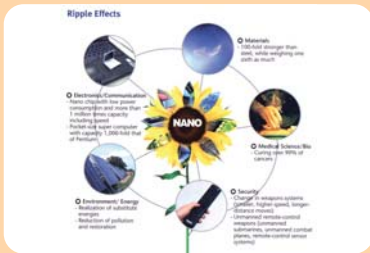




## Prosperity, Innovation, Global Standards

2007 is the Year of the Pig under the oriental zodiac. In Korea, the pig is a symbol of prosperity, good health and good fortune. With this in mind, I would like to use the initials of P-I-G to describe the goals of KATS' efforts in the standards field - Prosperity, Innovation, Global standards.



## ISO/TC Meeting on Nanotechs Held in Seoul

Hosted by KATS, an international standardization General Assembly meeting of ISO/TC229 (Nanotechnologies) was held in Seoul on December 4. At the meeting, Korea presented detailed content of the purity evaluation method for carbon nanotubes proposed earlier on March 16, 2006, and also suggested carbon nanotube size and shape measurement methods.



## Korea's Top 10 New Techs Picked for 2006

On December 20, the Ministry of Commerce, Industry and Energy (MOCIE) announced 'Korea's 2006 Top 10 New Technologies' at the auditorium of KATS. The ministry selects 10 new technologies (NTs) annually among locally-developed world-class products that can bring excellent technological and economic ripple effects.

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## Prosperity, Innovation, Global Standards

*First of all at the start of the new year, I wish to extend my best wishes for the prosperity of all related to the standards field around the world and especially to our valued clients and partners.*

2007 is the Year of the Pig under the oriental zodiac. In Korea, the pig is a symbol of prosperity, good health and good fortune; and in Korean folklore if a pig appears in your dream, it represents future wealth.

With this in mind, I would like to use the initials of P-I-G to describe the goals of KATS' efforts in the standards field - Prosperity, Innovation, Global standards.

Last year, the Korean economy overcame various challenges at home and abroad including high oil prices and a domestic demand slowdown to set an annual export record of more than US\$300 billion, just the 11<sup>th</sup> nation in the world to reach this milestone. Making this record of prosperity even more striking, it came just two years after surpassing exports of US\$200 billion for the first time.

With this rapid expansion of trade volume, KATS takes special pride in being the de facto home of standards and technology innovation. These days, the aspiration of all competitive organizations is represented by the keyword, innovation. However, technology is the basic engine for innovation.

Standards create an environment for the efficient practical use of technology and innovation. But it is also important to extend standardization beyond its domestic use through global cooperation. Bearing witness to KATS' success in this area, Korean industrial standards (KS) are today nearly 100% harmonized with international standards. In fact, KATS is the national standard bearer for global standardization in collaboration with organizations like ISO, IEC, and others.

*(Continued on p7)*



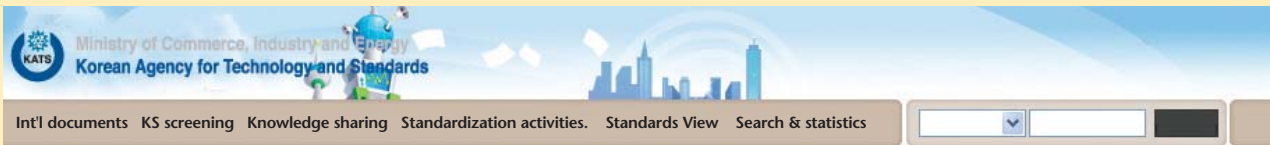
We are not only working to upgrade our own standards systems at home but also are spreading our experience and expertise in the field to developing countries. For example, in 2006, KATS conducted standards education programs for ASEAN countries on a multilateral and bilateral basis.

## Building Open-Type Knowledge Management System for Standards

KATS has prepared a private sector-government knowledge and information sharing system by standards field to encourage participation of domestic experts in global standardization activities and also to expand the suggestion and reflection of domestic technologies in global standards.

