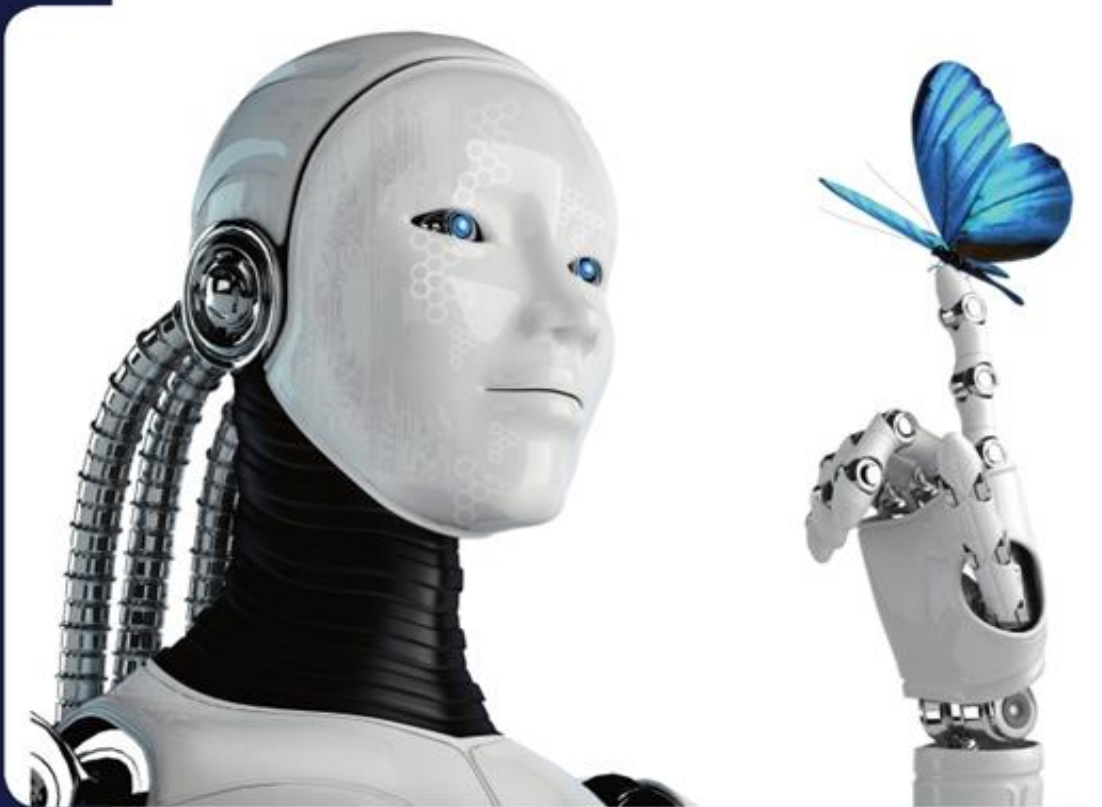


Newsletter September, 2023



ICR



Hot Issue

1. ICR-KIEL Research Institute Testing/Certification Business Agreement Signing
2. Auditor Training Course for FITI Testing & Research Institute
3. 2023 3rd Auditor Training Course Plan
4. Purchase of test equipments for Portable transmitters
5. UNECE R100 for Electric Vehicle Batteries
6. Establish and promote international standard technology for wireless power supply technology in railways.



ICR-KIEL Research Institute Testing/Certification Business Agreement Signing



- On August 8th, 2023, ICR Co., Ltd. signed a business agreement for **testing and certification in the fields of information communication, electrical, and electronic industries** with KIEL Research Institute (formerly known as Lighting Research Institute) at its Gimpo headquarters, with the presence of Director Jo Hyun-hoon from KIEL Research Institute, CEO Kim Deok-yong of ICR, and key stakeholders.



