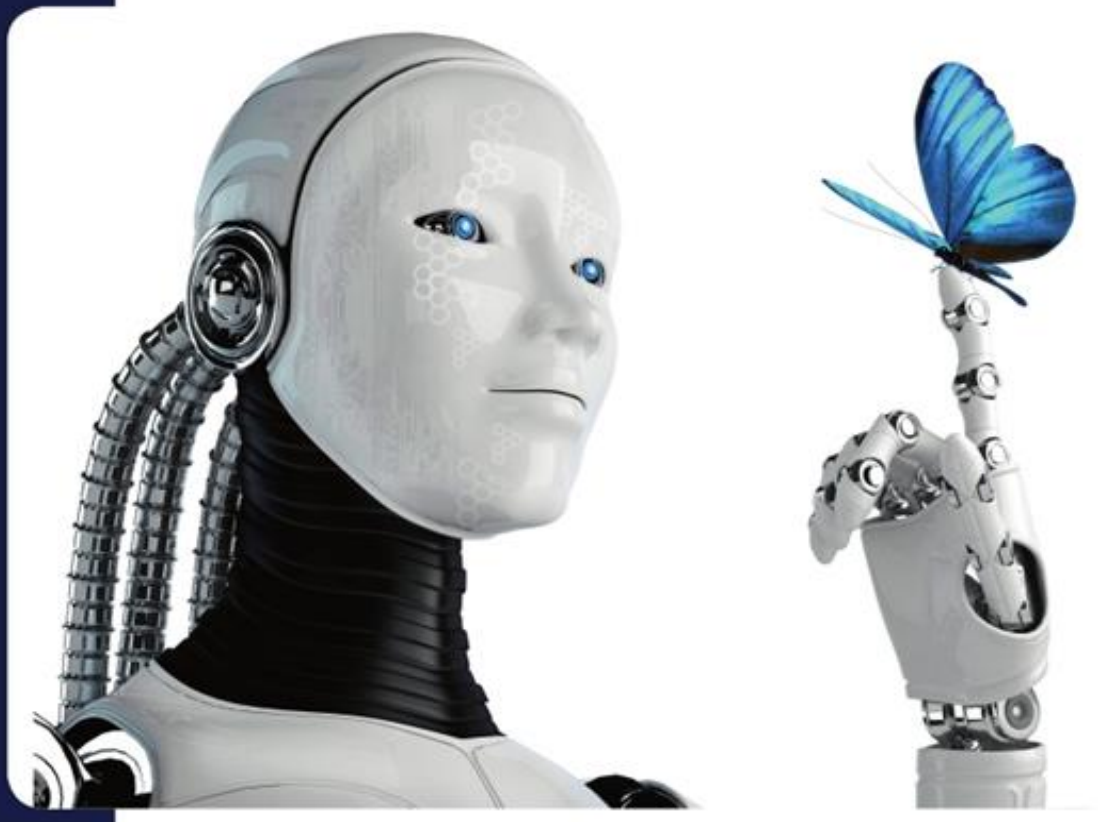
Newsletter
January, 2024

ICR



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Hot Issue

1. ICR become accredited certification body for ISO 19443
2. Nuclear Energy Supply Chain Quality Management System(ISO 19443) Internal Auditor Training Course
3. Hyundai/Kia Motors 22nd revision of EMC standard
4. Publication of EN ISO 13849-1:2023
5. UN 38.3 Revision 8
6. Notification No. 2023-22 of the National Radio Research Institute

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ICR become accredited certification body for ISO 19443

Introduction to ISO 19443(Nuclear Energy Supply Chain Quality Management System) Certification

▣ What is ISO 19443 Certification?

▶ ISO 19443 is an international nuclear quality management standard designed to improve nuclear safety and quality throughout the nuclear power supply chain.

▶ This is a quality management standard for suppliers of products and services critical to nuclear safety (ITNS), established based on ISO 9001 by adding "nuclear safety culture" and "nuclear quality assurance program requirements."

※ **Nuclear Safety** : Protecting workers, the general public and the environment from excessive radiation risks by achieving appropriate operating conditions, preventing accidents and mitigating the consequences of accidents.

