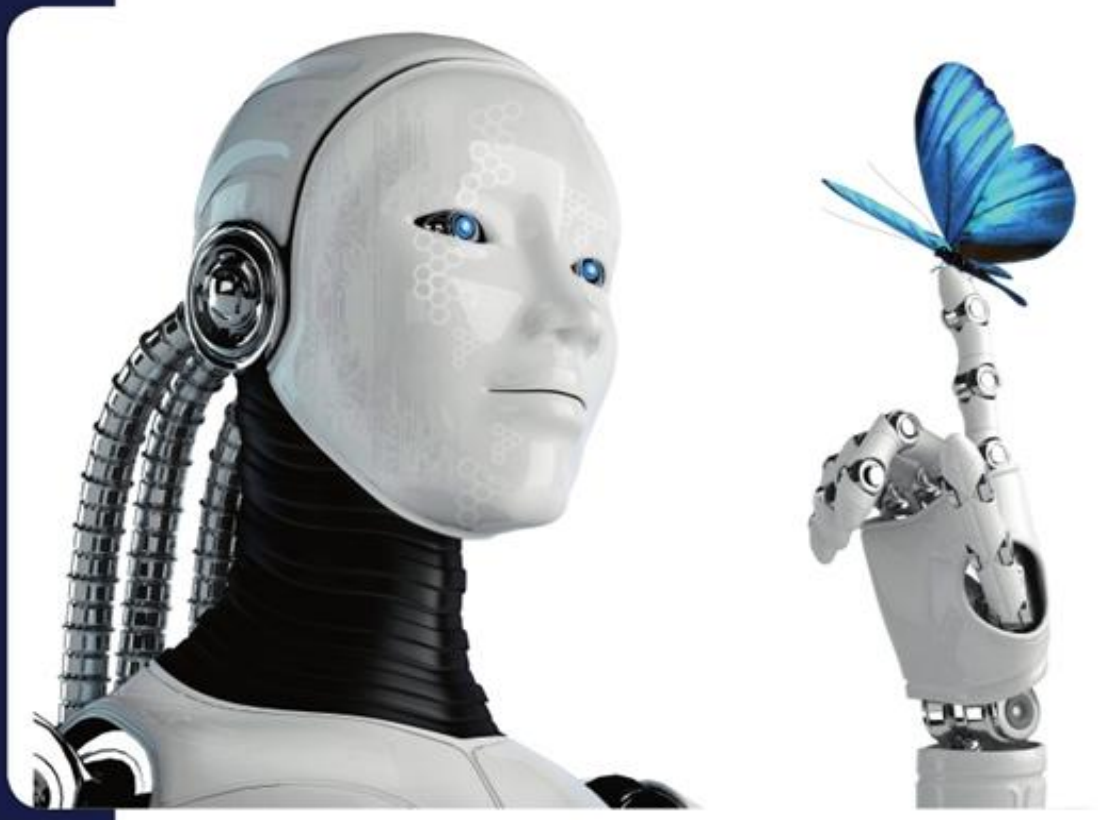
Newsletter
September, 2025

ICR



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Hot Issue

1. Designated as Korea's First Traction Battery Safety-Performance Testing Institution
2. FCC Proposal on Spectrum Regulations to Support Advanced Aviation Technologies
3. ISO 9001:2025 Revision Progress
4. BN EN 1114-1:2011 Plastics and rubber machines —Extruders and extrusion lines

