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for the Best Quality*



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KTR KOREA TESTING &
RESEARCH INSTITUTE

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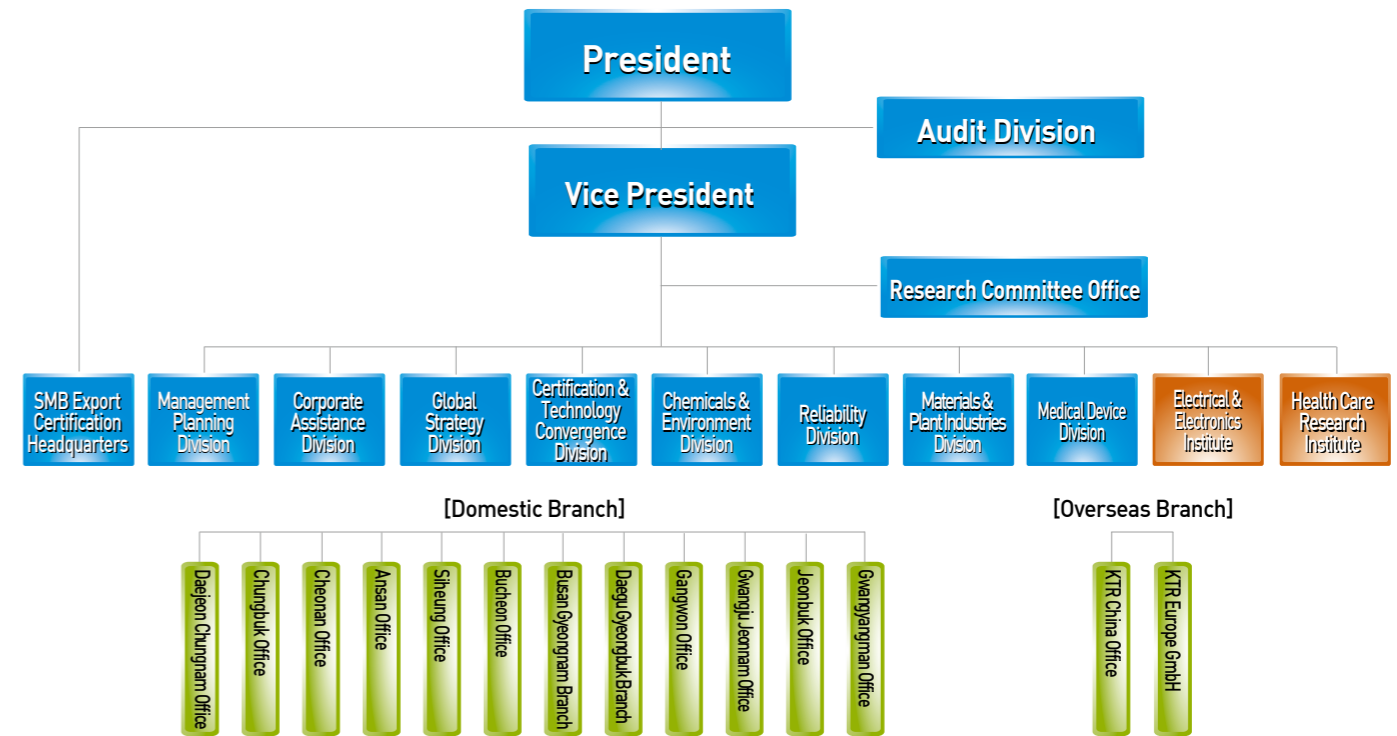
KTR, a testing, certification and technical consulting organization in all areas of industries including chemical•environmental, parts & materials, civil engineering & construction, automobiles•shipbuilding, electrical & electronics, health care and convergence Industries.

- ▶ KTR is providing over 350 thousands test reports for about 30 thousands enterprises for a year.
- ▶ It is an optimum partner supporting enterprise's overseas expansion through its partnership with 92 organizations over 24 countries in the world.