[Business agreement signing ceremony between ICR and KIEL]

ICR-KIEL Research Institute Testing/Certification Business Agreement Signing



- Both organizations have mutually agreed to **collaborate closely on testing and certification activities in the fields of information communication, electrical, and electronic industries**, leveraging their accumulated expertise and technological capabilities.
- Additionally, both parties have committed to conducting training and information exchange for their respective staff members, providing technical information and expert support for corporate assistance, and actively promoting each other's organizations.
- Building upon this business agreement, **the goal is to deliver higher quality testing and certification services** to customers of both organizations.

 **Inquiries**

EMC&RF Testing Center / Kim, Young-Sik
T. 070-5083-2652 / kys@icrqa.com

Auditor Training Course for FITI Testing & Research Institute



▣ Auditor training courses for employees of **FITI Testing & Research Institute** have been finished successfully.

▣ **The training courses** were conducted as follows:

- * Training period: 24.Jul.2023 ~ 28.Aug.2023
- AU/TL (ISO 19011:2018)
- QM (ISO 9001:2015)
- EM (ISO 14001:2015)
- OH (ISO 45001:2018)

☎ Inquiries

System Certification Div. / Kim, Hyung-Geon
T. 070-5083-2635 / edu@icrqa.com

2023 3rd 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 Sep 2023.**
- Through the AU, TL, QM, EM, OH, MD, ABMS, and CMS 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 Sep 2023 is as follows.**

Curriculum	Training period	Training hours
AU/TL	Sep 04~06 (3days)	8hours/1day, total 24hours (3 days)
QM	Sep 07~08 (2days)	8hours/1day, total 16hours (2 days)
EM	Sep 11~12 (2days)	8hours/1day, total 16hours (2 days)
OH	Sep 13~14 (2days)	8hours/1day, total 16hours (2 days)
MD	Sep 18~19 (2days)	8hours/1day, total 16hours (2 days)
ABMS	Sep 20~21 (2days)	8hours/1day, total 16hours (2 days)
CMS	Sep 25~26 (2days)	8hours/1day, total 16hours (2 days)

※ Please note that the training schedule and location may change depending on circumstances and each training may be held or not depending on the number of applicants.

Inquiries

System Certification Div. / Kim, Hyung-Geon

T. 070-5083-2635 / edu@icrqa.com

Purchase of test equipments for Portable transmitters



■ Test equipments according to ISO11452-9 2nd edition revision

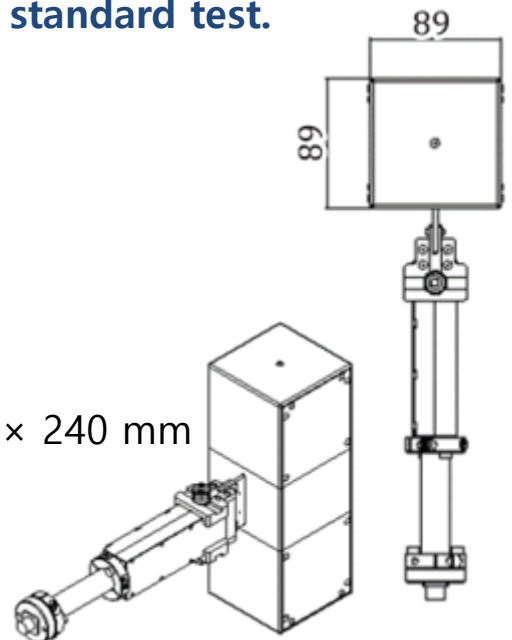
ICR signed a test equipment contract according to the revision because **the portable transmitters test item of the HMC specification(ES96200-00 21th) was revised from 1st edition to 2nd edition.**

Test equipment is according to the ISO standard and is used by all automotive companies around the world. It is a test equipment that can perform portable transmitters test.

The most important content in the revised standard is the definition of folded dipole antenna. **ICR introduced the corresponding folded dipole antenna and passed the revised standard test.**

■ Folded dipole antenna

- Input impedance: 50 Ω
- Balun transformation ratio: 1:1
- Frequency range: 142 MHz – 246 MHz
- Radiating element dimensions: 89 mm \times 240 mm
- Maximum power input 30 W
- Connector: type-N female



Purchase of test equipment for Portable transmitters



■ Before revision Ed 1.0 General

Simulated portable transmitters consist of

- radio frequency (RF) signal generating equipment, and
- RF power monitoring equipment and antennas.