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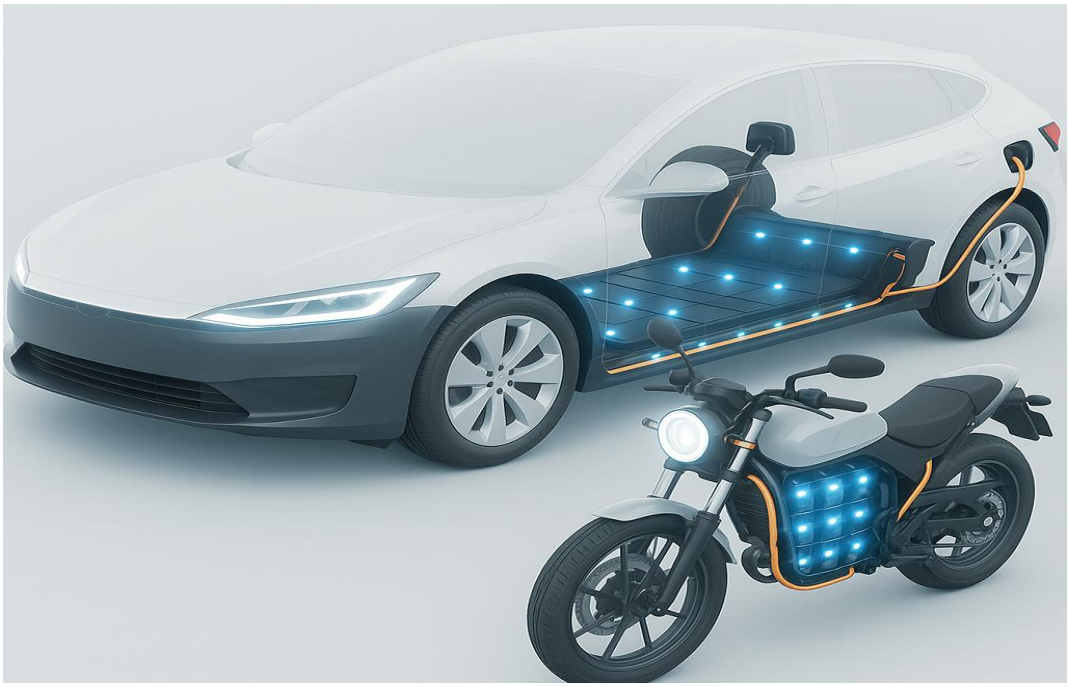
Designated as Korea's First Traction Battery Safety Performance Testing Institution

▣ ICR Designated as Korea's First "Traction Battery Safety Performance Testing Institution"

ICR Co., Ltd. (ICR)'s Pyeongtaek Battery Testing Center received **"Certificate No. 1 of Designation as a Safety Performance Testing Institution for Core Devices"** from the Ministry of Land, Infrastructure and Transport on August 8, 2025.

The core device covered by this designation is **the traction battery**, and the Center has been officially designated as **a safety performance testing institution** pursuant to Article 30-8(3)1 of the Motor Vehicle Management Act and Article 40-22(5) and (7) of its Enforcement Rule.

[MOLIT Notice No. 2025-1020**]**



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Designated as Korea's First Traction Battery Safety Performance Testing Institution

▣ MOLIT Official Letter & Safety Performance Testing Institution Certificate of Designation

국토교통부

국 토 교 통 부

수신 주식회사 아이씨알 (ICR)
(경유)
제목 핵심장치등의 안전성능시험 시험기관 지정서 발급

귀하(사)께서 자동차관리법 제30조의8 및 동 법 시행규칙 제40조의22에 따라 신청한 '핵심장치등의 안전성능시험 시험기관 지정'에 대하여 붙임과 같이 지정서를 발급합니다.

붙임 핵심장치등의 안전성능시험 시험기관 지정서(별첨) 1부. 끝.

국토교통부장관

주무관	이민영	공업사무관	심형석	자동차정책과장	전결 2025. 8. 8. 박용선

협조자

시행 자동차정책과-4166 (2025. 8. 8.) 접수

우 30103 세종특별자치시 도움6로 11 (어진동) / http://www.molit.go.kr

전화번호 044-201-3841 팩스번호 - / dididu12@molit.go.kr / 비공개(6,7)

문서관리카드 자동차정책과-4166 1/1

■ 자동차관리법 시행규칙 [별지 제26호의17서식]

핵심장치등의 안전성능시험 시험기관 지정서

(Designation of safety performance test institution for an EV battery)

제1호(No.1)

신청인 (Applicant)	기관명(법인명) (Name of the institution) 주식회사 아이씨알	법인(사업자)등록번호 (Corporate registration number) 110111-2431479
	대표자명(Name of Representative) 김덕용	전화번호(Tel) 02-6351-9003
	주소(Address) 경기도 김포시 양촌읍 황금3로7번길 112, 113	
핵심장치등 (Key devices)	명칭(Name) 구동축전지, 이륜자동차의 구동축전지	

