

Volume II 2011



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## DEAR READERS

Today's consumer products are increasingly defined by innovative expression, and more often than not utilising the latest technologies in both production and operation. Yet, product safety continues to be a challenge for many manufacturers. The U.S. Consumer Product Safety Commission reports that product recalls occur regularly every month, and involve everything from food to medicines to toys.

The costs of such recalls are significant. Mattel Toys announced that a single toy recall in 2007 cut its quarterly operating income by more than US\$30 million. For toys in particular, such recalls usually involve hazardous material content, due mostly to unregulated manufacturing protocols, and in some instances, to increasingly competitive pressures that may seriously compromise quality.

New toy regulations are constantly being implemented to correct oversights in the toy supply chain, particularly in managing design risks and controlling the use of unsafe materials. However, as with many other consumer products, it is only through structured third-party risk assessments, product testing and safety compliance that manufacturers can really prove their diligence to product safety.

Concurrently, global consumers are also more aware of their environmental responsibility, and are more thoughtful with their purchase decisions and energy use. Incandescent light bulbs are already being phased out in several major regions, such as the EU and USA, in favour of more energy efficient ones. Such initiatives should motivate and spur manufacturers to proactively find ways to improve the energy efficiency of their own products.

This issue marks the end of my term as President and CEO of TÜV SÜD Asia Pacific as I take on a new challenge as Global Head of TÜV SÜD Product Service. In doing so I hand over the reins of the TÜV SÜD Journal Asia to Dirk Eilers Member of the Board of Management, TÜV SÜD AG, who I am confident will continue to take the TÜV SÜD Journal Asia to greater heights even as he continues to drive the organisation forward.

Mr. Ishan Palit  
CEO and President  
TÜV SÜD Asia Pacific



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## TÜV SÜD supports landmark photovoltaic project in India

As one of the leading technical service providers globally, TÜV SÜD has accumulated a wealth of experience in the realisation of large-scale energy projects that range from conventional power stations to renewable energy plants. It was recently selected by India's state energy supplier Maharashtra State Power Generation Company Limited (MahaGenco), to provide quality assurance services for a 125 MW total capacity photovoltaic (PV) power station being constructed by MahaGenco in Shivajinagar, in the Dhule district of Maharashtra, India.

The Shivajinagar PV plant, which will be one of the largest PV facilities in the world, features different technologies in its construction. Three blocks will generate 75 MW of the plant's capacity using crystalline silicone PV modules, while two further blocks will generate the remaining 50 MW with the help of thin-film terrestrial modules. The five blocks, which will network with each other and connect to the grid, are critical to the function and performance of the new power station.

TÜV SÜD will provide end-to-end quality assurance support to the Shivajinagar PV plant throughout the construction process, and up to the commissioning of the plant. This will involve design reviews, electrical and mechanical installation support as well as quality management of all PV components, modules and systems used in the building of the plant.

The project adds to TÜV SÜD's global experience of supporting manufacturers and operators in achieving safe, reliable and profitable renewable energy generation, and assisting investors in making the right investment decisions in this area. With a comprehensive range of photovoltaic services ranging from product testing and certification, to feasibility studies, site and environmental assessments, supplier evaluation and technical due diligence, it is well poised to partner clients around the world in ensuring the success of their solar energy efforts. ■

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## TÜV SÜD now accredited as ENERGY STAR® certification body

In January 2011, TÜV SÜD was accredited by the U.S. Environmental Protection Agency (EPA) as an official ENERGY STAR® certification body for a range of home appliances and electronics, and commercial food service, information technology and lighting products. The accreditation is part of the EPA's new rating requirements to have ENERGY STAR® products tested by recognised testing agencies worldwide.

Among the first global certification bodies to be EPA-recognised in this area, TÜV SÜD now provides manufacturers with the test capacity

to qualify their products to ENERGY STAR® requirements across its test facilities at key regional manufacturing centers around the world.

The EPA accreditation reinforces TÜV SÜD's commitment to provide the latest and most relevant technical services to its customers. Apart from ENERGY STAR® testing, it also offers verification and certification services to Nationally Recognized Testing Laboratories (NRTL) and Federal Communications Commission (FCC) standards for customers exporting their products to the USA. ■

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## Ishan Palit appointed CEO of TÜV SÜD's Product Services Division

TÜV SÜD has announced the appointment of Ishan Palit as Chief Executive Officer for its Product Services Division at TÜV SÜD AG with effect from 1 August 2011. Mr Palit succeeds Dirk Eilers who was promoted to the Board of Management, TÜV SÜD AG in 2010.

In his new capacity, Mr. Palit will oversee TÜV SÜD's thrust to expand its global portfolio for product and food safety. Today, the Group has close to 2000 employees engaged in these areas over more than 50 sites across Europe, the Americas and the Asia Pacific. Its product specialists work closely with customers along their entire supply chain, qualifying products from toys to complex medical devices. In the food sector, it primarily focuses on hygiene audits and the quality and safety of processes and products.

