taking an applicable method from the current standard, and additional review is required like the EMC subcommittee.

▣ However, at present, in terms of technical standards for radio wave applied equipment, there are only medical radio wave applied equipment among the test items in the wireless field, and only the equipment for medical equipment that uses high-frequency current is subject to the code of the target equipment.

▣ We cannot proceed according to the reply to the 2018 technical review, so we ask again.

Testing of 6.78 MHz wireless charger without Bluetooth technology

▣ National Radio Research Institute Review Results

Latest reply

Wireless power transmission equipment is categorized as radio application equipment, and equipment exceeding 50 W is subject to approval according to Article 74 of the Radio Law Enforcement Ordinance.

However, among household electronic products, radio-applied equipment and equipment (including wireless power transmission equipment of 200 watts or less that uses low-voltage power supply equipment for home use) other than some communication equipment announced by the Minister of Science, Technology and Information Communication may be operated/used for conformity assessment only without permission. In addition,

[Attachment 1] Total Synthetic Evaluation of the Public Notice Concerning Conformity Evaluation of Broadcasting Communication Equipment, etc. High-frequency equipment used in the material industry, science, medical, etc., is classified as an electromagnetic compatibility applicable object, and is separately radio test is deemed unnecessary. (When wireless testing is applied, there is a risk of duplication of regulations, etc.)

The KS X3143 (hypothetical wireless power transmission equipment electromagnetic wave release standard) standard can be applied to the electromagnetic compatibility test method for wireless power transmission equipment subject to conformity evaluation.

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