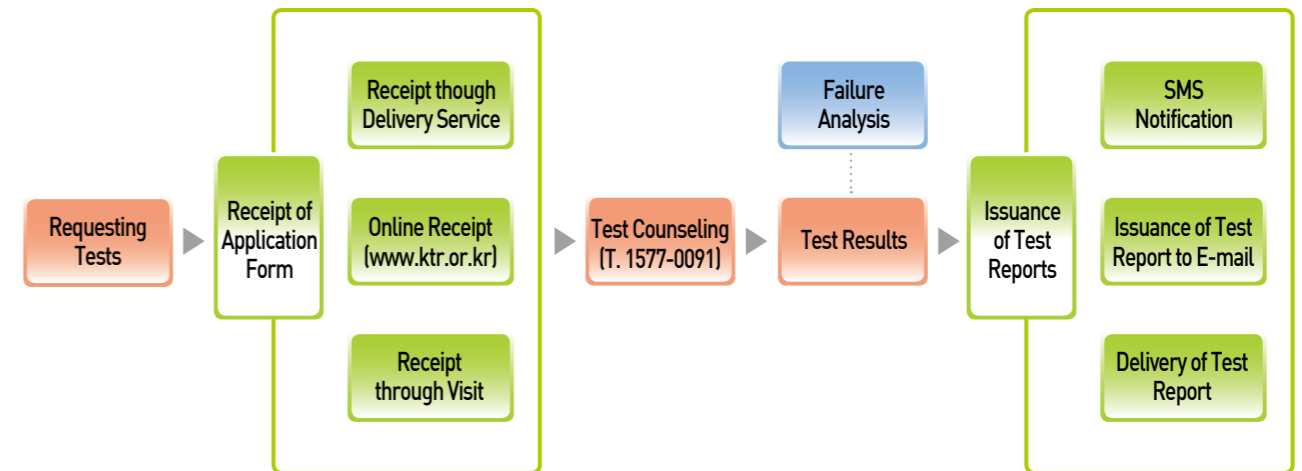
Organizational Chart

- Internationally accredited non profit testing and certification institute operated under the Ministry of trade, Industry and Energy
- Headquarter in Seoul, 7 Laboratories (Gimpo, Incheon, Ulsan, Yongin, Hwasun, Busan and Daegu), twelve offices and two overseas branches



Applying for Tests and Counseling

- One-stop service through various application methods (by visit, delivery service, online)



CHEMICAL & ENVIRONMENTAL

Analyzing harmful materials in parts and chemical materials to cope with international environmental regulations

Offering general technological services needed for environmental technology evaluation and development



Fine Chemicals

- Analyzing internationally regulated materials for the environment (RoHS Class I, II, III, REACH SVHC, PoHS, ELV, WEEE and etc.)
- Analyzing molecular volumes, major ingredients and additives of high molecular substances
- Analyzing ingredients of new products and unknown chemical materials
- Quality testing for everyday chemical products such as toys, stationeries and detergents and analyzing harmful materials
- Quality testing for organic polymeric coagulants, treated wood, chemical resistance, organic chemicals and fertilizers
- Cosmetic product inspection organization assigned by the Ministry of Food and Drug Safety : quality testing for cosmetic products, analyses of harmful materials and steroids

Material Evaluation

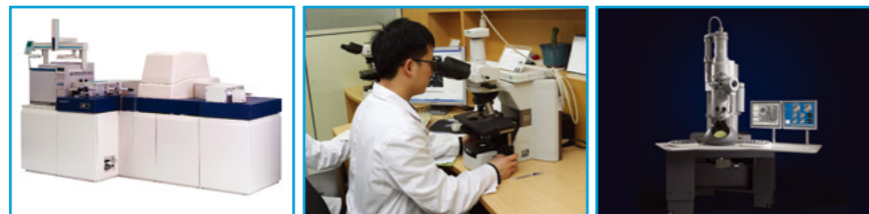
- Analyzing metals and nonferrous metals and precious metals
- Analyzing mineral products, refractories, coals and cokes
- Analyzing inorganic chemicals and organic materials
- Analyzing internationally regulated materials for the environment in the inorganic material sector
- Checking quality of salt

