

### Newsletter August, 2020





#### **Hot Issue**

- 1. Flameproof enclosure test facilities build
- 2. 2020 4th Auditor Training Course Plan
- 3. Combined Temperature & Vibration Equipment
- 4. Utilization status the 5G & Simplification of Measurement process



### Flameproof enclosure test facilities build



■ The ICR Explosion-Proof Certification Team visits the manufacturing site of the flameproof enclosure test facilities and checks the progress of the self-overpressure test and The overpressure test of the authorized institution is coming up next. In August, we will build an Ex test device and Ex test lab to provide more services to our customers and help them through technical support.



### Flameproof enclosure test facilities build



#### <IEC 60079-1:2014 Flameproof enclosures "d">

- Determination of the explosion pressure
- Overpressure test
- Test for non-transmission of an internal ignition 60079-series general test and environment test process



### Flameproof enclosure test facilities build



Our ICR Industrial Safety Center explosion-proof certification team provides free visit training for customers of Ex equipment manufacturers.

We are doing our best to provide education services to those who have difficulties in Ex certification to help them obtain Ex certification.

If you are interested, please contact the person in charge below.

**T** Inquiries

Industrial Safety Center / Yang Dae-song T.02-6351-9001 / yds@icrqa.com

## 2020 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 Aug 2020.
- Through the AU, TL, QM, EM, OH, FS 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.

AU/TL	Aug 03-05 (3 days)	8 hours / 1day, total 24 hours (3 days)
QM	Aug 06-07 (2 days)	8 hours / 1day, total 16 hours (2 days)
EM	Aug 10-11 (2 days)	8 hours / 1day, total 16 hours (2 days)
ОН	Aug 12-13 (2 days)	8 hours / 1day, total 16 hours (2 days)
FS	Aug 18-19 (2 days)	8 hours / 1day, total 16 hours (2 days)
MD	Aug 20-21 (2 days)	8 hours / 1day, total 16 hours (2 days)

#### **T** Inquiries

System Certification Div. / Kim, Chae-Lin T.02-6351-9001 / kcl@icrqa.com

## Combined Temperature & Vibration Equipment



#### TRENDS

- Test of large scale and high strength of products such as batteries and parts by electric vehicle development The test area of the higher spacs in the area required by the existing equipment. The performance of possible equipment is required.

#### **■ 8 TON Combined Temperature & Vibration**

- In line with these customer needs, the ICR has an 8-ton combined vibration tester.

It will be introduced from September and will be in operation.



- Performance : 8,000 kgf (sine, random)

- Shock: 24,000 kgf (6ms)

- Displacement : 100 mm (p-p)

- Chamber Temp : -50  $\sim$  170  $^{\circ}$ C

- Chamber Size : 1.2 m \* 1.2 m \* 1.0m

- BMW, FORD, Benz, H/KMC, GM



**T** Inquiries

Mobility Center / Lee, Han-Kook T.010-5522-1825 / lhk9876@icrqa.com

# Utilization status the 5G & Simplification of Measurement process

- According to the open signal survey, Korea's actual 5G network access level is 15% in SKT and LGU+ and 12% in KT. This means that even if you use a 5G smartphone in Korea, it is only 15% of the total usage time.
- When connected to 5G, the speed of using mobile apps and websites was in order of LG U+ (237.2 Mbps), SK Telecom (220.4 Mbps), and KT (214.8 Mbps). By carrier, 5G speed compared to the average speed of 4G was 5.2 times that of LG U+, 4.8 times of KT, and 3.5 times of SK Telecom.
- The 5G measurement time will be shortened to LTE level. In order for a mobile phone to be released, it is necessary to test the exposure of the human body to electromagnetic waves to ensure that it meets the human body protection standards.
- Unlike LTE, 5G has many antennas and uses multiple beams, so it takes a long time to measure for certification testing. Rather than measuring all cases, measurement guidelines have been prepared to protect the human body and simplify the measurement by finding and measuring the conditions with the maximum electromagnetic wave.

# Utilization status the 5G & Simplification of Measurement process

- If the improved measurement guidelines are applied, the measurement time of the 28 GHz 5G mobile phone will be shortened to a level similar to that of LTE, and the cost will be reduced accordingly.
- However, 28 GHz 5G mobile phones, which have benefited from simplified measurement, are not expected to be released this year. because of 28GHz infrastructure has not yet been established.
- Currently used 5G is difficult to use indoors and is not fast enough for users to feel. To solve this, you need to increase the number of base stations to improve the speed and quality of 5G network.



**T** Inquiries

EMC&RF Test Center / Lee, Hong-Kyu T.010-5522-2943 / hklee@icrqa.com



www.icrqa.com

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