Newsletter
September, 2017

ICR

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

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Home page : www.icrqa.com

Hot issue

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- Audit for Ex equipment (ISO/IEC 80079-34)
- AIST succeeds in shielding Electromagnetic waves
- Develops wireless charging technology for electric cars

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Expansion of KOLAS Scope of Accreditation

Our ICR informs you that We have **extended the KOLAS Scope of Accreditation** on Aug. 21, 2017.

KOLAS Scope of Accreditation is as follows.

Scope of Accreditation :

- **03.005 Measuring instrument performance Test (23)**
- **03.007 Household and similar equipment (58)**
- **03.010 Medical Appliance (91)**
- **03.006 Industrial electric equipment (45)**
- **03.013 Energy Efficiency (42)**
- **03.014 Environmental and Reliability Test (56)**

Please check the KOLAS Homepage to confirm the detailed scope of accreditation.

We will provide Testing services related to KOLAS.

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Expansion of KOLAS Scope of Accreditation

Korea Laboratory Accreditation Scheme

CERTIFICATE OF ACCREDITATION

ICR Co., Ltd.

Accreditation No. : KT652

Corporation Registration No. : 110111-2431479

Address of Laboratory : 112, Hwanggeum 3-ro 7beon-gil Yangchon-eup, Gimpo-si, Gyeonggi-do

date of Initial Accreditation : January 16, 2015

Duration : January 16, 2015 ~ January 15, 2019

Scope of Accreditation : Attached Annex

Date of issue : August 21, 2017

This testing laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025 : 2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 8 January 2009).

Jung Dong Hee

Administrator
Korea Laboratory Accreditation Scheme

Korea Laboratory Accreditation Scheme(KOLAS) is a signatory of the ILAC mutual recognition arrangement

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Registered IECEE CBTL (CB Testing Laboratories)

We have been recognized as **CBTL (CB Testing Laboratories)** by **IECEE** on August 17, 2017
Medical Devices (MED) field is recognized as follows.

IEC 60601-1:2005	IEC 60601-2-10:2012
IEC 60601-1:2005/AMD1:2012	IEC 60601-2-10:2012/AMD1:2016
IEC 60601-1-3:2008	IEC 60601-2-22:2007
IEC 60601-1-3:2008/AMD1:2013	IEC 60601-2-22:2007/AMD1:2012
IEC 60601-1-6:2010	IEC 60601-2-25:2011
IEC 60601-1-6:2010/AMD1:2013	IEC 60601-2-27:2011
IEC 60601-1-8:2006	IEC 60601-2-45:2011/AMD1:2015
IEC 60601-1-8:2006/AMD1:2012	IEC 60601-2-47:2012
IEC 60601-1-11:2015	IEC 60601-2-49:2011
IEC 60601-1-12:2014	IEC 60601-2-54:2009/AMD1:2015
IEC 60601-2-3:2012	IEC 60601-2-57:2011
IEC 60601-2-3:2012/AMD1:2016	IEC 60601-2-63:2012
IEC 60601-2-4:2010	IEC 80601-2-30:2009/AMD1:2013
IEC 60601-2-6:2012	IEC 80601-2-60:2012
IEC 60601-2-6:2012/AMD1:2016	ISO 80601-2-61:2011

We will provide testing services related to **CB Certification**.

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Registered IECEE CBTL (CB Testing Laboratories)

IEC IECEE

Certificate of Acceptance

To participate
in the IECEE CB Scheme – IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE)

ICR Co., Ltd.

112, Hwanggeum 3-ro 7 beon-gil, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea, Republic of

has been assessed and determined to fully comply with the requirements of ISO/IEC 17025: 2005-05, The Basic Rules, IECEE 01: 2016-10 and Rules of Procedure IECEE 02: 2017-06, and the relevant IECEE CB-Scheme Operational Documents.

ICR Co., Ltd.

is therefore entitled to operate as a CB Testing Laboratory (CBTL) under the responsibility of **Korea Testing & Research Institute (KTR)** as National Certification Body (NCB) and to carry out testing within the IECEE CB Scheme for the Scope (Product Category(ies) and Standard(s)) as listed in the relevant part of the IECEE Web Site at www.iecee.org, and is subject to all other terms as set forth in the IECEE Basic Rules and Rules of Procedure

The IECEE membership status of this CBTL can be verified on the aforementioned site.