Environment Safety Sector

- Analyzing water quality and pollutants in industrial water, soil and waste
- Analyzing sea water and waste dumped into the sea
- Quality certification tests for materials and products for waterworks
- Analyzing PCBs and quality of solid fuel
- Testing food containers and wrapping devices
- Evaluating new environmental technologies

Environmental Health Sector

- Standard material production (asbestos): white, brown and blue asbestos
- Checking asbestos in construction structures (including ships and facilities) and monitoring work to remove asbestos
- Analyzing TVOCs and formaldehyde in construction materials in accordance with the Small Chamber Method
- Foul odors and atmosphere monitoring, interior air and air pollutants analysis
- Evaluating microorganism decomposition of high molecular materials



PARTS & MATERIAL

An organization specialized in key industries such as shipbuilding, steel and nuclear power plants

Carrying out performance tests and certification support activities in compliance with international standards such as the IMO and ASME



Shipbuilding and Maritime Plants

- Evaluating quality of heat insulators for LNG-powered ships (GTT III SYSTEM)
- Performance evaluation of paints for vessel classification (shop primer welding, anticorrosive paints and A/F paints)
- Evaluating performance of harmful materials in vessel classification sector and environmental durability
- Testing and evaluating basic materials for ships
- BWMS_G9 Test and Analysis of the IMO
- Evaluating performance of WBT PSPC of IMO
- Corrosion tests on materials for Ballast tanks of IMO
- * Carrying out international ship classification for DNV, ABS, BV and KR

Steel and Nuclear Power Generation

- Tests and evaluations related to ASME / KEPIC certifications
- Tests and evaluations related to WPS and PQR for welding
- Evaluating performance of sacrificial anodes of anti-corrosion structures
- Evaluating NDT (Nil Ductility Transition Temperature) for nuclear power
- Evaluating anti-corrosion performances in accordance with the Replica method
- Corrosion tests (HIC and SSCC) related to NACE
- Performance evaluation of painting materials to protect nuclear power plants (APR1400)

Automobiles

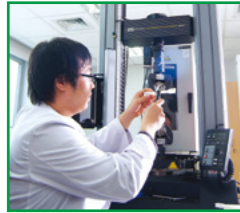
- Evaluating reliability of internal and external plastic and high molecular materials
- Testing flammability and odors of interiors
- Testing abrasion and complex corrosion and evaluating VOCs



RELIABILITY

Evaluating reliability of components and materials such as chemical materials and metals

Offering services to cater to needs of companies from testing to product lifetime evaluation



Reliability Evaluation

- Analyzing physical and mechanical characteristics of plastic materials, rubber materials and products
- Testing reliability of parts and materials and evaluating their expected life span

Non-Destructive Tests and Welding

- Carrying out non-destructive tests and PQ tests for bridges, steel structures and pressure containers
- Recognized as a non-destructive test organization for Korea Laboratory Accreditation Scheme (KOLAS), Korea Register of shipping (KR) and Renault Samsung Motors
- Surface Treatment Test (Chrysler, GM and Renault Samsung Motors)
: Corrosion Resistance Test [CCT, SST, CASS] and Gilt/Coating Test