※ **ITNS(Important to Nuclear Safety)** : Characteristics of a product, service, item or activity that, if failed, could result in excessive radiation exposure to people or the environment.

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ICR become accredited certification body for ISO 19443

▣ Background

▶ Overseas

- When entering the nuclear power plant market in European countries (France, Czech Republic, Poland, etc.), ISO 19443 certification is required.

▶ Domestic

- Expansion of domestic nuclear power plant construction and operation based on nuclear safety culture.
- Absence of ISO 19443 application policy/guidelines for KEPIC and ASME certified companies.

▣ Key Requirements

- Nuclear Safety Culture
- Independence of quality assurance organization.
- Determination of ITNS items/services.
- Use of Commercial Grade Item.
- Prevention of Counterfeit, Fraudulent.

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ICR become accredited certification body for ISO 19443

▣ Expected effect

- Identify and prevent potential risks for Important to Nuclear Safety(ITNS) Item and Service.
- Strengthening social responsibility capabilities by establishing a nuclear safety culture system.

▣ Certification Target

- Public institutions, public enterprises and general enterprises with customer/stakeholder requirements for nuclear safety quality management.
- Equipment supplier preparing for overseas export in the nuclear industry.

▣ Application and Inquiry

- **System Certification Center / 02-6351-9001 / hckim@icrqa.com**
- References. ISO 19443:2018 certification body certification certificate

☎ Inquiries

System Certification Center / Kim, Hyun-Cheol

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ICR become accredited certification body for ISO 19443

KOREA ACCREDITATION BOARD

Nuclear Supply Chain Management System Certification Body

CERTIFICATE OF ACCREDITATION

Korea Accreditation Board(KAB) has accredited

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#1501-ho, 298, Beotkkot-ro, Geumcheon-gu, Seoul, Republic of Korea

complying with ISO/IEC 17021-1:2015 and ISO/TS 23406:2020 for providing nuclear supply chain management system certification in accordance with ISO 19443:2018.

. Accreditation No.	: KAB-NQ-02	. Name of Representative	: Deok-yong Kim
. Initial Accreditation Date	: December 12, 2023	. Legal Entity Registration No.	: 105-86-35114
. Validity	: December 12, 2023 ~ December 11, 2025	. Issue Date	: December 12, 2023
. Scope of Accreditation	:		

A Machinery and structure

B Electrical equipment

D Electricity generation and supply

E Construction

F Transportation and waste treatment

Korea Accreditation Board

CEO, JINSUH PARK

Nuclear Energy Supply Chain Quality Management System Internal Auditor Training Course (ISO 19443)

▣ As the **ICR Certification Institute acquired ISO 19443 certification as a certification body**, we provide customer service in the nuclear industry. As part of our effort to help strengthen internationalization and competitiveness, we have held an ISO 19443 internal auditor course.

▣ **The ISO 19443 internal auditor course** is for those in charge of quality management systems in the nuclear industry for operation management and improvement of nuclear safety-based standard requirements and processes We help you cultivate knowledge.

▣ The detailed training schedule is provided below. for further inquiries, **please contact the training manager**. I will answer you with all my sincerity.

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Nuclear Energy Supply Chain Quality Management System Internal Auditor Training Course (ISO 19443)

▣ **The detailed schedule** for the internal auditor training course in January 2024 is as follows.

Training Guide	**Training Name**	**ISO 19443 Internal Auditor Training Course**
	Training Schedule	2024. 01. 09(Tue) ~ 1.11(Thu), 3 days [8hr/1day, Total 24hr(3 days)]
	Training Place	Seminar room, B1F 6th Daeryung Post Tower, 298 Beotkkot-ro, Geumcheon-gu, Seoul
	Participation Target	QM, QA, QC, Team Leader, ISO Certification manager , Nuclear Industry Workers
	Benefits	ISO 19443 training materials and certificate provided

※ Please note that the training schedule may change depending on the number of applicants and other circumstances.

