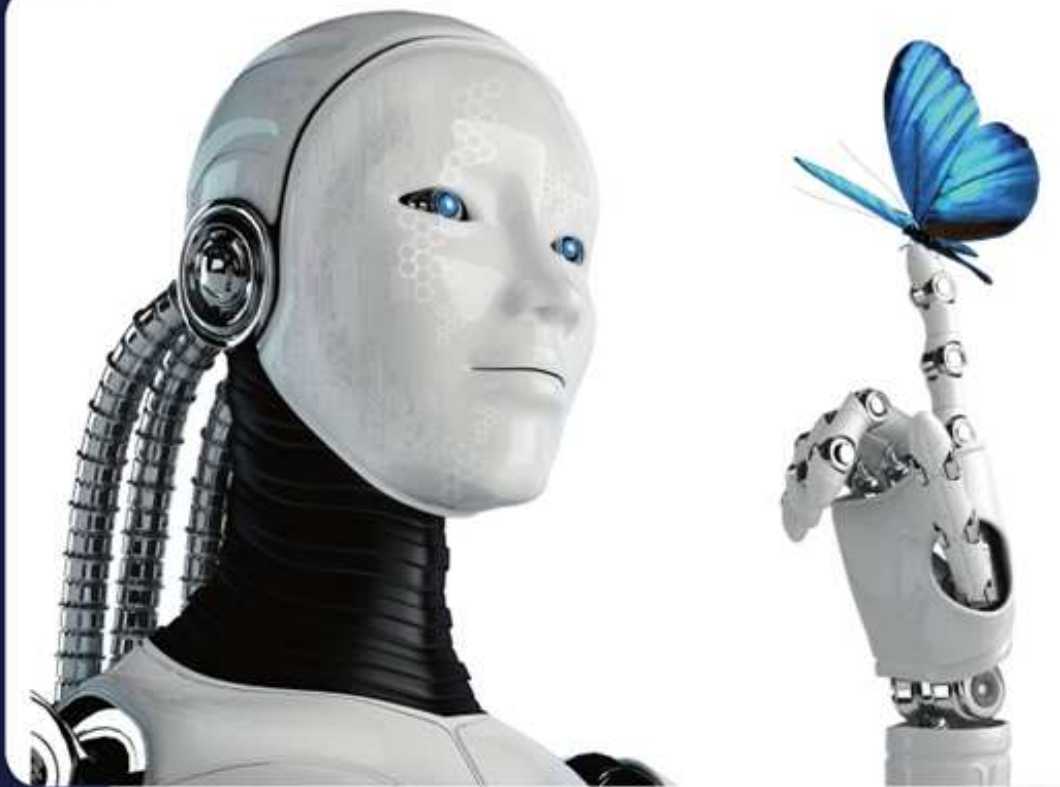


# Newsletter January, 2018



# ICR



## Hot Issue

1. Designated by Radio Research Institute
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3. ICR Polska MD Scope Expansion
4. Changes of Multi-site certification criteria and certification activity branch control criteria
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# Designated by Radio Research Institute



On November 29, 2017, I received the qualification from the National Institute of Radiological Research as **an Electromagnetic Compatibility Testing Laboratory**.

Based on this, ICR is providing **KC test certification registration**.



# Designated by Radio Research Institute

**지 정 서**  
*Certificate of Designation*

지정번호(Designation No.) : KR0165

기관명(Name of CAB) : 주식회사 아이씨알

주소(Address) : 경기도 김포시 양촌읍 황금3로 7번길 112

시험분야(Scope of Designation) : 전자파적합성

시험항목(Items of Tests) : 전파 차폐

위 기관을 「전파법」 제58조의5의 규정 및 ISO/IEC17025:2005에 의하여 방송통신기자재등 적합성평가 시험업무를 하는 기관으로 지정합니다.  
*This Laboratory is accredited and designated in accordance with the provisions of Radio Waves Act and International Standard ISO/IEC 17025:2005.*

2017. 11. 29.

