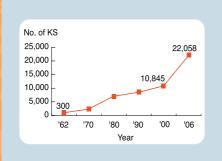
Global Standards Frontier KATS: Be The First

KATS KATS Newsletter

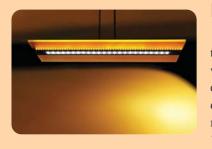
orean Agency for Technology & Standards, Ministry of Commerce, Industry and Energy

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Increased KS Application Cuts Corporate Burden

Results of a KATS' survey on the application of Koean Industrial Standards (KS) to the legislations and technical regulations of respective ministries since 2000 showed that the KS application rate surged about two-fold (173%) compared with six years ago. In 2000, 15 ministries applied only 1,076 kinds of KS. Through KATS' continuous efforts to harmonize KS with international standards, however, KS application expanded to 22 ministries and 2,945 kinds in 2006.



KS for High Energy-Efficiency LED Lights

KATS plans to develop 15 kinds of KS over the next three years in order to enhance the development and support the business effects of LED lighting, which is in the spotlight as a next-generation device enabling reduction of electrical energy up to 90%. To effectively support LED lighting technology development by enterprises and also to standardize testing and assessment methods and quality criteria for lighting products, KATS established the 'Three-Year Plan for Standardization of LED Lighting.'



Comprehensive Countermeasures to Ensure Elevator Safety

Due to the increasing occurrence of elevator accidents at the start of this year, KATS announced comprehensive countermeasures against elevator safety accidents on March 7, including publicity reinforcement targeting elevator users, re-examination and adjustment of elevator inspection criteria and advancement of the elevator safety management level.

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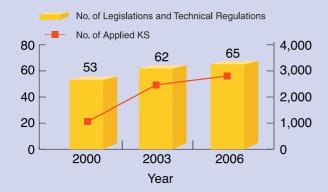
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In 2000, 15 ministries applied only 1,076 kinds of KS. Through KATS' continuous efforts to harmonize KS with international standards., however, KS application expanded to 22 ministries and 2,945 kinds in 2006. The increased KS application is reducing corporate burdens significantly while playing a large role in securing public safety, a KATS official said.

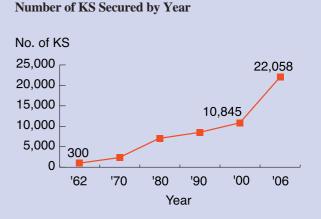
As for the application rate, the Ministry of Commerce, Industry and Energy (MOCIE) led all others, followed by the Defense Acquisition Program Administration (DAPA), Ministry of Construction and Transportation (MOCT) and National Police Agency (NPA).

Application Status of KS to Legislations and Technical Regulations



Korean Industrial Standards (KS) are harmonized with international standards in accordance with WTO/TBT Agreement. KS not only plays the role as mandatory regulation when applying to legislations and technical regulations but also are used by the central government, local autonomous bodies, government-invested organizations, etc. when purchasing goods/equipment or implementing construction projects.

The number of KS, which was just 10,845 in 2000, increased to 22,058 as of the end of 2006, and their harmonization rate with international standards rose to 99% from 52% as well.



To expand KS usage, KATS established the second 'Basic Master Plan for National Standard (2006~2010),' and is encouraging respective ministries to apply national standards when developing or revising technical regulations after establishment of commonly available testing methods, etc.

KATS has also established a database of about 41,000 kinds of national standards & technical standards at Korean Standards Information Center (KSIC) (www.standard.go.kr) and makes the information readily available to the public.

The Agency plans to continuously reflect priority application of KS, if national standards exist in the individual legislation that becomes the basis to develop technical regulations for respective ministries. It also plans to survey and analyze the KS application status of 106 government-invested organizations and subordinate agencies in their purchase and facility construction regulations in order to expand application of national standards.



KS for High Energy-Efficiency LED Lights



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lighting, which is in the spotlight as a next-generation device enabling reduction of electrical energy up to 90%.

To effectively support LED lighting technology development by enterprises and also to standardize testing and assessmentl methods and quality criteria for lighting products, KATS established the 'Three-Year Plan for Standardization of LED Lighting.' Meanwhile, the Ministry of Commerce, Industry and Energy (MOCIE) is promoting 'LED Lighting 15/30 Supply Project' designed to replace more than 30% of the current market with LED lighting by 2015.