■ After revision Ed 2.0 General

The following equipment is used:

- ground plane;
- radio frequency (RF) generator with internal or external modulation capability;
- power amplifier;
- power measuring instrumentation to measure the forward and reverse power;
- dual directional coupler;
- low loss coaxial cables;
- vector network analyzer (VNA);
- transmit antenna;
- artificial networks (AN), and/or high voltage artificial networks (HV-AN), and/or artificial mains networks (AMN), and/or asymmetric artificial networks (AAN).

 **Inquiries**

Mobility Center/ Im, Dae-Hyun

T. 070-5083-7908 / terry.im@icrqa.com

UNECE R100 for Electric Vehicle Batteries



- **E-Mark is necessary to market in the EU** to show compliance with United Nations Economic Commission for Europe (UNECE) requirements.
- Among them, the Rechargeable Energy Storage System (REESS) of road vehicles of categories M and N equipped with electric power train should be compliance with **UNECE R100**, and R100.02 type-approval process is available until 31 August, 2023.

	Series	Until Aug 31, 2023	Until Aug 31, 2025	From Sep 1, 2025
Acceptable by Contracting parties (in EU)	R100.02	O	Only issued before Sep 1, 2023	X
	R100.03	O	O	O

UNECE R100 for Electric Vehicle Batteries



■ Changes in UNECE R100.03 regarding REESS testing

- 1) SOC of DUT is changed over 50% to over 95%
- 2) Added overcurrent protection test
- 3) Added review of documents for low-temperature protection
- 4) Added review of documents and testing for Thermal propagation

■ If you have any inquiry about **UNECE R100 testing and type-approval process**, please feel free to contact our Battery Testing Center.

 **Inquiries**

Battery Testing Center / Yang, Chul-Ho
T. 02-6351-9003 / yangch@icrqa.com

Establish and promote international standard technology for wireless power supply technology in railways.



- The Ministry of Land, Infrastructure and Transport, the Korea Railroad Research Institute, and the Korea Advanced Institute of Science and Technology held an international standardization work group **launching meeting to establish railway wireless feed technology as an international standard.**
- By 2026, international standards will be established for systems that wirelessly supply electricity to railways.
It is the first time in the field of railways that Korea is leading the establishment of international standards.
- **The wireless power transfer railway system method** is a technology that wirelessly supplies power to railway vehicles while driving or stopping.
- If the wireless power supply system is established as an international standard in the future, it is expected to be the basis for commercialization of railway wireless power supply technology, such as securing interchangeability between railway vehicles and facilities.

Establish and promote international standard technology for wireless power supply technology in railways.



■ Existing railway vehicle power supply system

- Problems with contact power supply system
 1. High construction cost
 2. Frequent maintenance
 3. Low safety security
 4. Environmental problems occur

■ Improvement Wireless Railway Vehicle Power Supply System

- Tramline. - No current collector required
 1. Reduction of construction costs, such as reduction of tunnel section
 2. Reduce maintenance with non-contact and high efficiency
 3. Improved access/electricity stability and security
 4. Improving urban beauty and environment (dust/noise)

 **Inquiries**

EMC&RF Testing Center / Son, Min-Gi
T. 070-5083-2627 / thsalsrl@icrqa.com



www.icrqa.com

ICRO-31/R20161125 본 문서는 법률 제 14088호 저작권법의 보호대상이며, ICR의 지적 자산으로 불법 편집 및 복사를 금합니다.

Address :3611, Hagun-ri, Yangchon-eup, Gimpo-si,
Gyeonggi-do , South Korea (10048)

Company Id No : 110111-243147
Tax & VAT Id No : 105-86-35114

Tel : (+82)2-6351-9001~5 / Fax : (+82)2-6351-9007
Home page : www.icrqa.com