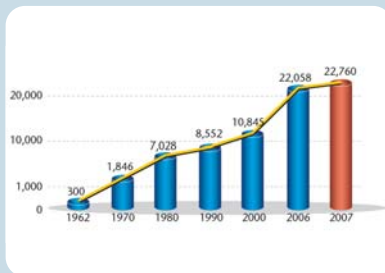




# KATS Newsletter

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## 916 New National Standards Established in 2007

KATS established 916 kinds of new national standards in 2007. The total number of standards developed by Korea therefore reached 22,760. In terms of fields, among the Korean Industrial Standards (KS) established last year, the standards for public safety and convenience constituted the majority with 220 standards, followed by those for national infrastructure at 210 standards.



## Safer and More Pleasant Driving Environment

KATS revised the national street lighting standards, KS A 3701, in a way to enable drivers to see objects more clearly while reducing power consumption of the lights. Previously, criteria for street lighting applied identically to all roads, regardless of road type. The revised standards, however, specify diverse brightness levels by taking into consideration the types of roads, traffic density, road facilities and brightness of nearby areas.



## Revised KS for Hearing Aids: Big Benefits for All

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# 916 New National Standards Established in 2007



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In terms of fields, among the Korean Industrial Standards (KS) established last year, the standards for public safety and convenience constituted the majority with 220 standards, followed by those for national infrastructure at 210 standards.

The standards for the cultural service field, including the financial sector, were about 180, while those for future growth industry fields like education information, etc. were about 170 and those for the energy field, photovoltaic power generation systems, etc. were about 130.

The new national standards selected among those closely related to people's lives, in particular, and their effects are:

First, the standard for 'RFID Tech-Applied Livestock Management System' is expected to considerably relieve consumer uncertainty over foods by making possible the management of the age and origin of livestock utilizing a wireless recognition system.

And the national standard for 'vehicular black boxes', which was established to verify causes when traffic accidents occur, is projected to protect drivers and prevent car accidents.

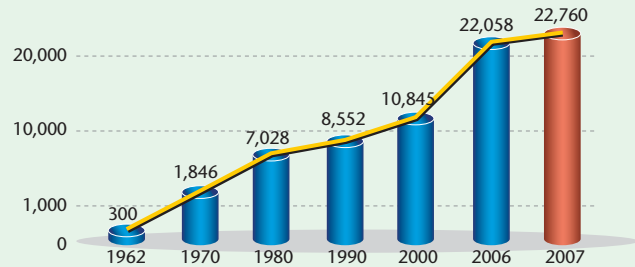
The standard for 'elderly housing facilities' that take the body characters of the elderly into consideration is being evaluated as a useful standard for an aging society by suggesting facility design criteria for nursing institutions.

The standard for a new energy conservation technique, 'Energy Management System,' is expected to reduce energy consumption among industries by 15-20% annually, while the standard for 'Logistics Security Management System' is likely to assist in effective response when trade issues between nations occur due to international terrorism.

A project for measuring Korean anthropometric data and body shape, so-called 'Size Korea', revealed the fact that the muscular strength of full-time housewives in their 30s-40s is the strongest among all females. Female muscular strength turned out to be 225N for those in the 20s age group, 240N for the 30s, 250N for women in their 40s and 220N for those in their 50s.

In 2008, meanwhile, KATS plans to establish new national standards for a wide variety of fields related to the economy, society, culture, etc. and to revise existing standards to match completely new environments.

Number of KS



Status of KS

(Unit: No. of Standards)

Year	Established	Revised	Confirmed	Withdrawn	Secured (cumulative)
1962	300	-	-	-	300
1990	448	598	686	45	10,596
2000	290	427	1,456	41	10,845
2006	995	1,426	2,059	188	22,058
2007	916	2,558	3,351	214	22,760