Metal Materials

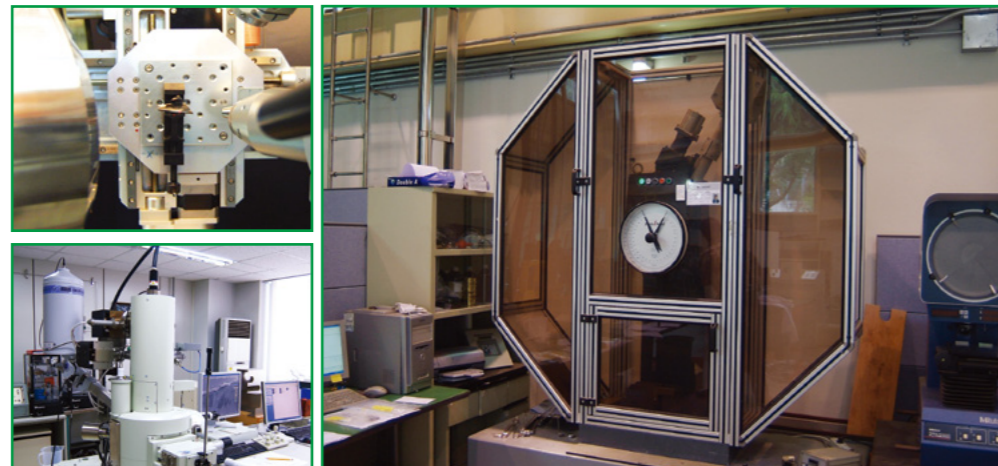
- Testing mechanical elements such as steel, nonferrous metal, bolts and nuts
- Testing seals, compression, shearing, bending of metal products
- Analyzing causes of corrosion and destruction of metal materials

Chemical Materials

- Carrying out tests in the paint and glass sectors
- Assuring environment-friendly products such as paints, glues and anti-slip road paving materials

Construction Materials

- Testing concrete, soil, asphalt concrete, external and internal construction materials
- New technology support business such as certification of NET and GR



ENERGY · CONVERGENCE

Testing, Assessment, and Certification Performance to procure competitiveness of climate change act and new regeneration energy

UN designated organization operated by CDM DOE (Designated Operational Entity)



New and Renewable Energy

- Safety evaluation and developing materials for portable lithium secondary batteries
- Testing and evaluating large and medium-sized secondary batteries
- Testing and certifying new renewable energy such as solar and wind power generation

Climate Change Action

- Providing CDM validity assessment and verification services
 - * Assessment is available for new renewable energy, manufacture, chemistry and waste process and discarding industry in general.
- Providing verification and certification services of VCS(Verified Carbon Standard) and GS(Gold Standard)
- Providing verification services of Greenhouse Gas and Energy Target Management System
- Developing alternative cleaning and technological guidance (SF₆ standard material development)

GLOBAL CHEMICAL MATERIAL REGISTRATION REACH

Supporting corporate exports by preemptively tackling technological regulations by countries



KTR is offering a one-stop total service from devising measures to cope with chemical material registration systems of major nations and registration on the foundation of international testing, evaluating and assuring systems.

- EU REACH registration service
- New chemical material registration in China
- TSCA, FDA registration in US
- Chemical material registration in Turkey
- New material registration in Taiwan
- Registration in accordance with Korean Harmful Chemical Material Management Law
- Producing MSDA to cope with GHS
- REACH-related physical and chemical test and identification of materials
- J-REACH registration service



ELECTRICAL & ELECTRONIC

Supporting companies from development, tests to certifications for safety of electrical and electronic sectors, electromagnetic and lighting instrument sectors

KTR is recognized as a national certification body (NCB) and a certification body testing laboratory (CBTL) by the Korea Laboratory Accreditation Scheme (KOLAS) and the IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE). KTR provides testing and certifying services in electrical, electronic safety and electromagnetic compatibility sectors.

KTR guides Korean industry to increase their performances by improving their safety, quality and reliability and assists in every stage of their productions from developing stage to certification for effective acquisition of domestic and international certifications.

The testing and certifying services of KTR cover all sectors related to electric devices and equipment, electromagnetic compatibility, lighting instruments, electric wires, components and aims to offer optimized solutions for companies with excellent equipment and specialized human resources.