Date of Issue: 2017-08-17
TL637

Kerry McManama
IECEE Executive Secretary

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INTERTEK RTL Testing Site Acceptance

We have been recognized as **INTERTEK RTL (Recognized Testing Laboratory)** by **Intertek** on August 09, 2017.

INTERTEK RTL Scope of Acceptance are as follows.
Scope of Acceptance :

- **UL 399 7th ED. Rev. Oct. 18, 2013**
- **CAN/CSA C22.2 NO.120-13, March 2013**
- **EN 60065:2014**
- **UL 60065:2015 Ed 8.**
- **CAN/CSA-C22.2 NO. 60065:2016 Ed 2.**
- **EN 60950-1: 2006+A11+A1+A12+A2**
- **UL 60950-1:2007 Ed. 2(revised Oct.14, 2014)**
- **CAN/CSA-C22.2 NO. 60950-1: 2007 Ed.2 +A1+A2**

We will provide testing services related to **Intertek RTL**.

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INTERTEK RTL Testing Site Acceptance

Intertek

Testing Site Acceptance

RTL Level 2

The following organization has been assessed and found to comply with the relevant requirements of ISO/IEC 17025 and the Intertek Global Recognized Testing Laboratory Program Manual and accepted by Intertek as a Level 2

Recognized Testing Laboratory

and is authorized for Intertek to witness test work for the product types identified on the endorsement to this Testing Site Acceptance

Intertek Recognized Testing Laboratory Program
Our Level 2 data acceptance testing program allows Intertek to witness tests at a qualified laboratory, with the same validity as if it were conducted in an Intertek laboratory. By combining their existing testing resources with Intertek's global recognition, Intertek clients can reduce their time-to-market while verifying the accuracy of their test results.

Organization:

ICR Co., Ltd.

112, Hwanggeum 3-ro 7 beon-gil, Yangchon-eup, Gimpo-si, Gyeonggi-do, Republic of Korea (10048)

Acceptance Number	2017-RTL-L2-233
Issue Number	001
Issue Date	09 August 2017

This Testing Site Acceptance is revalidated during each testing project, subject to continuing compliance with the conditions specified in the endorsement of this site acceptance.

The Testing Site Acceptance is comprised of this front sheet and one endorsement.

Signature:
Name: Albert Jung
Title: Deputy General Manager
Date: 09 Aug 2017

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IATF 16949:2016 Published

IATF 16949:2016

- In October 1st, 2016, ISO/TS 16949:2009 was reviewed and published to IATF 16949:2016.
- This Automotive Quality Management System Standard, referred to as "Automotive QMS Standard" or "IATF 16949," along with applicable automotive customer-specific requirements, ISO 9001:2015 requirements, and ISO 9000:2015 defines the fundamental quality management system requirements for automotive production and relevant service parts organization.

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IATF 16949:2016 Requirements[1]

4. Context of the organization	
4.1	Understanding the organization and its context
4.2	Understanding the needs and expectations of interested parties
4.3	Determining the scope of the quality management system
4.4	Quality management system and its processes

5. Leadership	
5.1	Leadership and commitment
5.2	Policy
5.3	Organizational roles, responsibilities and authorities

6. Planning	
6.1	Actions to address risks and opportunities
6.2	Quality objectives an dplanning to achieve them
6.3	Planning of changes

IATF 16949:2016 Requirements[2]

7. Support	
7.1	Resources
7.2	Competence
7.3	Awareness
7.4	Communication
7.5	Documented Information

8. Operation	
8.1	Operational planning and control
8.2	Requirements for products and services
8.3	Design and development of products and services
8.4	Control of externally provided processes, products and services
8.5	Production and service provision
8.6	Release of products and services
8.7	Control of nonconforming outputs

IATF 16949:2016 Requirements[3]

9. Performance evaluation	
9.1	Monitoring, measurement, analysis and evaluation
9.2	Internal audit
9.3	Management Review

10. Improvement	
10.1	General
10.2	Nonconformity and corrective action
10.3	Continual improvement

Shelf life Study and Stability Evaluation Test[1]

Shelf life study is to demonstrate that, under the rigors of distribution, storage, handling, and aging, the integrity of the final package is maintained at least for the claimed shelf-life of a product under storage conditions specified by the manufacturer, as long as the package is undamaged or unopened. There are two methods to demonstrate the shelf life of a product; **Real-Time Testing** and **Accelerated Aging Testing**.