According to the plan, KATS intends to develop eight kinds

of KS for emergency lights for buildings, LED electric signs, thermal characteristics, safety requirements, performancetesting methods, etc. in 2007; four kinds, including testing method for performance of automobile LED lighting in 2008; and three kinds including LED street lamps in 2009.

In the future, KATS plans to reorganize and expand the 'LED Lighting Standardization Consortium' for networking the various infrastructure of related organizations. Based on this, while developing KS for LED lighting, KATS plans to actively support enterprises at the same time by suggesting those develolped standards strategically as IEC standards so that Korean lighting products can preoccupy the global market.



International Drive to Standardize Social Responsibility

On February 23, KATS organized a report session at the conference room of the Korea Chamber of Commerce and Industry (KCC) as a result of the fourth SR (Social Responsibility) plenary meeting held from January 29 to February 2 in Sydney, Australia.

The session was designed to prepare ways for Korea to respond actively to the international drive to establish SR as a new 21st-century standard (ISO 26000) after reviewing the plenary meeting results.

International standardization of SR started from the general recognition that SR is a prerequisite for sustainability of human society. Such recognition was confirmed earlier at the '1992 Rio Summit' in Brazil and the '2002 World Summit on Sustainable Development' in the Republic of South Africa.

SR plenary meeting was launched in March 2005 and a total of four meetings have been held to date. At the Sydney plenary meeting, some 275 experts representing industry,

government, labor, consumers, NGOs and SSRO (Service, Support, Research and Others) from 54 ISO member nations and 28 international organizations participated and agreed on seven key topics regarding ISO 26000.

Seven ISO 26000 Key Topics

SR Issue	Responsible Task Group (TG)
Environment	Ad Hoc Group 1, TG5
Organizational Governance	Ad Hoc Group 2, TG5
Fair Operating Practices	
Human Rights	Ad Hoc Group 3, TG5
Labor Practices	
Consumer Issues	Ad Hoc Group 4, TG5
Community Involvement/	
Society Development	

Meanwhile, ISO plans to hold its fifth and sixth plenary meeting in November this year and in May next year, respectively, and to publish ISO 26000 in November 2009.

3 Korean Technologies Expected to Become IEC Standards

Three technologies developed in Korea are expected to become new IEC standards. They are measuring technology for BLU (Back Light Unit) characteristics, radio-frequency superconductivity surface resistance technology and ethernet technology for industrial communication networks. BLU is a core component in LCD HDTVs.

KATS announced that the BLU measuring technology suggested by Korea as an international standard had been adopted as an official project by the IEC/TC's meeting held recently in Japan. This draft is an achievement of development by the team of Dr. Lee Jong-Seo of Samsung Electronics and Dr. Cho Mi-Ryoung of Korea Institute of Lighting Technology (KILT). This technology is likely to contribute significantly to the expansion of global LCD HDTV market shares for Korean firms like Samsung Electronics, LG Electronics, and others.

The radio-frequency superconductivity surface resistance technology, which is applied to noise-reducing superconductivity filters for mobile communications, and the ethernet-based industrial communication network technology utilized as a real-time communication protocol for factory automation have also been suggested as international standards. The team of Prof. Lee Sang-Young of Konkuk University and researcher Lee Sang-Kun of KATS developed the radiofrequency superconductivity surface resistance technology, which can be utilized at



mobile communication base stations, with superconductivity filter system having extremely low signal loss and excellent frequency selectivity. At low temperature (77 K), the surface resistance is very small at a scale of about 1/500 of the copper loss in the PCS mobile communication frequency band, providing communication sensitivity improvement and increased signal distance (20%) as well as reduction in terminal power consumption (40~60%).

There is a very high possibility that the ethernet-based technology for industrial communication networks, a patented technology secured by LG Industrial Systems, will be adopted as international standard because the technology was presented at the international technical meeting held in January this year in France and obtained favorable response from experts of each member body.

KS on Ventilator System Adopted as ISO Draft Standard

According to KATS, Korean Industrial Standard (KS) on heat recovery ventilator system was adopted as a draft international standard at the ISO/TC86 (refrigeration and airconditioning) meeting held on January 24, 2007, in Dallas, U.S.A.

KATS also said that at the meeting Dr. Choi Jun-Young of Korea Testing Laboratory (KTL) was elected Convenor of the newly established WG (Working Group). This is the first time that an Asian has been elected as a WG convenor in the refrigeration and air-conditioning field.