Electromagnetic Compatibility Test (EMC: EMI + EMS)

- Testing electromagnetic compatibility of electric appliances for safety (KC Mark)
- Testing electromagnetic compatibility (EMC: EMI+EMS) : Electrical and electronic products
- Testing electromagnetic pulses: Anti- electromagnetic pulse facilities and filter
- Testing electromagnetic compatibility on industrial electric control devices such as trains, automobiles and semiconductors
- KCC certification test (registration of electromagnetic compatibility of products)
- Domestic managing organization in the TC 77(TC77 A/B/C) sector
- Operating a 10 meter-long anechoic room for electromagnetic tests, opening EMC measuring devices and facilities and supporting debugging

Electrical and Electronic Tests

- Product safety certification (KC certification) and Korean Standard (KS) tests for electric, IT and A/V machines and devices
- Overseas certification tests such as the IECEE CB for electric machines and devices (HOUS), IT products (OFF), A/V products (TRON)
- Energy efficiency: Standby power reduction program, tests for energy efficiency level and high energy-efficiency materials
- Performance tests such as vibration, temperature and humidity resistance, heat shocks and wind power measurement
- KCC and specialized checks of supplied products

Testing Lighting Instruments

- Electric product safety certification test (KC certification)
- KS certification test in the lighting instrument sector (including LED lighting)
- Tests of energy-efficiency level and high energy efficiency instruments and equipment in the lighting sector
- Test for Environment Mark certification and specialized checks of supplied products
- Operating light distribution and spectrum test facilities, LED light analysis system and evaluating photo-biological safety
- General tests in the lighting and LED lighting sector

Electric Wire and Component Test

- Electric product safety certification tests (KC) and Korean Standard (KS) tests on electric wires, wiring instruments, components, transformers and welding machines
- Overseas certification tests such as the IECEE CB in the INST sector and the CB of all component sectors
- Operating fire resistance test facilities in the electric wire sector and testing and evaluating fire resistance of electric wires
- Operating facilities for automatic control element and electric welding machine sector and testing and evaluating automatic control element and electric welding machines





HEALTH CARE

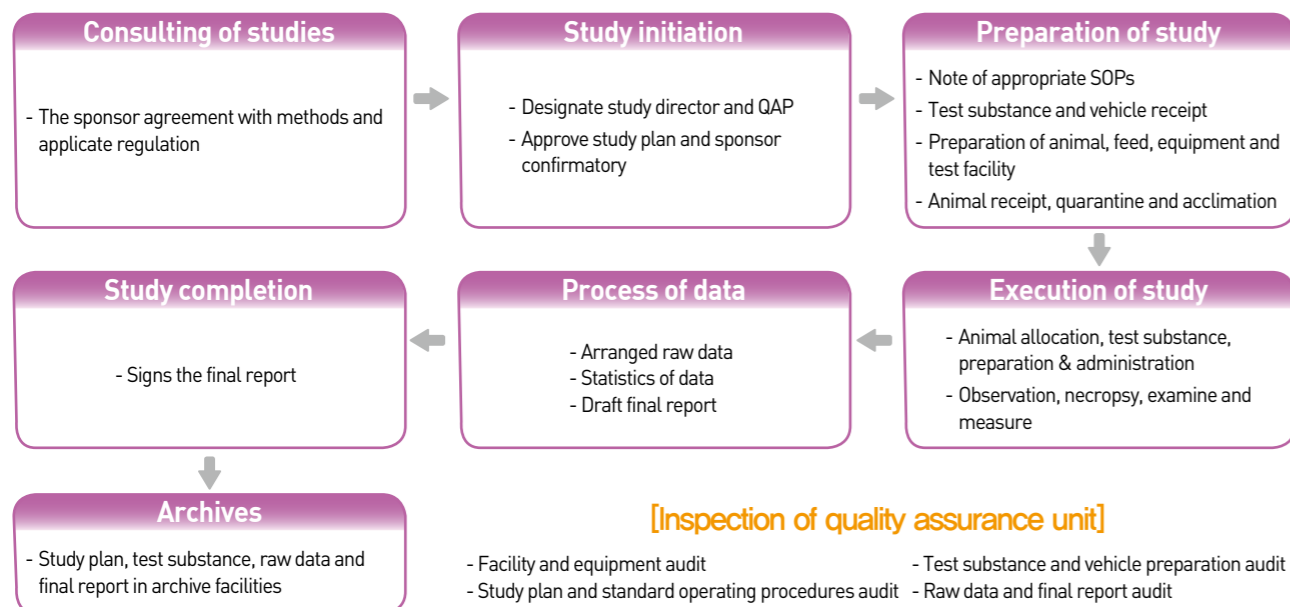
A highly reliable medical device healthcare-specialized organization which built the advanced research base