**국립전파연구원장**  
*National Radio Research Agency*  
Ministry of Science and ICT



Electromagnetic compatibility (03.011)  
\_Designation number: KR0165



# ※ [Notification on Conformity Assessment of Broadcasting and Communication Equipment, etc.] Some revisions



## 1. Amendment of conformity identification marking method for broadcasting communication equipment

- In order to prevent confusion and inconvenience between businesses and consumers under the reorganization of government Used as a permanent identification label "R" that is not affected by changes in the name of the department in charge
- How to display identification code

<b>R</b>	-	<b>C</b>	<b>R</b>	<b>M</b>	-	<b>A</b>	<b>B</b>	<b>C</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
①		②	③	④		⑤				⑥												
방송통신 기기식별		기본인증 정보식별				신청자 정보식별				제품식별												

(New revision of existing broadcasting communication equipment identification code MSIP → R)

## 2. Amendment of Applicable Laws for Registration of Designated Laboratory Conformity

### ㉑ mobile means Reclassification of power transmission equipment

4. Household electric appliances and Electric motor current: Household electrical appliances, Electric tools, electric heating devices and Other electrical equipment	Power tools for moving means	1) Electric motor bicycle
		2) Electric motor board
		3) Electric motor wheelchair
		4) Electric motor scooter
		5) Other similar devices

### ㉒ Incorporate fire fighting equipment into the conformity assessment target device

16. Fire fighting equipment	1) short circuit alarm	10) Hydraulic opening and closing device for starting
	2) Gas leakage alarm	11) Commercial kitchen automatic fire extinguisher
	3) Receiver	12) Automobile pressure, overpressure adjustable Tampere
	4) repeater	13) Automatic closing device
	5) sensor	14) Cabinet Type Isfing Cooler Facility
	6) Residential kitchen automatic fire extinguisher	15) Flap damper
	7) Cabinet type automatic fire extinguisher	16) Guide light
	8) Gas, powder automatic fire extinguisher	17) Emergency light
	9) Solid aerosol automatic fire extinguisher	18) Other fire fighting equipment

출처: <http://www.rra.go.kr>(국립전파연구원 고시 제2017-14호)



# ICR Polska MD Scope Expansion

The Machinery Directive's task is to introduce rules about the sale of machines within the EU and to preserve the safety of consumers and workers.

If compliance is not met, it may prohibit placing them on the market or even order to withdrawal the machines that have already been placed on the market.

According to this rules, ICR Polska steadily expands **The Machinery Directive Scope.**

Additionally, **Mobile elevating work platforms** and **Vehicle Lifts** will be added to the scope in 2018.



# ICR Polska MD Scope Expansion

## ■ Vehicle Lifts

Vehicle Lifts should be compliant with EN 1493:2010. It provides the safety requirements and solutions needed for possible hazards (e.g. mechanical hazards, electrical hazards, operating hazards, overloading hazards etc.).



## ■ Mobile elevating work platforms

Mobile elevating work platforms should be compliant with EN 280:2013. Because people ride on the work platforms, it shall be installed the safe guard and designed the work platforms to consider hazards about not only basic hazards, but also falling, slipping.





# Changes of Multi-site certification criteria and certification activity branch control criteria

## ■ IAF MD1 will be published by combining MD19 and MD1

MD1 will be published in the first half of 2018. In the case of initial and recertification audit, 'multi-site which cannot be sampled', every site shall be audited. In the case of surveillance audit 30% of every site shall be audited.

## ■ The control criteria for certification activity branch will be tightened.

New IAF MD will be established, and risk assessment will be obliged. The contracted information for the branch shall be shared with the located national accreditation body.



# K-OHSMS 18001 certification trend



## ■ KAB occupational health and safety management system certification

- Established: April 2002
- Certification standard: K-OHSMS 18001
- Number of certification body: 24
- Issued certificate: 2,311(Construction 50%, Machinery, Electricity, Other transportation equipment 10% each)

# K-OHSMS 18001 certification trend



## ■ ISO standard development status

The development of FDIS 45001 is finished in 20<sup>th</sup> October 2017, and it will be published in March 2018.

ISO 17021-10(Competence requirements for auditing and certification of occupational health and safety management systems) will be published in the second half of 2018(November~ December).