For examination of draft international standards and systematic accumulation and management of knowledge and information related to standards, KATS established and launched operation of its global standards voting system (<http://evote.kats.go.kr>) on December 11.

Under the system, 5,570 industry-academia-research institute standards experts, who are members of the nation's standards experts council, will carry out global standardization activities, such as online examination and voting on international documents, and also share diverse standards-related knowledge and information with KATS employees. External standards experts can access the knowledge produced by the employees of the agency and the employees also can review the knowledge registered by external experts.



## ISO/TC Debates Regulations Related to Tire Durability

The plenary meeting of ISO/TC 31 (Tires) was held Dec. 11-15 on Korea's Jeju island with more than 60 tire industry experts from about 10 tire manufacturers participating, including Korea's Hankuk Tire and Kumho Tire, USA's Goodyear, France's Michelin, Japan's Bridgestone, etc.

Some 80% of the US\$83-billion world tire market is shared by 12 major manufacturers, and, therefore, the securing of technological competitiveness and successful efforts to set international standards in the sector are vital to each country.

The issue of the greatest interest at this meeting was the latest moves by the EU and the U.S. to reinforce regulations related to tire durability intended to protect their countries' own industry. The participants joined in-depth discussions among the countries on the test method and criteria for tire durability.

As the present European tire quality certificate mark, the E Mark system, and the U.S. Federal Motor Vehicle Safety Standards (FMVSS) applicable only to durability tests of new tires are being studied to extend the period beyond three years, use (application of use period considering aging of rubber), exports by the domestic industry may be greatly affected unless proper measures are prepared.

**Tire Production by Major Countries (Unit: 1,000 each)**

Country	2003	2004
USA	235,850	233,106
Japan	170,215	173,093
China (estimated)	95,000	120,650
Germany	72,366	78,488
Korea	70,921	76,596
France	61,905	63,168
Brazil	38,682	40,715
Russia	38,969	38,427
Total	1,224,000	NA

Source: U.S. "The Business" 06.2.13



## ISO/TC Meet on Nanotech Standardization



Hosted by KATS, an international standardization General Assembly meeting of ISO/TC229 (Nanotechnologies) was held in Seoul on December 4.

At the meeting, Korea presented detailed content of the purity evaluation method for carbon nanotubes proposed earlier on March 16, 2006, and also suggested carbon nanotube size and shape measurement methods.

Of particular note, IEC's Nanotechnology Subcommittee meeting was held simultaneously with the ISO/TC229 GA meeting. In the future, ISO and IEC are expected to organize a Joint Working Group in the nanotechnology field and also to utilize the venue as an opportunity for creation of maximum possible synergy effects through establishment of an ideal cooperation system between the two organizations.

### Nanotech Ripple Effects



Based on its 'Five-Year Nanotechnology Standardization Plan,' KATS is supporting industry-academia-research institute experts to spur the nation's nanotechnology standardization infrastructure establishment project. Starting in 2007, KATS plans to identify more systematic and efficient work patterns through specific demand surveys of consumers and enterprises and to prepare a nanotechnology standardization roadmap.

Global interest in the nanotechnology field induced astronomical investment (US\$9.6 billion) in the development of related technologies in 2005. The present situation is that nanotechnologies have already been utilized in a wide variety of industrial areas and practical life applications, and also have been commercialized into products.

## Korean Elected as ISO/TC224 Co-Chairman



A Korean professor was elected to co-chairman of ISO/TC224 (drinking water systems and wastewater systems) at the technical committee's general assembly meeting

held in Uruguay on December 3, with unanimous approval of all 20 member countries, including France, U.S.A. and Japan.

The co-chairman-elect is Prof. Namkung Eun, Dept. of Environmental Engineering and Biotechnology, Myongji University. Prof. Namkung acquired a Ph.D in water management engineering from the University of Illinois at Urbana-Champaign in the United States.

With global interest in protection of water resources and supply of good-quality water and efficient treatment of wastewater heightening, ISO/TC was newly established in 2002 at the recommendation of France, which has the world's top competitive enterprises in the field, such as Veolia and Ondeo.