Status of KS by Industrial Field

Category	1990	2000	2006	2007
Total	8,552	10,845	22,058	22,760
Basic (A)	471	536	1,090	1,113
Machinery (B)	1,439	1,764	4,043	4,156
Electricity (C)	1,089	1,140	3,131	3,339
Metal (D)	829	943	1,628	1,653
Mining (E)	231	248	435	434
Civil & Architecture (F)	598	604	814	827
Daily Necessities (G)	330	267	371	367
Foods (H)	135	147	490	494
Textiles (K)	406	517	788	826
Ceramics (L)	364	362	435	452
Chemicals (M)	1,331	2,094	3,998	4,070
Medical Products (P)	241	327	703	722
Transport Equipment (R)	441	604	1,036	1,065
Shipbuilding (V)	491	501	823	837
Aviation (W)	156	238	467	486
Information (X)	-	553	1,798	1,850



## 6 Firms Received Logistics Management System Certificates

KATS has implemented a pilot certification project to introduce and conduct logistics management system certification, which has dramatically improved the efficiency of domestic logistics processes since last May, and it has issued certificates to six companies.

This certification is an important tool to assess whether logistics facilities used in diverse cargo movement processes such as packaging, transportation, offloading, and storage have been standardized, or to what extent these facilities can upgrade logistics efficiency when linked together.

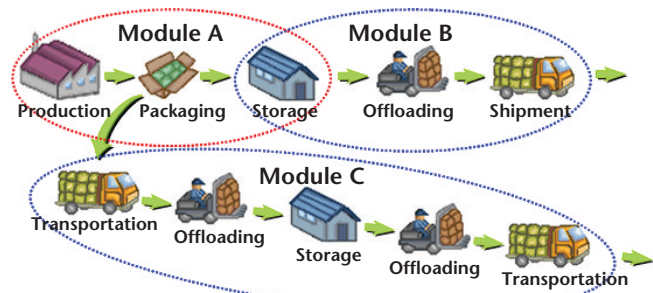
The implementation of the certification system originated with establishment of the unit load system. It became more urgent due to a sharp increase in the mechanization, automation and up-scaling of logistics facilities like logistics centers and cargo terminals. Meanwhile, the scope of logistics management has recently expanded to all industries including manufacturing and distribution businesses.

This environment required an increase in the efficiency of complementary module systems at logistics facilities as well as logistics management indicators to enhance national competitiveness in logistics through logistics standardization. In 2007, the logistics standardization rates of major countries were Europe 90%, USA 60%, Japan 45% and Korea 39.4%.

As for the assessment indicators for certification of logistics management systems, KATS plans to allocate:

- 40% to logistics standardization capability, evaluating

### Example of Logistics Management System Certification



Logistics Management System Certification Module

standard logistics facilities and the operating status of the ULS by process;

- 30% to logistics management capability, evaluating logistics management processes, leadership and logistics management strategy; and
- 30% to logistics management results, evaluating the customer satisfaction level regarding logistics services and social achievements from logistics activities.

With 1,000 points as full marks, KATS intends to apply a minimum score of 700 and 600 for large enterprises and SMEs, respectively, as criteria for certification.

If standardization spreads throughout the whole logistics system, KATS expects that the nation will be able to reduce annual costs by three to four trillion won, equivalent to reducing 3-5% of national logistics expenses versus GDP.

## Distributing Guideline on SW Development

To help small and medium-sized enterprises developing high quality software (SW) products of an international level at low cost, KATS distributed a free SW process guideline specifying details in accordance with the development procedures of ISO/IEC 15504, known as SPICE (Software Process Improvement and Capability dEtermination).

The guideline defines 15 processes to improve SW development procedures and is comprised of characteristics, practices, etc. of work products required for application at industrial fields.

To raise its utilization rate, the guideline referred to related standards, CMMI (Capability Maturity Model Integrate), IEEE Software Engineering Standards, ISO 9001, etc., which are leading the global market based on the definitions of international standards.



At present in Korea, foreign-made software has about 80% of the domestic market, while the global market share of made-in-Korea software stands at the level of just 0.5%. Therefore,

(Continued on p4)

## Standardization of Crime-Prevention Design

A survey conducted by KATS and the National Police Agency (NPA) found that Korea spent about 25 trillion won in social and economic areas in 2006 owing to crimes like burglary, theft, violence, rape, arson, etc.