# K-OHSMS 18001 certification trend



## ■ Migration instruction from OHSAS 18001 to ISO 45001

- Document type: IAF MD
- Publication schedule: January ~ February 2018
- Contents
  - Certification body: Gap analysis, Migration plan development
  - Accreditation Body: Accreditation assessor training, Migration program development.
- ※ If 1M/D off-site assessment is positive, the migration would be acceptable. However, if the off-site assessment is negative, office or witness audit may required.
- Certification body: Human resource training, Migration plan development, Migration audit M/D
- ※ Migration audit standard: OHSAS 18001 and equal standard

# Issue of a test report of KOLAS as to the railway goods



The ICR is recognized as an internationally accredited testing agency by the government(KOLAS, Korea Laboratory Accreditation Scheme) and provides product testing services with specialized skills and advanced testing equipment.

Recently, By expanding the test standards for railway equipment, it is possible to perform ' type approval ' work concerning railway equipment under the Railway Safety Act

## ■ What is 'type approval'?

Tests to verify safety and quality in relation to railway vehicle/equipment, whether the first built railway vehicle/equipment in accordance with the Railway Safety Act complies with the prescribed railway technical standards.

# The status of KOLAS-related accreditation



Test method	Standard designation	Test method	Standard designation
KS C IEC 62236-1:2006	Railway applications – Electromagnetic compatibility – Part 1 : General	IEC 61373:2010	Railway applications – Rolling stock equipment – Shock and vibration tests
KS C IEC 62236-2:2006	Railway applications – Electromagnetic compatibility – Part 2: Emission of the whole railway system to the outside world	IEC 62498-3:2010	Railway applications – Environmental conditions for equipment – Part 3: Equipment for signalling and telecommunications
KS C IEC 62236-3-1:2006	Railway applications – Electromagnetic compatibility – Part 3-1: Rolling stock – Train and complete vehicle	EN 50155:2007	Railway applications – Electronic equipment used on rolling stock
KS C IEC 62236-3-2:2006	Railway applications – Electromagnetic compatibility – Part 3-2: Rolling stock - Apparatus	EN 61373:2010	Railway applications – Rolling stock equipment – Shock and vibration tests
KS C IEC 62236-4:2006	Railway applications – Electromagnetic compatibility – Part 4: Emission and immunity of the signalling and telecommunications apparatus	KS C IEC 60571:2002	Railway applications – Electronic equipment used on rolling stock
		KS C IEC 61373:2002	Railway applications – Rolling stock equipment – Shock and vibration tests
KS C IEC 62236-5:2006	Railway applications – Electromagnetic compatibility – Part 5: Emission and immunity of fixed power supply installations and apparatus	KS C 7620:2003	Railway car luminaries for fluorescent lamps
		KS R 9144:2014	Test methods for vibration of parts of railway rolling stock
IEC 60571:2012	Railway applications – Electronic equipment used on rolling stock	KS R 9146:2002	Railway Rolling stock parts – Test methods for shock



# The status of KOLAS-related accreditation



Test method	Standard designation
KS R 9156:2002	General rules for tests of electronic equipment used on railway rolling stock
KS R 9186:1996	Parts for railway signal – Vibration test methods
KS R 9189:2003	Parts For Railway Signaling Waterproof Test Methods
KS R 9191:1996	High and Low temperature testing methods for parts of railway signal
KS R 9192:1996	Change Of Temperature Testing Method For Parts of Railway Signaling
KS R 9193:1996	Insulation Resistance And Withstand Voltage Testing Methods Of Parts For Railway Signaling
KS R 9197:1996	Test Methods For Insulation Resistance And Withstand Voltage Of Railway Rolling Stock

Test method	Standard designation
KS R 9213:2007	Railway rolling stock – High and low temperature test methods of parts
KRS CS 0003-13:2013	Railway Rolling Stock- Test methods : Train signaling and telecommunications
KRS SG 0014-16(R):2016	Power Supply for Signal Device
KRS SG 0015-14(R):2014	Electronic Interlocking Device
KRS CM 0026-16:2016	The Data Transmission Equipment between Train and Wayside(On-board Equipment)-Test methods
KRS SG 0033-14(R):2014	Insulated Audio Frequency Track Circuit
KRS SG 0036-16(R):2016	Track Circuit Function Monitoring Device (TLDS)

# The status of KOLAS-related accreditation



Test method	Standard designation
KRS SG 0038-16(R):2016	Non-insulated Audio Frequency Track Circuit
KRS SG 0051-14(R):2014	Railroad Crossing Control Unit(Plug in Type)
KRS SG 0054-14(R):2014	Single Track Automatic Block Control Device
KRS SG 0055-14(R):2014	Double Track Automatic Block Control Device

