

Newsletter

September, 2020



ICR



Hot Issue

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MOU sign with KOTITI Testing & Research Institute



- **ICR** and **KOTITI Testing & Research Institute** signed a business agreement for mutual cooperation on August. 12th, 2020.
- Through this agreement, Both **ICR** and **KOTITI Testing & Research Institute** will provide better service in testing, examine and certification as regards reliability, electromagnetic waves and toxic materials analysis.

☎ Inquiries

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Establishment of the IECEx Testing Laboratory (ExTL) in 2020



- ICR has completed the installation of an **Explosion Proof Test Laboratory (ExTL: IECEx Testing Laboratory)**, where testing and evaluation can be carried out according to IEC standards and is preparing to apply for **ExTL** registration during the second half of the year.
- In the field of explosion proof testing and certification, we are able to provide more expertise and more services and certifications to customers.



Establishment of the IECEx Testing Laboratory (ExTL) in 2020



- The following tests and evaluations are possible at the IECEx Testing Laboratory (ExTL).
- ▶ **IEC 60079-1:2014 Flameproof enclosures “d”**
 - Test for determination of explosion pressure
 - Overpressure test
 - Test for non-transmission of an internal ignition
 - 60079-series general test and environmental test
 - Test for Intrinsic safety and test for type of protection



[Explosion Chamber]

Establishment of the IECEx Testing Laboratory (ExTL) in 2020



[Equipment of Overpressure test]



[Equipment of Maximum experimental safe gap test]

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ISO 45001 accreditation scope expansion



- Recently, **ICR** was assessed by the Korea Accreditation Board (KAB) to expand the scope of accreditation **the Occupational Health and Safety Management System (ISO 45001)**.
- According to the results of the audit, **the expansion of accreditation scope was approved on July 28, 2020**.
- The expanded scope of accreditation is as follows.

Code No	Accreditation scope
IAF Code 12	Manufacture of chemicals and chemical products
IAF Code 13	Pharmaceutical products
IAF Code 14	Rubber and plastic products
IAF Code 31	Transporting and storage

- IAF codes 12,13,14 and 31 have been changed from non-accredited to accredited.
- Accordingly, from July 28, 2020, the initial and recertification audit for the scope of non-accredited of IAF codes 12,13,14 and 31 are not allowed.
- Clients who are currently maintaining the IAF Code 12,13,14 and 14 non-accredited certification shall be certified for initial audit.

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The past, present, and future of wireless charging



- **Wireless charging technology**, precisely called Wireless Power Transfer, is a convenient power charging technology that can get you away from cumbersome and cluttered lines.

- **Past**
 - ▶ The first concept of wireless power transmission was in 1905 when scientist Nikola Tesla planned to build the Tesla Tower (Wonder Cliff Tower) in New York.

 - ▶ There was a plan to easily supply power to the world by realizing long-distance wireless power transmission by using the internal coil, but it was canceled due to the difficulty of realization possibility and concern for human body effect of electromagnetic waves.

- **Present**
 - ▶ With the integration of the smart device wireless charging standard into Qi, the cost of introduction has been lowered, so the number of personal wireless power Transmitters/receivers is expected to increase to about 450 million units in 2017 and about 2.2 billion units in 2023. (2018 HIS Market Report)



The past, present, and future of wireless charging



- ▶ The number of products supporting wireless charging is also increasing. In addition to small device chargers, the range of application products such as stands, work lights, beds, side tables, notebook track pads, etc. is expanding.

■ Future

- ▶ In addition to the current magnetic induction method, a magnetic resonance method or a method of transmitting a long distance by converting power into microwave/laser/ultrasonic waves are being studied.
- ▶ Electric buses are being studied as a method of charging vehicles by burying electric wires in the road. It is possible to solve problems such as space for installation of chargers, waiting time for charging, and compatibility of charging plugs. Trial operation is being conducted in several places in Korea (in KIAST campus, some city buses in Gumi, etc.)
- ▶ Research is being conducted to enable wireless charging/power supply of several products in the house using a WiFi router, or to simultaneously supply wireless power to several electronic devices on the desk with a wireless charger for the entire desk.

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

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