☎ Inquiries

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T. 02-6351-9001 / hckim@icrqa.com

Nuclear Energy Supply Chain Quality Management System Internal Auditor Training Course (ISO 19443)

▣ ISO 19443 Training Schedule

Date	Item	Contents	Note
1 day **1/9(Tue)** **09:00~18:00**	ISO 19443 Outline	- ISO 19443 Outline - ISO 19443 Composition - ISO 19443 Certification System - ISO 19443 Key points at each stage	
	ISO 19443 Requirements Description	1. Scope 2. Normative reference 3. Terms and Definitions 4. Context of the organization 5. Leadership 6. Planning	
2 day **1/10(Wed)** **09:00~18:00**	ISO 19443 Requirements Description (Cont.)	7. Support 8. Operation 9. Performance evaluation 10. Improvement	
3 day **1/11(Thu)** **09:00~18:00**	ISO 19443 Non-conforming Search	[Training] Non-conforming Search	
	Internal Audit	- Internal Audit Outline - Auditor's Attitude and Wishes [Training] Establishing an audit plan, Writing an audit checklist - Conduct Audit	
	Internal Audit Report and follow-up	- Reporting and follow-up - Preparation of audit report	

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Hyundai/Kia Motors 22nd revision of EMC standard

▣ Hyundai/Kia Motors 22nd revision of EMC standard

Hyundai/Kia Motors has revised the EMC testing standards for automotive components (November 2023)

The most important part of this 22nd revision is the separation of the EMC standard for existing automotive component and the high voltage component. High voltage component were separated for professional management.

▣ The major revision history is as follows.

1) Apply the same electrical component class classification method as the actual vehicle test conditions
2) Radiated Immunity (ALSE) test item frequency expands from 3 GHz to 6 GHz
3) Sweep method added in Portable Transmitter test method
4) Radiated Emission test item frequency expands from 3 GHz to 6 GHz

☎ Inquiries
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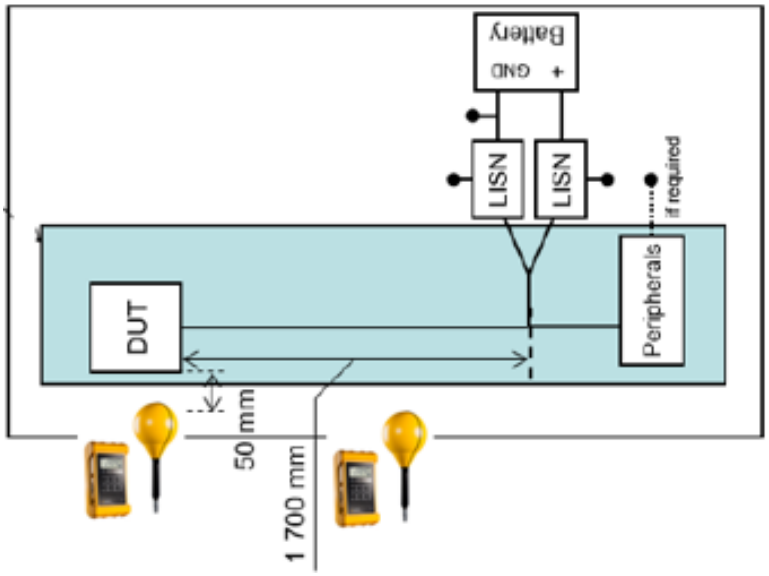
Hyundai/Kia Motors
22nd revision of EMC standard

5) Magnetic Field Emission (60 cm Loop Antenna) test item added.
(example of actual vehicle test)

6) Magnetic Field Emission (ICNIRP) test item added.



7) Modification of ESD test setup for portable devices such as smart keys

Publication of EN ISO 13849-1:2023

▣ EN ISO 13849-1:2023 was published on November 30, 2023.

▣ **EN ISO 13849-1 is a safety standard** that provides design and safety requirements for safety-related control systems used in machinery.

▣ Main changes

Clause	Main changes
4	Recommendation for risk assessment
5	Specification of the safety functions
6	Combination of several subsystems
7	Software safety requirements
9	Ergonomic aspects of design
10	Validation
Annex G.5	Management of the functional safety
Annex L	Electromagnetic interference (EMI) immunity
Annex M	Additional information for safety requirements specification
Annex N	Fault-avoiding measures for the design of safety related software
Annex O	safety-related values of components or parts of the control systems

Publication of EN ISO 13849-1:2023

▣ A main change is that the validation process has been moved from EN ISO 13849-2 to EN ISO 13849-1, and the newly added Annex L provides four ways to meet EMI requirements.