시험항목 (Test items)		과충전 Overcharge	과방전 Over-discharge	과열방지 Over-temperature	과전류 Over-current	단락 External short circuit	낙하 Drop	침수 Water immersion	연소 Fire resistance	진동 Vibration	열충격 Thermal shock	충격 Mechanical shock	압착 Mechanical integrity
	자동차 Vehicle	√	√	√	√	√	√		√	√	√		√
	이륜자동차 Motorcycle	√	√	√	√	√	√	√	√	√	√		

「자동차관리법」 제30조의8제3항제1호 및 같은 법 시행규칙 제40조의22제5항·제7항에 따라 위와 같이 안전성능시험 시험기관으로 지정합니다.

In accordance with Article 30-8 (3) of the Motor Vehicle Management Act and Article 40-22 (5) and (7) of its Enforcement Rule, it is hereby designated as a safety performance test institution for an EV battery, as stated above.

2025년 8월 8일(2025/08/08)

국토교통부장관
Minster of Land, Infrastructure and Transport
Republic of Korea

직인 official seal

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Designated as Korea's First Traction Battery Safety Performance Testing Institution

▣ The importance of Traction Batteries and Safety

Traction batteries are electrical energy storage devices that power the drive motors of electric vehicles and two-wheeled vehicles. As demand for electric vehicles continues to grow, ensuring battery safety is becoming a critical requirement. Accordingly, the government is enacting and enforcing relevant laws to ensure the use of only batteries with proven safety.

▣ Legislative Revisions and ICR's Proactive Response

The Ministry of Land, Infrastructure and Transport introduced mandatory **self-certification of safety performance testing** for drivetrain batteries starting in August 2023. Subsequently, through a revision on February 18, 2025, it was stipulated that, **starting in 2026, only testing institutions designated under Article 40-22 of the Enforcement Decree of the Automobile Management Act will be required to conduct standard testing.**

The ICR Pyeongtaek Battery Testing Center responded swiftly to regul atory changes, meeting the legal requirements ahead of other testing centers and securing its status as **Korea's first designated testing institution**.

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Designated as Korea's First Traction Battery Safety Performance Testing Institution

▣ Test Items and Scope of Services

Items	Vehicle	Two-Wheel Vehicle	Note
Over-charge	○	○	
Over-discharge	○	○	
Over-temperature	○	○	
Over-current	○	○	
External short circuit	○	○	
Drop	○	○	
Water immersion	-	○	Vehicle Battery Approval Expected in Q3 2025
Fire resistance	○	○	
Vibration	○	○	
Thermal shock	○	○	
Mechanical shock	-	N/A	Vehicle battery 'shock' item to be outsourced
Mechanical integrity	○	N/A	

[The ICR Battery Testing Center]

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Designated as Korea's First Traction Battery Safety Performance Testing Institution

▣ Additional testing areas and responses

❖ Vehicle Submersion Testing

Testing facilities are currently under construction, and additional accreditation is expected in Q3 2025.

❖ Vehicle Impact Testing

Under Appendix 1-48 ("Drive Battery Safety Tests") of the Detailed Enforcement Regulations of the Standards for Performance of Motor Vehicles and Auto Parts, testing must be performed using either (1) a drop test or (2) an impact/crush test. Most clients currently select the drop test. Impact/crush testing is available through a partner laboratory if preferred.

▣ inquiries related to battery testing

Although mandatory certification will begin in 2026, conducting tests at ICR—a government-designated institution—even during the grace period can enhance product reliability and maximize marketing impact.

For **all inquiries related to battery testing**, including traction battery safety performance tests, please feel free to contact **ICR** at any time.

☎ Inquiries

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FCC Proposal on Spectrum Regulations to Support Advanced Aviation Technologies

▣ Overview

❖ **The Federal Communications Commission (FCC)** has proposed the following measures to advance next-generation aviation technologies.

1) Authorize the use of the 450 MHz band to support advanced aviation operations

2) Permit the use of the 24.45–24.65 GHz band for drone detection.

3) Update FCC regulations related to the 849–851 MHz and 894–896 MHz bands currently allocated for in-flight connectivity.