## Advancing System for Chemical Substance Safety Control -Gov't Joint GHS Promotion Committee-



By Choi Hyung-Ki,  
Director  
Standard Technology  
Support Division  
Ministry of Commerce,  
Industry and Energy  
(MOCIE)

Worldwide interest in safety management of chemical substances is very strong. This is because a wide variety of new chemical substances are being manufactured in line with the rapid development of science and technology to improve quality of life. If safety management is neglected, however, those substances could cause human health problems or industrial accidents.

Nevertheless, chemical substance management systems and labeling methods differ by country, presenting many difficulties for exports and imports. Therefore, countries around the world are beginning to work on unification of safety management systems and arrangement of relevant laws and ordinances.

In 2003, after about 10 years of effort, the United Nations completed development of the 'Globally Harmonized System of Classification and Labeling of Chemicals (GHS),' and prepared and notified guidelines to respective countries. GHS was intended to be utilized globally as a harmonized system for management of chemical substances. In other words, the U.N. prepared the guidelines to enable safety management with the same methodology harmoniously.

GHS classifies chemicals into 27 categories according to physical properties, health and environmental hazard and indicates their hazard level in nine pictographs. The system also makes it easy to know their harmfulness and danger with mandatory labeling of signal words (danger, warning) and phrases ('May Cause Cancer,' etc.).

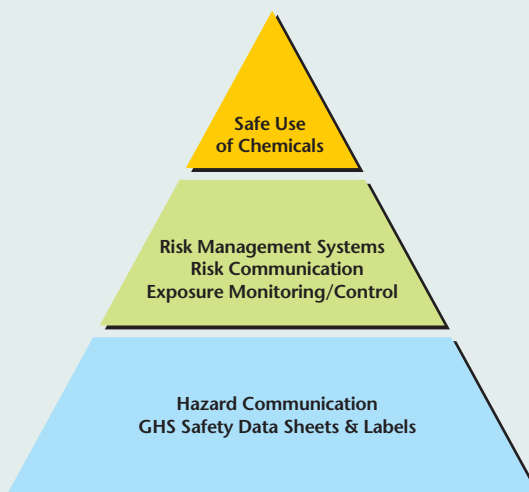
### ***Development and Supply of GHS***

Introduction of the U.N.-enacted GHS to Korea is expected to contribute to enhancing the nation's management of chemical substances to the level of advanced countries. It will also be conducive to securing national competitiveness with greater convenience at the time of export and import of chemicals.

For this, more important than any other aspect is the harmonization of related laws, ordinances, regulations, etc., which Korea has thus far implemented differently, with GHS. To this end, the government organized 'Government Joint GHS Promotion Committee' composed of 10

ministries, Ministry of Labor, Ministry of Environment and Ministry of Commerce, Industry and Energy, etc., in 2004 and has been operating it since then.

The committee is a forum to discuss ways for the ministries to apply a unified system, because their present slightly different chemical substance management systems may bring about confusion. Up to now, nine meetings have been held, with major agenda focused on ways to introduce GHS guidelines and revise laws by ministry.



Owing to substance-rich operation of the committee, meanwhile, the Ministry of Labor plans to implement chemical substance management in accordance with GHS in 2008 for the first time after revising the Industrial Safety & Health Act, and the Ministry of Environment and Ministry of Agriculture & Forestry are targeting implementation of the global system in the same year.

With enactment of classification and labeling methods in line with GHS as Korean industrial standards (KS), KATS also has prepared the foundation that enables respective ministries to introduce GHS domestically. Respective ministries have agreed to specify that regulations follow KS standards in their laws and ordinances for safety management of chemical substances.



## 87 Certified as 'Excellent Service Quality Enterprise'



On December 22, 2006, KATS presented 'Excellent Service Quality Enterprise' certificates to 87 companies, including Cheil Industries, for the second half of the year.