▣ EN ISO 13849-1:2015 is scheduled to be withdrawn on May 31, 2026, and EN ISO 13849-1:2015 is applicable before the withdrawal date.

▣ If you have any questions about the design of **the EN ISO 13849-1 safety-related control system**, please feel free to contact our Industrial Safety Center.

☎ Inquiries

Industrial Safety Center / Kang, Gyeong Man

T.070-5083-2620 / kkm@icrqa.com

UN 38.3 Revision 8

▣ The UN Manual of Tests and Criteria contains criteria, test methods and procedures to be used for classification of dangerous goods according to the provisions of the "United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations". And **clause 38.3 is for Lithium metal and Lithium ion batteries.**

▣ Originally developed by the Economic and Social Council's Committee of Experts on the Transport of Dangerous Goods which adopted a first version in 1984, it has been regularly updated and amended every two years. Presently, Revision 8 was published on November 27, 2023.

▣ New provision for **the testing of sodium-ion batteries is added.**

A summary of test items :

UN 38.3 Revision 8

Sodium Ion Cells and Batteries						
Test item		Cell	Battery	Battery assembly ≤ 6.2 kWh	Single cell battery	Component cell
T.1 Altitude Simulation		X	X		X	
T.2 Thermal test		X	X		X	
T.3 Vibration		X	X	X	X	
T.4 Shock		X	X	X	X	
T.5 External short circuit		X	X	X	X	
T.6 Impact/ Crush		X			X	X
T.7 Overcharge			X*	X*	X*	
Q'ty	T.1~T.5	10	Small: 8 Large: 4	1 (T.3 ~ T.5)	10	-
	T.6	10	-		10	10
	T.7	-	Small: 8 Large: 4	1	8	-

* In case of DUT with overcharge protection

▣ Tests T.1 to T.5 shall be conducted in sequence on the same cell or battery. Test T.6 is for cells only.

UN 38.3 Revision 8

▣ If you have any inquiry about **battery testing and certification service** as well as UN 38.3 test, please feel free to contact our Battery Testing Center.

☎ Inquiries

Battery Testing Center / Yang, Chul-Ho

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Partial revision of technical standards for wireless equipments for telecommunications business

Notification No. 2023-22 of the National Radio Research Institute

In accordance with Article 45 (Technical Standards) of the Radio Act and Article 123 (1)-7 (Delegation and Enforcement Decree of the same Act), some of the "Technical Standards for Wireless Facilities for Telecommunications Business" (National Radio Research Institute Notice No. 2022-15, 2022.7.29) are revised and announced as follows

December 8, 2023

Director of the National Radio Research Institute

▣ 1. Reasons for revision

Some of the "Technical Standards for Wireless Equipment for Telecommunications Business" are revised and announced as follows to reflect the conformity of the International Standard (ITU/3GPP) of 5G mobile communication terminal out-of-band launch conditions.

Partial revision of technical standards for wireless equipments for telecommunications business

▣ 2. Main contents

▶ 2-1 Clarification of expression of "additional unnecessary launch conditions" table of LTE radio equipment, same as the existing standard (Article 4 (4) 4 (f) and Article 4 (4) 6 (f)

▶ 2-2 clarifies the expression of the frequency range of the "adjacent channel leakage power" measurement of the narrow-band Internet of Things wireless equipment, clarifies the expression of the "additional unnecessary launch conditions" table, and is the same as the existing standard (Article 4 (6) 4 (c) and Article 4 (6) (c))

▶ 2-3 The table of "out-of-band launch conditions" of mobile communication terminals is simplified and revised according to the expression set out by the International Standard (ITU/3GPP) to ease some standards (Article 4(8)(6(d) and Article 4(10)(6(d))

Change Out-of-Band Launch Limit by Occupied Frequency Bandwidth

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