FCC Proposal on Spectrum Regulations to Support Advanced Aviation Technologies

▣ Key Details

❖ FCC Announcement

The FCC announced its intent to **revise spectrum regulations to facilitate the rapid development of both manned and unmanned advanced aviation technologies.**

- FCC Chairwoman Jessica Rosenworcel stated:
"Today's decision on advanced aviation mobility will enhance the accessibility, convenience, and efficiency of passenger and cargo transportation in the future."

- She further emphasized:
"This also means that, in emergency situations such as the California wildfires, these technologies could be deployed to deliver personnel and supplies into hard-to-reach areas, inspect critical infrastructure in disaster zones, and support first responders in search and rescue operations."

FCC Proposal on Spectrum Regulations to Support Advanced Aviation Technologies

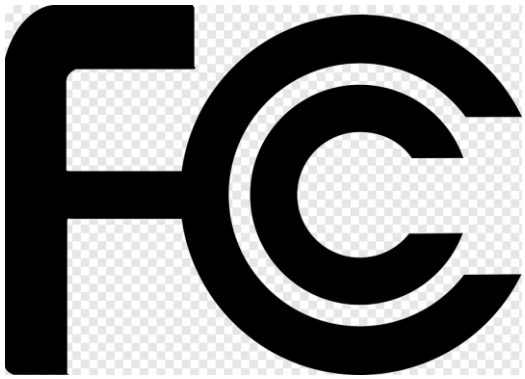
❖ Advanced Aviation Mobility Systems

Advanced aviation mobility systems enable both piloted and unmanned operations, including remote control and automated technologies.

- These systems are designed to connect regional air traffic with the national airspace, providing greater accessibility and supporting services such as urban–airport shuttles, large-scale cargo transport, and passenger mobility solutions.

- The Notice of Proposed Rulemaking (NPRM) also highlights wireless communication technologies, including:

• Command and control for flight operations.
• Reliable in-flight broadband connectivity for passengers.
• Drone detection and monitoring systems to safeguard sensitive airspace.



[FCC Marking]

FCC Proposal on Spectrum Regulations to Support Advanced Aviation Technologies

❖ NPRM Proposals

The NPRM outlines the following regulatory updates:

- Open the 450 MHz band for aviation command and control, establish a single nationwide license, and adopt flexible licensing, operational, and technical rules to ensure robust utilization across multiple altitudes while minimizing interference.

- Expand the use of the 24.45–24.65 GHz band to support drone detection and geolocation operations.

- Modernize FCC regulations governing the 849–851 MHz and 894–896 MHz bands, which are currently applied to commercial aviation ground-to-air systems.

☎ Inquiries

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ISO 9001:2025 Revision Progress

▣ ISO 9001:2025 Draft Revision Released

The International Organization for Standardization (ISO) has released the draft revision of the international standard for quality management systems, ISO 9001, with the aim of publication in 2025. **ISO 9001** is currently **the most influential quality management standard**, adopted by over 1 million organizations in more than 170 countries worldwide.

ISO 9001:2025 Revision Progress

This revision is not merely a document revision, but a qualitative innovation that reflects changes in the global business environment and the trends toward ESG and digital transformation.
The **main focus** is on **sustainability, advanced risk-based thinking, expanded stakeholder participation,** and **harmonized structure with other management system standards.**

In particular, through this revision, ISO aims to expand quality management beyond product and service management to include sustainable growth strategies for organizations.
This means that companies will go beyond simply complying with quality standards to expand the scope of quality management to include environmental and social responsibility (ESG) and long-term trust, presenting new management standards and opportunities for companies.

ISO 9001:2025 Revision Progress

▣ Publication Schedule and Progress

1) **April 2024**: Release of the first committee draft (Committee Draft 1,CD-1) and submission to the ISO TC 176 committee
2) **March 2025**: Completion of comments on the second committee draft (CD-2)
3) **May 20, 2025**: ISO Technical Committee (TC 176/SC 2/WG 29), resolution of comments on Clause 10 and start of discussion on Clause 8.5
4) **Current stage**: Draft International Standard (DIS) in progress
5) **Future schedule**: Approximately 12-week public ballot procedure scheduled.

▣ Revision Direction and Expected Major Changes

Although the detailed provisions have not yet been officially finalized, industry experts anticipate that the following changes will be reflected.