Healthcare material testing evaluation and certification necessary for the biological and medical industries

QAU : Organization in GLP regulatory

The QAU is responsible for monitoring each study to assure management that test facility, equipment, personnel, methods, practices and records are in conformance with Good Laboratory Practice.

Procedures of study by GLP regulation



Healthcare

- Nurturing the high-value-added healthcare material industry and building biological resources infrastructure
- Evaluating effects of biological resources as functional materials
- Supporting exports through certification of functional products
- Supporting overseas certification and registration for healthcare globalization

Toxicity and Effect Evaluation

- Single/Repeated Dose Toxicity Test
- Carcinogenicity Test, Local Irritation Test, Reproductive Toxicity Test
- Reproductive Toxicity Test, Genotoxicity Test, In-Vitro Cytotoxicity Test, Immunotoxicity Test
- Local Immunity Test, Safety Pharmacology Test, Phototoxicity Test and Photosensitization Test

Environmental Toxicology

- Tests for registration of agricultural chemicals (physico-chemistry, crop residues, environmental residues and ecotoxicity)
- Ecotoxicity tests of quarantine drugs, waste water and chemicals

Medical Devices Evaluation

- Bio-Safety Test
- Genotoxicity Test
- Epidemiological and Performance Test

Review of Technical Documents on Medical Instruments

- 43 items including contact lens
- Designated as a cooperating organization in the medical sector

Microorganism Related Test

- Antibiotic and sterilization test
- Fungus resistance test



CERTIFICATION

Supporting Korean companies' certification at costs through a network of 92 organizations in 24 countries

Local Certificates Provided

Certification

TR Mark

TR Mark, a certification mark on technologies and reliability, is given to products which pass reviews of deliberate councils consisting of specialists on product qualities, safety, functionality and characteristics

Asbestos-Free Certification

This service issues asbestos-free certificates through tests of and examinations of production processes for industrial products, cosmetics, construction materials and electronic products in compliance with the international test standards.

Q Mark

This mark guarantees the quality of products satisfying tests and quality-check standards for the purpose of enhancing the quality of electric, electronic products and industrial products.

S Mark

The Korea Accreditation System gives this S Mark to products to enhance product quality and to protect consumers from any damages from product-use in step with product variation.

Audits & Assessment

KS Certification

KTR as a KS inspection body designated by the rules and regulations of the Industrial Standardization Act implements on-site factory and product inspections.

Medical Instruments

Companies which produce or import medical instruments can sell their products only after receiving GMP and GIP for their products. As a medical instrument quality reviewing organization, KTR carries out tests on all medical instrument sectors (39 product groups).

Testing Certificate

KC Mark

13 legally obligatory certification marks were integrated into a unified national certification mark, KC Mark. So the certification process of KC Mark has become simplified and more efficient (Safety certification, self-regulated safety checks, packages for children's safety and safety quality notices and so on).

V-check

KTR was recognized as an international product certification organization by KAS and gives good-quality and safe products the V-check Mark

Energy Efficiency Management System

-The Energy Efficiency Level System: The Energy Efficiency Level System in accordance with energy efficiency and amount of energy use
-The High-Efficiency Energy Material Certification System: Issuing certificates for high-energy-efficiency products

Overseas Certificates Provided

IECEE-CB



IECEE-CB

KTR is recognized as an NCB and a CBTL by the IECEE and supports companies which want to obtain certificates in 54 countries.