■ **Real-time aging test** is performed to demonstrate that package materials and package integrity do not degrade over time at ambient conditions during the claimed shelf life of the product.

■ **Accelerated Aging Testing** is performed to demonstrate that package materials and package integrity do not degrade at an elevated temperature in order to simulate real time aging in a reduced amount of time.

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Shelf life Study and Stability Evaluation Test[2]

▪ What kinds of products can be applicable?

Shelf life study shall be conducted for **sterilized me dical devices**, **medicinal products**, **cosmetics** and **food products** to be approved or certified for CE ma rking, FDA or MFDS.

ICR provides reliable shelf life study and stability evaluation test with high performance thermo-hygrostat chambers and relevant facility equipment.

▪ List of thermo-hygrostat chambers that ICR owns;

- ESPEC(JAPAN): Model Name : EBE-3E20W6P3T-22
  TEMPERATURE RANGE : -40℃~ 80℃
  HUMIDITY RANGE : 10% ~ 95% R.H.
  INNER SIZE : 2950*1900*2800 (mm)

- ESPEC(JAPAN): Model Name : PL-3J
  TEMPERATURE RANGE : -40℃~ 150℃
  HUMIDITY RANGE : 20% ~ 95% R.H.
  INNER SIZE : 600*800*850 (mm)

- VOTSCH(GERMANY): Model Name - VC-7034
  TEMPERATURE RANGE : -72℃~ 180℃
  HUMIDITY RANGE : 10% ~ 98% R.H.
  INNER SIZE : 580*765*750 (mm)

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Audit for Ex equipment (ISO/IEC 80079-34)

The manufacture producing Ex equipment shall have quality system complied with **ISO/IEC 80079-34:2011 (Explosion atmospheres – Part 34: Application of quality systems for equipment manufacture).**

Based on ISO 9001 quality system, Ex equipment intended to use at explosive atmospheres is applied additional requirements considered risk and specificity.

ICR, on the basis of **professionalism and many experience** helps manufacture that be able to have quality system correctly.

ICR has capability to provide services both of ISO/IEC 80079-34 & ISO 9001 required obligatorily, and **continuous monitoring & management** for manufacture.

For IECEx and ATEX, we are planning to perform initial and surveillance audit by Korean auditor of ICR in the near future **with low cost and without the language barrier**.

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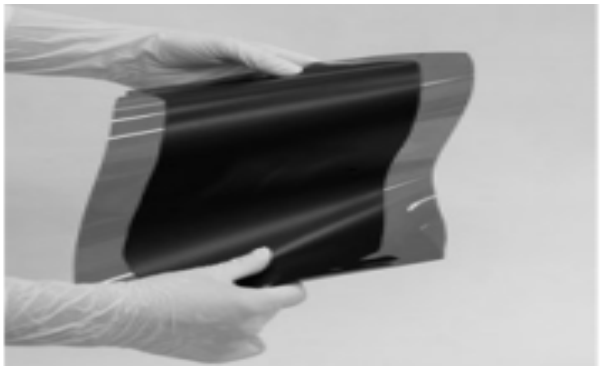
AIST succeeds in shielding Electromagnetic waves with paint using carbon nanotubes[1]

Research Group of **AIST** Nanotechnology Research Center, CNT Usage Team, Atasehika Research Institute, Japan, used a single layer **carbon nanotube (SWCNT)** fabricated by the super growth method, Developed a coating that forms a functional film.

As a method for shielding electromagnetic waves from various electronic apparatuses, a method of putting electronic apparatuses and parts connecting them into a metal housing has been used.