Test method	Standard designation
KRS SG 0059-14(R):2014	Automatic Train Stop Wayside Transmitter
KRS SG 0067-14(R):2014	Track-side subsystem-Test methods : Equipments for Signalling
KRCS C027 03:2011	Signal Floating Rectifier
KRCS C229 03:2016	Electronic Interlocking System

# Autonomous vehicle system configuration, element technology and development stage



According to the World Health Organization (WHO), millions of people are injured every day in the world and more than 3,500 people die from traffic accidents. The annual number of traffic accidents is 1.3 million, and if the increase is large, it is estimated that the number of traffic accident deaths in 2020 will reach 1.9 million a year. Also, according to the statistics of Korea's Road Traffic Corporation in 2015, more than 95% of all traffic accidents are caused by driver's carelessness.

Therefore, in order to minimize driver 's negligence and to reduce the loss of life caused by traffic accidents, advanced nations in the automotive industry have been supporting the development of autonomous vehicle technology by putting a lot of budget from early 90' s. The function of autonomous vehicle is largely composed of recognition, judgment and control.

[Source] Autonomous vehicle system configuration, element technology and development stage  
[Writer] MOT Consultant

# Autonomous vehicle system configuration, element technology and development stage



Autonomous vehicle system configuration		Element technology	ICT and OEM role expected
External driving environment recognition	Path navigation	Precision mapping and positioning (High-altitude maps and high-precision GPS devices)	<p>Lack of technical standards and open systems</p> <p>-&gt; We look at the trend of standardization of technology rather than proprietary investment and maintain cooperative relations with various companies</p>
	Fixed entity recognition (Lanes, tunnels, etc.)	V2X communication (Vehicle to infra / Vehicle) (Adjacent vehicle and infrastructure communication)	
	Variable - Moving object recognition (vehicles, pedestrians, traffic lights, etc.)	ADAS Sensor (Lidar Sterep, Camera, Rader etc)	
Judgment and Driving Strategy	Situation determination and strategy establishment (car change, intervention, etc.)	Learning type judgment and control system (Autonomous driving record based algorithm)	<p>Gain technology leadership with existing OEM realm And Investment Area for Retention</p> <p>-&gt;Fostering differentiation through independent investment</p> <p>-&gt; Prior to the full-fledged autonomous driving car and utilize demonstration materials</p>
	Driving trajectory generation (trajectory, speed, etc)	Sensor based driving situation recognition system (Sensor based operation)	
Vehicle control	Vehicle control (Steering, acceleration, deceleration, etc.)	Integrated Vehicle Control Solutions (Existing ADAS-based vehicle control system)	

# Development stage a Autonomous driving (SAE standard)



The Road Traffic Safety Administration and the Automotive Engineering Society (SAE) of the United States present the level of autonomous driving technology step by step.

Of these, SAE standards are the most common. SAE International's (On-Road Automated Vehicle Standards Committee), a global association of more than 128,000 engineers and related technical experts engaged in the aerospace, automotive and commercial vehicle industries in 2014, L5) proposed an automation level.

[Source] Autonomous vehicle system configuration, element technology and development stage  
[Writer] MOT Consultant



# Development stage a Autonomous driving (SAE standard)



Automati on stage	Characteris tic	Contents
A person monitors the driving environment		
Level 0	Non- automatic	A step in which the driver entirely controls all operations and promotes all dynamic driving
Level 1	Driver assistance	Where in the vehicle is run by a steering assist system or an acceleration / deceleration support system, but the person performs all the functions for the dynamic running of the vehicle
Level 2	Partial automation	Although the car is operated by the steering assist system or the acceleration / deceleration support system, the driving environment is monitored by the person and the responsibility for safe driving is also borne by the driver
Autonomous driving system monitors driving environment		
Level 3	Conditional automation	The system controls all aspects of the driving operation, but if the system asks the driver to intervene, the driver must properly control the vehicle and the responsibility lies with the driver.
Level 4	Advanced automation	The system is carried out both in the core control of the driving, in the driving environment monitoring, and in the emergency, but the system is not always controlled at all times.
Level 5	Fully automated	The system is in charge of all road conditions and environments.



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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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