Certification



JIS (Japan)

KTR was recognized as a JIS-registered certification organization by the Japanese Industrial Standard Law and carries out JIS certification.



CU (Russia, Kazakhstan, Belarus)

Supporting and consulting to achieve CU certificate which is for distribution and sales within Russia, Kazakhstan, and Belarus.



Audits & Assessment

CE Certification (Europe)

This is compulsory certification related to environmental safety and consumer protection. KTR is able to offer CE certification in all sectors and in the shortest time at the lowest costs by signing MOUs with European certification organizations.



NSF (U.S.A.)

NSF recognized KTR as the first testing organization in Asia and now carries out NSF certification.



FCC (U.S.A.)

When exporting most electrical and electronic products to the U.S.A., an exporting company should get FCC certificates for its exports. KTR offers the finest services with the latest and the best EMC facilities.



MET (U.S.A.)

KTR offers UL certification services for exports of electrical and electronic products to the U.S.A. and Canada in cooperation of MET Lab in the U.S.A.



SASO (Saudi Arabia)

KTR offers SASO certification service for exports to Saudi Arabia.



Energy Star (U.S.A.)

Supporting certification achievement for 8 testing items including LED and electric electronic IT products based on its registration as a EPA Recognized Laboratory.



C-Tick (Australia)

C-Tick is an electromagnetic telecommunication standard for electrical and electronic products in Australia. KTR offers C-Tick certification service.



VCCI (Japan)

This is self-controlled certification that regulates obstructing waves from IT products. KTR offers this service ranging from a test to certification.



NF (France)

Supporting tests and certification of Korean companies to get the NF Mark of LCIE of France



KEMA (Netherlands)

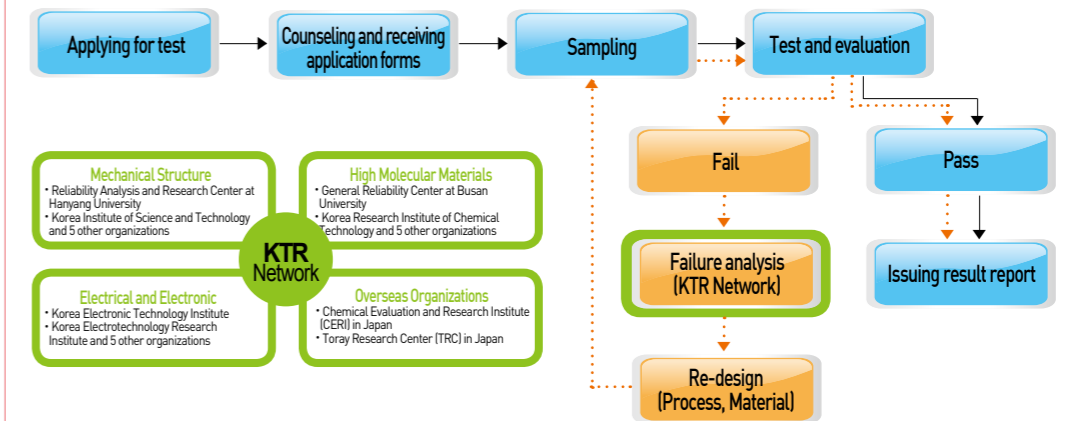
Carrying out plant inspections of KEMA implemented one or more times a year.

TECHNICAL CONSULTING

Analyzing causes of product failures, improving production processes

Offering specialized technological consulting via technological evaluation of patents

Failure Analysis



Evaluating Value of Technology

Commercialization of technology through advanced evaluation of technology of companies

Technological Consulting

Enhancing productivity, developing technology and solving problems at business sites by supporting companies

EDUCATION & CONSULTING

Carrying out systematic education and consulting for companies, the government, organizations and associations as a KOLAS and KAS approved testing organization.

KOLAS / KAS

KTR conducts recognition and execution consulting by offering systematic practical education and training as education, consulting and certification organization approved by KOLAS and KAS.