The waste heat recovery ventilator is an air-conditioning device that can reduce the cost of operating air-conditioners or heaters by $20 \sim 30\%$. Its market is growing sharply with recent increases in new construction of residential-commercial complex apartments and mandatory installation of the system. The market is projected to reach 400 billion won in 2007 and 800 billion won in 2009.

Korea hosted ISO/TC86 (refrigeration and air-conditioning) plenary meeting in September last year in Jeju Island and suggested the need to develop international standard for the system. This year's meeting in Dallas approved Korea's proposal and confirmed the establishment of WG for developing new international standard.

This WG on the ventilation system is scheduled to hold meetings for experts from seven countries, U.S.A., Japan, etc., in Korea and the U.S.A. in May and October this year, respectively. Establishment of international standard is expected to take three or four years.

If this draft is adopted as international standard, exports of the relevant items could be increased significantly, reflecting national technology in the international standard. Considering this case as a good model, KATS plans to strengthen its international standardization activities further in traditional manufacturing business fields, the progress of which has been poor.

National Market Size of Heat Recovery Ventilator System

(Unit: 100 million won)

C	ategory	2001	2003	2005	2007	2009
D	emand	500	800	1,500	4,000	8,000
Supply	Production	200	300	1,000	3,000	6,000
	Imports	200	400	500	1,000	2,000

Source: Korea Ventilation Committee and Association

Standardizing National Semiconductor Equipment

KATS has established and announced a five-year semiconductor equipment standardization plan to develop 35 kinds of national standards, including an assessment method for the function of atomic layer deposition (ALD), a new technology developed in Korea.

The KATS' plan is designed to support the government goal of achieving a 50% localization rate for semiconductor equipment by 2015.

Korea's semiconductor industry has international competitiveness as the world's third largest producer with US\$24 billion in annual production, accounting for 10.5% of the global total. However, the industrial foundation for semiconductor equipment actually used for production of semiconductors is vulnerable to the extent that only 18% of the national market (US\$6.8 billion) is manufactured and supplied in Korea. Therefore, the situation is that the nation urgently needs to prepare countermeasures to resolve the problem.

Market Size of Semicon Devices and Semicon Equipment (2005) (Unit: US\$1 million)

Market Size	Semicon Devices	Semicon Equipment
World	227,484	33,936
Domestic	24,070	6,856

Source: Korea Semiconductor Industry Association (KSIA)

Korea imports most of its semiconductor equipment from Japan and the United States. Moreover, as the nation also lacks the standard infrastructure to assess reliability and functions of parts and equipment, there are a number of difficulties linked with purchase decisions by demander enterprises at home and abroad, even if domestic equipment firms develop new products.

At the government level, therefore, KATS plans to promote standardization focusing on assessment methods for functions of nationally developed parts and equipment requiring acceleration of localization and equipment design guidelines for the safety of workers.

To strengthen standardization capabilities of the private sector, KATS also plans to organize and operate standardization forums for the fields in which technology deployment is faster in terms of the semiconductor industry's characteristics, and induce domestic firms to respond properly to the de-facto international standard, SEMI (Semiconductor Equipment and Materials International).

In the future, KATS intends to reduce the development



expenses and the development cycle of semiconductor equipment firms and facilitate the market advance of latestarting firms through private-government joint systematic standardization activities as part of the agency's significant contribution to construction of the world's second strongest semiconductor country by 2015.

With promotion of the semiconductor equipment technology development plan to be implemented starting in 2007, KATS expects to accelerate early commercialization of the developed technologies, while proceeding with standardization of nationally developed assessment methods for equipment functions for application to import substitution items with priority.

KATS also plans to maximize synergy effects through its standardization activities by integrating industrial structures grouped by semiconductor device firms.

Further, KATS intends to modulate high-tech semiconductor equipment by function and also classify them into technology specialization area and generalized technology area for promotion of standardization by the government and enterprises, respectively.