KATS introduced and implemented this certification system in 2001, along with service standardization, which is designed to enhance the satisfaction level of consumers, meet their needs for higher-quality services and strengthen the competitiveness of the service industry with quality improvement through good-will competition among businesses.

According to the agency's analysis, 53 of the 87 certified firms were small & medium enterprises (SMEs), accounting for 61%. This implies that awareness of service quality is spreading to SMEs.

Of particular note, acquisitions of the certificates by organizations in the public service sector, such as Bucheon City Facilities Management Corp. and National Youth Center of Korea, also were on the rise.

### Status of Excellent Service Quality Certified Enterprises

Category	Total	2001	2002	2003	2004	2005	2006
No. of Certified Firms	452	74	92	54	36	74	122
Large Enterprises	265 (58.6%)	74 (100)	63 (68.4)	33 (61.1)	19 (52.8)	24 (32.4)	52 (42.6)
SMEs	139 (30.7%)	0 (0)	29 (31.6)	12 (22.2)	7 (19.4)	26 (35.1)	65 (53.3)
Public Service Firms	48 (10.0%)	0 (0)	0 (0)	9 (17.0)	10 (27.8)	24 (32.4)	5 (4.1)

Under the system, certified firms will receive preferential treatment in the reliability appraisal for purchase by the Public Procurement Service (PPS), support from the knowledge service cultivation fund, credit guarantee fund, etc., in addition to citations by the government.

Since 2001, KATS has enacted 71 kinds of KS standards in 27 service fields, tourism, household movers, door-to-door delivery, call center, etc. It also plans to promote standardization of knowledge-based service fields, including finance, logistics and business management consulting, and social service fields, including nursery and silver industries.



## Korea's Digital Signature Techs OK'd as ISO Standards

According to KATS, Ministry of Commerce, Industry and Energy (MOCIE), four digital signature technologies (KCDSA, EC-KCDSA, IBS-2, ECKNR) proposed by Korea were finally accepted as ISO approved international standards at the ISO meeting on JTC1/SC27 held in November in the Republic of South Africa.



Digital signature is a technology that guarantees safety of e-documents used by e-government, public and financial fields, and the e-commerce industry.

In related news, professors Lee Pil-Jung of Pohang University of Science & Technology (POSTECH) and Jeon Myung-Kun of Chungbuk University were appointed as joint editors for the Biometric Template Protection (BTP) project for preventing illegal collection of personal biometric data now being used internationally in e-passports, etc.

KATS plans to reinforce standardization activities in the information security technology field, including introduction of biometric data security technology and information-protection management systems, both of which have high potential value for industry in the future.

## Korean Biotech Industry Production Rises 14.5% in '05

Korea's domestic bio industry is growing sharply. In 2005, the production scale of the industry increased 14.5% year-on-year to about 2.77 trillion won.

According to statistics announced on December 27 by KATS, average sales, employment, investment scale, etc. of related enterprises rose in 2005 compared with previous year. Industrialization also appeared to have made progress with increased clinical tests and higher ratio of firms advancing to the approval/license stage.

Some 8% and 10.4% of firms with sales below 1 billion won and sales between 1~5 billion won in 2004 saw sales growth to more than 1 billion won and 5 billion won, respectively, in 2005. The percentage of firms with less than 10 employees fell to 32% in the year from 47% in 2004, while that of those with 11 to 500 employees soared to 68% from 53%. Investment scale also increased 27.5% year-on-year to about 1.25 billion won per company on average. R&D and facility investment expanded 16% and 54.8%, respectively, as well.

Of the total industrial production, bio foods (41%) and bio medicines (40%) accounted for a combined 81%, followed by bio chemicals (7%) and bio environmental products (5%). The number of persons engaged in the bio industry totaled 13,867 in 2005, up 14.2% from the previous year, reflecting the growth trend of the industry.