To protect the public from crimes and reduce social and economic costs, KATS and NPA decided to promote standardization of CPTED (Crime Prevention Through Environmental Design) for construction of new cities and upgrade of existing city centers.

For this project, KATS and NPA conducted an investigation into domestic practices and analysis of standardization effects starting in July 2007. Based on the results, the two agencies established a 'five-year CPTED standardization promotion plan'.

According to the plan, standardization of CPTED will be implemented in the management aspects of software and hardware design and introduced into city design and construction stages after obtaining verification from experts whether the desired principles are being applied and fully implemented.

'Software design' involves planning the urban layout, lighting, auxiliary roads, land rezoning, color and materials of street structures, etc. taking into account crime-prevention principles. 'Hardware design' encompasses the design of doors, windows, locking devices, street facilities, etc. to have sufficient strength that will ensure the safety of citizens.

'Management' includes activities to augment and maintain the designed environment, eliminating elements that may facilitate crime, strengthening surveillance through patrols or CCTV, expanding infrastructure for youths or homeless individuals vulnerable to crime and communicating crime-related messages steadily.

Since 2005, the Ministry of Construction and Transportation, administration-centric complex provinces and cities and Seoul Metropolitan Government as well as the NPA have established



and promoted individual crime prevention environmental design plans. Due to the lack of a basic standard, however, the related manuals and guidelines were not compatible.

With this standardization of CPTED, it is therefore expected to resolve the problem and also to push ahead consistently with key government policies.

### What's CPTED?

CPTED is the proper design and effective use of the urban environment that can reduce the incidence and fear of crime. This, in turn, leads to improvement in the quality of life.

### Case Study:

In Europe, CPTED is spreading among EU-member countries after initial development of a European standard. The U.K. and Netherlands are implementing design and product certification systems led by the police. Especially in the U.K., housebreaking theft and car crimes declined 50% and 40%, respectively, after CPTED standardization.

(Continued from p3)

## Distributing Guideline on SW Development

the upgrade of external confidence in Korean-made software through quality improvement is urgently required.

Also, securing a foundation to improve quality at small and medium-sized software firms, which account for over 90% of the Korean software industry, has emerged as a crucial problem.

KATS plans to prepare momentum to further widen the

Korean SW market by making concentrated efforts in securing quality competitiveness of Korean-made software, including enhancing the global market response capability of related industries through the rapid dissemination of international standard technology.

## Safer and More Pleasant Driving Environment

KATS revised the national street lighting standards, KS A 3701, in a way to enable drivers to see objects more clearly while reducing power consumption of the lights.

Previously, criteria for street lighting applied identically to all roads, regardless of road type. The revised standards, however, specify diverse brightness levels by taking into consideration the types of roads, traffic density, road facilities and brightness of nearby areas.

The background of this revision is results of a fact-finding survey on lighting conditions in 19 regions last year, which found that, while energy consumption of street lights was high, road surface lighting was insufficient, causing difficulties for drivers in recognizing lanes and an intense dazzle effect.

In the past, moreover, there was no standard to measure quality of street lighting systematically. By including the method to calculate indicators for brightness and dazzle, the

revised standards will enable road lighting designers to select and design street lights with an identical standard technique.

KATS plans to disseminate software to help calculate the brightness of street lighting more easily and also to improve the criteria related to street lights in the future.

Through such efforts, KATS expects to reduce night-time traffic accidents caused by dazzle from lighting and to offer a more pleasant environment with the beautiful sights of cities at night.

### Traffic Lane System & Dazzle Improvement Effects

Before Improvement	After Improvement
	
Road Surface Brightness Spotty	Road Surface Brightness Uniform

## Cautions on Unsafe Toys and Children's Jewelry

As a result of a three-month safety investigation on products for children conducted from September to November 2007, KATS announced a recall of some toys and children's jewelry which contain high levels of lead, nickel, chrome, etc.

Those items subject to the safety investigation were 142 products being sold at discount stores, retailers, online shops, etc. in four categories - children's jewelry, toys, disposable diapers and baby textile products.