❖ **Enhanced risk management**:

- Clearer distinction between risks and opportunities.
- More proactive risk-based thinking throughout processes.

❖ **Greater stakeholder participation**:

- Broader definition of interested parties and their needs.
- Stronger link to customer satisfaction and supply chain relationships.

❖ **Stronger Integration of Sustainability & ESG**:

- More explicit requirements to consider environmental and social impacts.
- Links to ISO 14001 (Environmental Management) and ESG reporting trends.

ISO 9001:2025 Revision Progress

❖ **Emphasis on Leadership and Ethical Management**:

- Expanding the role of top management with stronger ethical responsibilities.

❖ **Application of Harmonized Structure**:

- Improved alignment with other management system standards.

▣ Key Points

The revision of ISO 9001:2025 goes beyond the maintenance and management of a quality management system and **strengthens sustainable management and trust with stakeholders.** Our company also needs to understand these changes in advance and proactively review our internal systems and processes.

▣ Conclusion

ICR will continuously monitor the progress of the ISO 9001 revision and **promptly share** any new details as soon as they are announced.
It is essential to obtain information and prepare in advance before the revised standard is officially published to ensure a smooth transition.

ICR System Certification Center will continue to do our best to support our clients in achieving continuous quality excellenc.

☎ Inquiries

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BN EN 1114-1:2011
Plastics and rubber machines - Extruders and extrusion lines

▣ Each country's policy to expand plastic recycling.

❖ **EU**: 0.8€ per kg plastic 稅 will be introduced for non-recyclable plastic packaging from 2021, while Italy and Spain will introduce separate taxes.

Disposable Plastic Guidelines Require Plastic Bottles to contain at least 25% recycled raw materials by 2025 and 30% by 2030.

❖ **US**: California Bill 793 calls for more than 50% recycled raw materials to be used in plastic beverage containers by 2030.

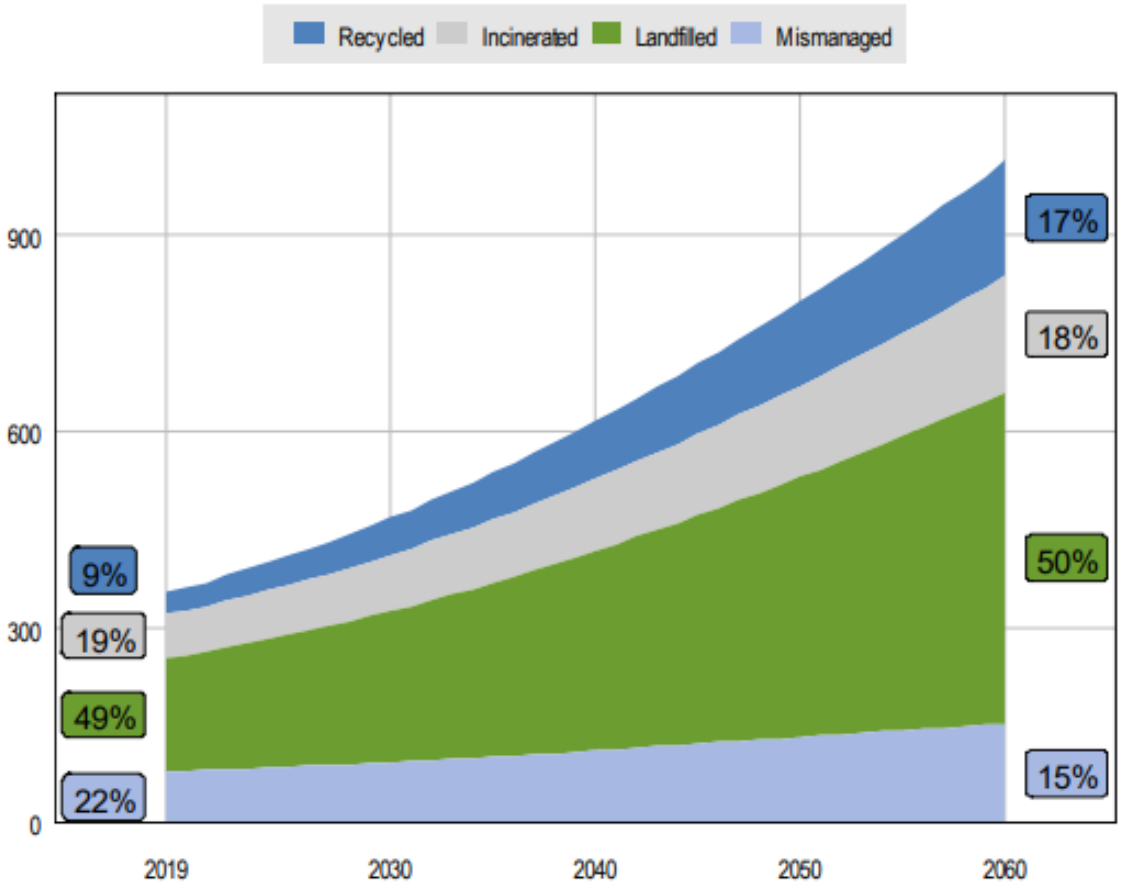
❖ **UK**: to apply 200 pounds per tonne tax on plastic packaging using less than 30% recycled raw materials from 2022.