Research jobs, in particular, showed a high education-oriented manpower structure with ratios of doctorate, masters and bachelor degree holders standing at 1:3:1.6, compared with those of production jobs 1:7.9:23.2. As for regions with the most active corporate activities, the Seoul metropolitan and Daejeon areas maintained intensity in the order of Gyeonggi-do (33.1%), Seoul (23.2%) and Daejeon (9.7%).

KATS Biotechnology & Environment Standards Team Leader Cho Deok-Ho said, "In the future, KATS will announce the statistical survey results of the domestic bio industry annually so that the government can utilize the data as an objective basis to foster the industry and establish standardization policies and R&D investment plans."



*(Continued from p2)*

### Prosperity, Innovation, Global Standards

We are not only working to upgrade our own standards systems at home but also are spreading our experience and expertise in the field to developing countries. For example, in 2006, KATS conducted standards education programs for ASEAN countries on a multilateral and bilateral basis.

Practicing our principle of 'participate, create and share the benefits of global standards,' KATS also solidified its position last year by restructuring its organization to take advantage of the emerging ubiquitous-service paradigm, which promises easy access for all anywhere, anytime, with any device, on any network, using any service.

Our vision to be the best standards organization in the world requires that we maximize international cooperation, collaboration and coordination. We intend to continue our global standardization initiatives in 2007 with this as our guiding philosophy.

Once again, I would like to wish all of our friends around the world even greater success in 2007 and ask for your continued patronage and support for global standardization in the new year.

## Korea's Top 10 New Techs Picked for 2006 -Combined Sales Seen to Reach 9 Trillion Won

On December 20, the Ministry of Commerce, Industry and Energy (MOCIE) announced 'Korea's 2006 Top 10 New Technologies' at the auditorium of the Korean Agency for Technology and Standards (KATS). The ministry selects 10 new technologies (NTs) annually among locally-developed world-class products that can bring excellent technological and economic ripple effects.

By industrial field, the top 10 selected NTs came from two key industries (electric 3, machinery 3) and four growth engines (IT 2, BT 1, nano material 1). In terms of corporate scale, the top 10 technology developers were six large enterprises, two medium-size firms and two SMEs.



An economical viability analysis indicated that sales of the 10 NTs would reach 1.5 trillion won in 2006 and exceed 9 trillion won in 2010, six times that of 2006.

To select the top 10 NTs for 2006, a screening committee organized with 22 private experts examined 78 new technologies that were commercialized in the 2005~2006 period, and results of electronic voting by industrial technology engineers also were reflected in the examination.

Industry-Commerce-Energy Minister Chung Sye-Kyun, who attended the event, said in his congratulatory speech, "With selection of the top 10 new technologies as momentum, MOCIE will take the lead in achieving US\$500 billion in exports and fulfilling the people's desire for a strong technology nation."

Minister Chung added that for the selected NTs his ministry would do its best to maximize their selection effects with preparation of support strategies corresponding to technology development trends and competitiveness through networks between the government and related enterprises.

### Korea's Top 10 New Technologies for 2006

Field	Company	Technology	Remarks
Electronics	LG Electronics	Dual Injection Steam-Type Drum Washing M/C	World-first
Electronics	PHICOM	Mfg. Tech for MEMS Probe Card	World-class (World's 3rd)
Electronics	LG Philips LCD	100" Full HD TFT LCD	World-first
Shipbuilding	Samsung Heavy Ind.	Arctic-Use Ice Breaking Cargo Ship	World-first
Automobile	Hyundai/Kia	V-6 Gasoline Ramda Engine	World-first
Semiconductor	Jusung Engineering	Semi-Batch Type Cyclon Plus ALD/SD CVD	World-first
IT	Samsung Electronics	High-Speed Mobile WiBro Tech	World-first
IT	Ssangyong Info & Comm.	Scientific Combat Training System	World-class (World's 2nd)
BT	Tego Science	Epidermal Cell Therapy Product Using Cultured Keratinocytes	World-class (Korea's 1st)
Nano Material	SK Corporation	Separator for Lithium Ion Battery (LIB)	World-class (World's 3rd)
Total			World-first 6 World-class 4