Education Programs : KS Q ISO/IEC 17025 / KS Q 17020 / Measurement Uncertainty / Standard Material Production Recognition System / Evaluators / Internal reviewers / Effective testing and correction methods / Analytic statistics / Sampling methods

Co-Research and Technological Development

Carrying out consulting on co-research and technological development in partnership companies, solving problems of companies and support tests and analyses while seeking ways to elevate productivity

Business : Industry-academy cooperation projects / Technological service business

HISTORY

- 2013 12. 20 Established ICT Analysis Laboratory in Daegu
- 06. 25 Established Materials and Parts Center in Busan
- 06. 11 Established Health Care Research Institute
- 2012 09. 28 Ministry of Environment designated KTR as an asbestos environment center.
- 09. 04 Chinese new chemical material registration for the first in Korea
- 07. 31 Ministry of Environment designated KTR as a soil relevant professional organization.
- 06. 27 Registration as an Energystar EPA designated testing lab.
- 03. 02 UN designated CDM DOE organization.
- 2011 10. 18 The nation's first KOLAS registration of HEMP protection facilities assessment testing
- 08. 01 Russian government publically designated KTR as a testing and GOST-R certification organization.
- 04. 06 Renault Samsung Motors Co., Ltd. designated KTR as a radiographic testing lab.
- 02. 28 General Motors (GM) designated KTR as a chromium plating testing lab.
- 2010 12. 30 Assigned as an organization to review technical documents on medical instruments
- 08. 31 Held a ceremony to celebrate the completion of the Health Care Research Center in Hwasun
- 07. 08 Established KTR (Integrating Korea Testing & Research Institute and EMC Research Institute)
- 05. 12 Registered new materials of the European REACH, a first for a Korean company
- 2009 12. 28 Assigned as an ABS testing organization
- 08. 07 Assigned as an asbestos investigation organization (Ministry of Labor)
- 03. 31 Assigned as a partner organization in developing standards (Agency for Technology and Standards)
- 03. 31 Assigned as a lithium secondary battery testing and certification organization
- 03. 10 Assigned as a DNV testing organization
- 2008 11. 25 Assigned as an organization to produce standard materials
- 06. 09 Assigned as a KR testing organization
- 2007 08. 15 Assigned as a new-JIS mark Certification Institute
- 2006 12. 01 Assigned as an NCB by IECEE
- 04. 01 Renamed KTR (Korea Testing & Research Institute)
- 2005 09. 21 Appointed as TUV SUD (Germany)
- 08. 23 Registered as a VCCI testing organization
- 07. 08 Assigned as a CBTL by IECEE CB-Scheme
- 04. 30 Assigned as an NRTL of the U.S. Department of Labor
- 01. 21 Assigned as UL RSCS 3rd Party Lab
- 2003 05. 30 Assigned as a GLP testing Lab
- 2002 04. 17 Registered as a U.S. FCC testing organization (10m Chamber)
- 02. 16 Assigned as an organization to test apparatus and materials for efficient management
- 2001 12. 31 Assigned as an authorized organization to test high-energy-efficiency materials
- 11. 21 Appointed as Safety Inspection body for Industrial Products
- 2000 08. 26 Assigned as an electric product safety certification organization
- 08. 01 Assigned as an organization to test electromagnetic compatibility immunity and electric safety
- 02. 11 Registered as a U.S. FCC testing organization
- 1999 12. 23 Assigned as an organization to manage qualities of medical instruments
- 06. 26 Assigned as an organization to test electromagnetic compatibility of the MIC
- 1998 02. 02 Assigned as a fastener testing organization for NVLAP of the U.S.A.
- 1997 10. 10 Accredited as a NATA Laboratory
- 09. 03 Assigned as a Quality Evaluation Institute for the Ministry of Land, Transport and Maritime Affairs
- 07. 29 Received a permit to establish the ERI
- 1969 04. 01 Foundation of the Korea Rubber Product Testing Inspection & Testing Institute

NETWORK

Local Network

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