❖ **France**: 100% increase in EPR fees when using non-recyclable raw materials, 50% reduction in EPR fees when using 15% recycled raw materials for textiles and shoes, etc.

[Source of data: Republic of Korea's representative office**]**

BN EN 1114-1:2011
Plastics and rubber machines - Extruders and extrusion lines

▣ **As such, the demand for reprocessing plastic and rubber is increasing.**



[Source of data: OECD Global Plastics Outlook]

BN EN 1114-1:2011
Plastics and rubber machines - Extruders and extrusion lines

▣ Application of equipment

- Hopper
- Single Roller Feed
- Double Roller Feed
- Cramer Feeder

[Hopper]

▣ Auxiliaries that are configured or attached

- screen changer
- Melt/Gear Pump
- Melt pipes and adapters
- a static mixer
- Extruder head that gives the extruded material its initial shape

▣ Section 5: Safety Requirements and Protective Measures.

❖ Safety requirements and protective measures of the regulations.

- **ElectricalMechanical danger**
- energy
- A temperature hazard
- Noise
- Processed/used substances
- Fire danger
- Senior Job Location
- Human engineering
- An emergency stop

BN EN 1114-1:2011
Plastics and rubber machines - Extruders and extrusion lines

▣ Safety measures required and PL grades required accordingly.

Component	Anticipated Hazard	Required Safety Measures	PL Rating (EN ISO 13849-1)
Main feed opening	Falling	Fixed or interlocked feeding system e.g. hopper, crammer feeder	PL r = c
Hopper	Falling	Interlock device e.g. door or movable cover	PL r = c
Single Roller Feed	Entanglement, Abrasion	Interlock device or hold-to-run control	PL r = c
Double Roller Feed	Entanglement, Abrasion	Interlock device, two-hand control	PL r = c
Crammer Feeder	Falling	Fixed guard by design or interlocked guard	PL r = c
Overload Protection(Pressure/Position Monitoring)	Explosion	Mechanical protection or system for pressure/position monitoring	PL r = c
Auto Screen Changer	Entanglement, Collision	Interlocked guard	PL r = c
Melt/Gear Pump	Explosion	Fixed guard and internal pressure protection	Additionally, must be protected by pressure and position monitoring systems designed in accordance with EN ISO 13849-1, PL r = c
Melt Pipe & Adapter	Explosion	Internal design	
Static Mixer	Explosion	Internal design	
Extruder Head	High Temperature	Interlock guard and hold-to-run or two-hand control	PL r = c (interlock) PL r = b (hold-to-run)
Machine Traversing Movement	Entanglement, Collision	Hold-to-run control or position-protective interlock system	PL r = c

※ refer to

* PL r = c: Classes required by the medium risk group of common industrial machinery.
* PL r = b: Used under relatively low risk or limited access conditions.
* If anything not mentioned other than the items mentioned is usually addressed by design or physical guard.

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BN EN 1114-1:2011
Plastics and rubber machines - Extruders and extrusion lines

▣ **ICR has the test equipments for BS EN 1114-1:2011** to enable to **carry out these tests** and provides high-quality technical services by professional engineers.

☎ Inquiries

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