Recently, electronic devices have been diversified, miniaturized, and lightweight.
As a result, a complex body of resin or rubber and parts enclosed with the materials are increasingly used, and the electromagnetic wave shielding paint is applied as a base material A method of imparting an electromagnetic wave shielding function is attracting attention.



※ A photograph of a coating film formed on a polyamide sheet using the developed SWCNT-based water-based coating material.

Source : AIST

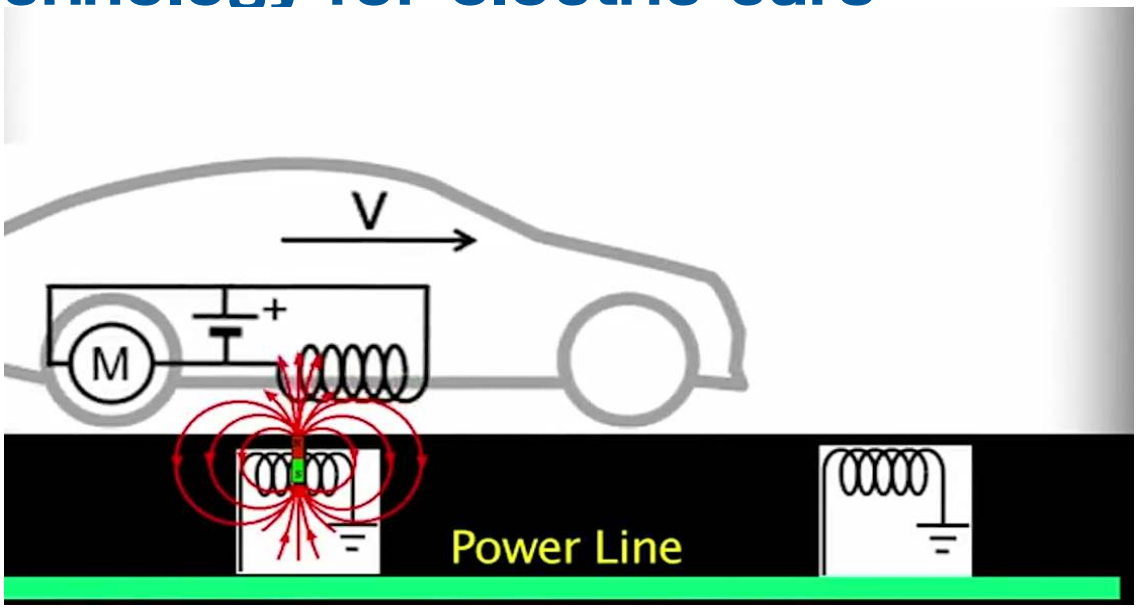
AIST succeeds in shielding Electromagnetic waves with paint using carbon nanotubes[2]

However, existing electromagnetic shielding paints have problems such as limited selectivity of the substrate or low electromagnetic wave shielding function.

The researchers developed a waterborne coating (SWCNT-based water-based paint) using **SWCNT capable of forming a coating with electromagnetic shielding.**
Since the coating material has high selectivity to the substrate, various coating methods such as a bar coating method, a spraying method and a dip coating method can be used. Therefore, a coating film can be formed on a base material having a complicated shape as well as a flat surface.
Further, the formed film can cope with the deformation of the substrate because it has high electromagnetic wave shielding function, durability against high temperature, and flexibility.
It is expected to be used as a measure against electromagnetic wave shielding in various fields such as automobile wiring harness and moving parts used in high temperature environment and industrial robots having complex shapes.

This technology was exhibited at the special booth of the 28th Annual Convention of the Plastic Molding

Stanford University researchers, develops wireless charging technology for electric cars



Stanford University researchers have developed **a new technology to charge electric cars**. Wireless charging is performed by using a current and a magnetic field generated between a coil installed at the lower end of the electric car and a coil installed at the traveling road.

Within a certain range, charging is possible even on the move.

Researchers say the new technology has been developed to improve the short mileage that was pointed out as a major problem with existing HEV.

The researchers succeeded in the development of the technology and basic experiments, but it is expected that it will take a long time to actually apply electric power to the electric vehicle in milliwatts.

Source : Betanews

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