Expected Effects of Standardization

Expected Effects of Standardization					
Semicon Equipment Firms	Semicon Device Firms				
Reduce development	Reduce equipment				
expenses and period	integration expenses				
• Assure equipment reliability	• Cut equipment purchase				
and compatibility	expenses				
Facilitate advance into	Minimize facility				
initial markets	maintenance expenses				
Respond effectively to TBT	• Assure safety of manpower				
(technical barriers to trade)	and equipment				
Provide Consensus f	or Industrial Activities				
Accelerate localization and exports of equipment through					
enhanced cooperation among enterprises					

Expand Growth Engine Base Thru Innovation of National Standards System

Advance National Standards System as National Innovation Infrastructure

- Develop national standards system with pan-ministerial cooperation, including substance-rich promotion of the '2nd Basic Plan for National Standards' and '2007 Implementation Plan by Ministry.' To be promoted under the plans are four core tasks - advance national standards management system; strengthen standard technology infrastructures; reinforce capability responding to international standardization; and stimulate private standardization activities.
- Prepare a pan-ministerial foundation for integration of diverse national certification systems and enhance corporate efficiency and consumer convenience. Categorize 80 legal certifications of 14 ministries and about 60 private certifications in terms of certification system and promote rearrangement of laws, ordinances and systems, unification of operating methods, etc. systematically.
- Link the present establishment and revision systems for individual standards to national policy agenda and convert them into a demander-oriented 'Package Standardization System,' for example, standardization responding to high oil prices, standardization responding to low-birth and aging society, standardization of package-type logistics transportation, etc. Also, build an IT-based national standards information system enabling suggestion and utilization of standards anytime, anyplace.

Strengthen Private Standardization Capability and Establish Functions to Support Industrial Standards Technology

- Build a private-led, bottom-up-style standards establishment system and private standardization capability through cultivation of standards-specialized manpower.
- Establish a new 'Standard Technology Support System' to support and utilize standards, certifications, etc. in corporations' full-cycle technology management activities. Set up standards management support plans by industry, which are required for 'Planning - R&D - Production -Distribution - Export.'
- To strengthen the nation's industrial competitiveness, reinforce technology infrastructures for industrial standards, precision measurement technology, reference materials, reference standards, etc. For this, designate and foster eight

reference standards data centers by 2007 and supply 10 reference standards databases, while expanding facilities of national accredited testing/calibration laboratories and inspection bodies and enhancing the capabilities of assessors.

Strategic International Standardization to Expand Advance of Korean Technologies into the Global Market

- Promote new strategies linking patents and standards of 15 strategic technology fields, next-generation growth engine industries, etc. with international standardization. Maximize utilization by linking Patent - Technology Development -Standards and build systems to support market expansion.
- Step up efforts to lead the international standardization activities through support for increased numbers of chairs and secretaries on technical committees and policy committees of international standardization organizations.
- Resolve trade barriers and support exporting firms with establishment of a system responding to technological restrictions. For this, support conclusion of FTAs with the U.S. and EU and build TBT dialogue channels and also respond to environmental restrictions and increase MRA conclusions.
- Build a system that reflects standardization achievements, patents and SCI theses, including suggestion of international standards, in the appraisal of business performance of standards experts, professors, researchers, etc.



Establish Product Safety Management System Enhancing Public Safety and Quality of Life

- Strengthen elevator safety management, including special management of old elevators, mandatory daily checks by managing bodies and also strengthen registration requirements for repair businesses.
- Improve systems to enhance the safety management efficiency of electrical products, while introducing a producer self-safety confirmation system and enactment and revision of 133 kinds of safety criteria for electrical goods.
- Reinforce safety management with a focus on the socially vulnerable to achieve social integration and a welfare society.

Comprehensive Countermeasures to Ensure Elevator Safety

Due to the increasing occurrence of elevator accidents at the start of this year, KATS announced comprehensive countermeasures against elevator safety accidents on March 7, including publicity reinforcement targeting elevator users, re-examination and adjustment of elevator inspection criteria and advancement of the elevator safety management level.



According to the countermeasures, for reduction of improper user behavior, which comprises the majority of the causes of accidents, and enhancement of the elevator utilization culture, joint street campaigns on 'Riding Elevators Correctly' will be conducted by the government, inspection bodies and business communities; elevator safety education is being implemented jointly by KATS and inspection bodies for 500,000 children at about 350 primary schools nationwide; and an 'Elevator Safety Publicity Council,' composed of representatives from government, inspection bodies, etc., will be organized and operated for establishment and implementation of comprehensive, systematic medium and long-term publicity plans.

Since there are limitations to the fundamental resolution of problems with just stopgap-style countermeasures prepared whenever an elevator safety accident occurs, KATS plans to draw an elevator safety injury map and set up the intensive preventive measures against accidents by placing priority on the areas where accidents occur most frequently, and extensively reexamine and adjust inspection criteria.

For elevators more than 15 years old, KATS will establish separate inspection criteria for special management, while making it mandatory that inspectors attach 'Failed to Pass Tests' labels on the tested elevators.