For children's jewelry, 9 out of 13 items of children's jewelry, including necklaces, bracelets and rings, contain higher levels of lead and nickel than specified. For toys, excessive level of lead and chrome were also found in 5 out of 46 items. While for disposable diapers and textile products for babies, 83 items of products proved to be safe, in compliance with the safety standards.

If unsafe products containing heavy metals

are used for a long time, it causes a contact dermatitis accompanied by blisters, eczema as well as symptoms of lack of appetite, exhaustion and headache. KATS also urges consumers to confirm the presence of KPS (Korea Product Safety) label before buying products and also recommends to visit its product safety portal ([www.safetykorea.kr](http://www.safetykorea.kr)) and check to see if the products they wish to buy have safety certificates.

To protect children from import of illegal and unsafe children's products, furthermore, KATS is currently in discussions with Korea Customs Service to regulate related products as items subject to confirmation by heads of customs offices.



## ○ Revised KS for Hearing Aids: Big Benefits for All



KATS revised three series of KS standards for hearing aids to improve overall performance in preparation for an aging society.

The revised standards are Measurement of performance characteristics of hearing aids for quality inspection for production, supply and delivery purposes (KS C IEC 60118-7); Hearing aids. Part 8: Methods of measurement of performance characteristics of hearing aids under simulated in situ working compatibility (EMC) (KS C IEC 60118-13).

### ●Determination of tolerance for performance of hearing aids

KATS increases consumer reliability on the products by determining the tolerance of performance of hearing aids and recommending that manufacturers and sellers include the tolerance of performance in product guidebooks.

### ●Simulation method with artificial ear

As measurement value of performance of hearing aids can be different depending on the testing conditions and environment, a simulation method with an artificial ear similar to an adult's is specified so that the identical performance values can be obtained.

### ●Measuring level of noise caused by electromagnetic waves

A lot of noise generated in hearing aids is due to mobile phone's electromagnetic waves; however, there's no evidence to prove the relationship between noise and electromagnetic waves.

This revised KS includes that the level of noise of hearing aids related to the strength of electromagnetic waves can be measured. It enables manufacturers to produce the hearing aids which are not affected by electromagnetic waves from cell phones.

KATS expects the revised KS to have substantial effects on improving the performance of hearing aids. KATS encourages manufacturers, testing and assessment organizations to apply the revised KS standards to ensure consumer safety and convenience.

### Market Trend of Hearing Aids in Korea

In Korea, there are about 10 manufacturers of hearing aids, including Starkey, Segi and Daehan. Yet, the hearing aids produced and sold in the domestic market depend on imports for more than 90% of core components like chips. Of the total, about 70% are sold after domestic assembly and about 30% are imported as complete products.



(In-the-ear hearing aids)



(Behind the ear)



(Box-style)

Nationwide, meanwhile, the number of persons who are hard of hearing account for about 10% of the total population. Among them, users of hearing aids are estimated at about 1% (some 500,000).

## ○ Higher Quality of KS-marked Antifreeze & Wash Solution

Among 69 automotive antifreeze and wash solutions being sold in the market, those with KS-mark appeared to have far higher quality than non-KS products, according to the result of a quality inspection conducted by KATS from September 20 to November 20, 2007. The total number of items inspected were 48 KS-marked and 21 non-KS products.

In the case of antifreeze solutions, 7% (three out of 40) did not reach the required quality criteria in moisture content, freezing point, metal corrosiveness, etc. The defect rates were 3% for KS products and 18% for non-KS products.

For wash solutions, 14% (4 out of 29) appeared to be defective, failing to meet requirements for freezing point, metal corrosiveness, etc., necessitating consumers' particular attention. The defect rates were 5% for KS products and 30% for non-KS products.

The result of the quality inspection indicated that if consumers use five products, which are defective in preventing rust, among the total



69, they could experience immediate undetectable damage due to corrosion on the car body, including breakage of air-conditioning equipment, trouble with window wipers, etc. The defective products related to metal corrosiveness consisted of one KS product and four non-KS products.

According to an analysis of KS-marked products sold in the market for the past five years, 30% of them were found to be improper in 2003 but the percentage declined significantly to 4% in 2007.