In addition, KATS plans to increase the number of parts required to have safety certification on a step-by-step basis,

(Continued from p6)

Expand Growth Engine Base...

For this, establish a safety management system for playground equipment and increase safety management items for the elderly and for children.

- Establish social safety networks to eliminate distribution of

make it mandatory for parts certification firms to conduct regular inspections, strengthen registration requirements for repair businesses, build a smooth parts supply system for repair, supplement the present elevator information management system, etc.

KATS also intends to establish and promote a comprehensive plan for advancement of the elevator safety management level. For this, the Agency announced that it would complete revision of laws concerning production and management of elevators this year.

Status of the Domestic Elevator Industry

- Market Scale: about 1.5 trillion won/year (about US\$1.6 billion)
- Installations: Increasing by about 25,000 units annually

Year	2002	2003	2004	2005	2006
No. of Units	231,562	259,850	289,808	314,495	336,180

• Elevator Accidents

Year	2002	2003	2004	2005	2006	Total
No. of Accidents	16	40	25	42	88	211

Note: The number of accidents in 2006 increased significantly because starting in January 2006, the government made it mandatory by law to report when serious accidents occur.

illegal and substandard products. Expand consumer participation in product safety investigations and prohibit sale of hazardous products, while promoting the implementation of mandatory labeling of safety information on products distributed on cyber shopping malls.

Self-Regulatory Safety Confirmation System for Electrical Goods

KATS plans to introduce an advanced safety management system in the second half of next year that it may designate low-hazard electrical goods, including printers and audio equipment, and newly developed products, as 'self-regulatory



safety confirmation items,' allowing sale of these products if enterprises themselves confirm their safety and report to the related government authority.

At present, in order to sell major electrical goods (247 items),

manufacturers shall acquire safety certificates from a safety certification body. However, although consumer demand for safe products is on the rise, safety management of new products is difficult in reality in the wake of sharp increases in the introduction of diverse well-being electrical appliances and fusion/complex electrical products. Enterprises also have experienced delays in putting newly developed products on the market due to the time and expense required for certification, including product tests, factory inspection, etc.

To resolve such problems, KATS designated new products in categories that previously had not required certification and low-hazard items among existing electrical products requiring certification as 'self-regulatory safety confirmation items.' KATS is also collecting opinions from interested parties after issuing a public legislation notice

to revise the Electrical Appliances Safety Control Act in a way to minimize the number of the present items requiring certification.



Illegal Products without Safety Certs to Be Monitored

Online distribution of illegal products is expected to decrease markedly as KATS decided to strengthen safety management cooperation with cyber shopping mall business organizations and to monitor distribution of illegal goods.

With rises in consumer complaints and reports on sale of illegal products in the wake of the recently increased number of people utilizing cyber shopping malls, KATS disclosed that it would strengthen safety management for cyber shopping malls.

The cyber shopping mall market grew 26% year-on-year to 13.4 trillion won in 2006 from 10.6 trillion won in 2005 and 7.7 trillion won in 2004, according to the National Statistical Office (NSO). The number of consumer complaints also increased to 25,141 in 2006 from 24,023 in 2005 and 17,673 in 2004, according to the Consumer Protection Board (CPB).

Illegal products are those domestically-manufactured or imported goods that are being distributed without safety certificates, a mandatory requirement. For example, electrical products (247 items), such as electrical home appliances and electric heaters, and industrial products (65 items) are required to have safety certifications. On February 23, KATS concluded a business agreement on safety management with Korea On-Line Shopping Association (KOLSA) and prepared framework for a self-regulatory safety management system that would block distribution of illegal products on cyber shopping malls.

Under the agreement, KATS plans to provide self-regulatory safety management guidelines and KOLSA will monitor whether member firms observe the guidelines and encourage related malls to stop sale of illegal products.

Those cyber malls that declare 'observance of self-regulatory safety management guidelines will be able to use the 'VAS (Voluntary Arrangement on Safety) Mark.' The malls must declare that they will not sell illegal products and carry product safety information on the Internet.

After its assessment of cyber malls using the VAS Mark on a regular basis, KATS plans to provide incentives, including awards to excellent safety management malls, and organize and operate a 'Cyber Mall Safety Management Experts Council.' Furthermore, the agency also plans to establish and operate an on-line system enabling businesses and consumers to confirm product safety information conveniently on a real-time basis.