Commenting on his new appointment, Ishan Palit said, "Global supply chains are getting more complex everyday. This poses a challenge to our customers in ensuring quality, safety as well as social and environmental accountability. In order to serve our customers in every location where they need to manage these challenges, we will continue to invest aggressively in our testing, inspection and auditing capabilities worldwide."

Mr. Palit joined TÜV SÜD in 1994 as General Manager of its operations in India. In 1999, he was appointed Managing Director of TÜV SÜD South Asia and was responsible for its activities in India and Sri Lanka. Under his leadership, sales revenue tripled and operations expanded to 30 branches and laboratories throughout India, Bangladesh and Sri Lanka. In October 2009, Mr. Palit was promoted to Chief Executive Officer of TÜV SÜD Asia Pacific. ■

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## TÜV SÜD refocuses its operations in the Asia Pacific



To sharpen its strategic focus of providing high-quality, independent, third-party testing and certification, TÜV SÜD has divested its tertiary education holdings in the region, divesting both a 100 percent stake in Singapore's PSB Academy to a Baring Private Equity Asia affiliate, and a 49 percent stake in the James Cook Australia Institute of Higher Learning to JCU Enterprises. These divestments will see TÜV SÜD reinvesting funds to support its organic and inorganic expansion in key regional market sectors including renewable energy, e-mobility and energy management.

The consolidation comes as part of TÜV SÜD's global growth strategy to expand its operations in core areas, primarily in the Asia Pacific, with the aim of reinforcing its extensive regional office and laboratory network, and doubling its revenue and increasing its headcount to 7,000 by 2014. In the short-term, TÜV SÜD aims to become the market leader in electromobility - specifically in battery testing and certification services for electric vehicles - as well as in energy management consultancy and the certification of green buildings.

While TÜV SÜD's divestments mark the end of its tertiary education thrust in Asia, it remains fully committed to enhancing its corporate training operations through TÜV SÜD PSB Learning. With a team of 300 in-house consultants, associates and curriculum developers, TÜV SÜD PSB Learning currently offers approximately 200 management and technical skills training programmes to more than 25,000 clients in Singapore and the Asia Pacific. ■

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## Demand for green products and services in Asia largely untapped

TÜV SÜD's Green Gauge, the first study of its kind to analyse consumer and corporate attitudes to green products, services and certifications in Asia, has revealed that businesses have so far significantly underestimated consumer interest in these issues. The study conducted in 2010, polled 460 management-level professionals in the home electronics, food and beverage, clothing and footwear industries in China, India and Singapore, as well as more than 2,600 key home decision makers in these regions. The report shows the disparity between demand for such products and services and their supply.

Key research findings in the report indicate that the vast majority of consumers are prepared to pay up to a 30% premium for green products and services, with as many as 74% claiming to have already purchased such items. In contrast, businesses in these sectors expect only 43% of consumers to be willing to pay more for green credentials, up to a premium of only 14%. Furthermore, just 43% of businesses produce or trade in green products, with a surprising 74% either not having green policies in place or failing to clearly communicate they have one.

The TÜV SÜD Green Gauge also investigated the impact green business credentials had on purchasing behaviour. Generally, more than 90% of consumers indicated that independent green certifications were of importance when deciding which product to buy. A large number also declared that such standards played a more significant role in their purchasing decisions than price.

With the majority of consumers and corporate entities showing high interest in green products and services, green issues will become even more prominent in the next five years. The stage is set for astute businesses to capitalise on this growing trend to reap significant



rewards, especially with the limited number of green products and services currently available.

TÜV SÜD is committed to supporting manufacturers in preparing their products and services for green qualification. By providing them with comprehensive test, audit and certification services, and leveraging its position at the forefront of trends and industry knowledge, it is well poised to help proactive businesses close the gap in consumer demand, thereby helping to improve their business prospects and enhance their contribution to environmental sustainability. ■

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## TÜV SÜD to provide support for rising solar energy requirements in the Philippines

Increasing solar energy requirements in the Philippines have led to more solar power plants being planned as feed-in-tariff rates for the country are finalised, a trend that has correspondingly seen rising demand for innovative solar technologies and photovoltaic applications.

To further promote the use of solar power across the country, the Philippine Solar Power Alliance (PSPA) and the Berlin-based Renewable Energy Academy have come together to help local and foreign companies better understand the mechanics and economics of photovoltaic solutions and how to develop and finance such projects.

In support of this drive, TÜV SÜD PSB Philippines recently participated in the Philippine Solar /PV Summit 2011 spearheaded

by PSPA and the Semiconductor and Electronics Industries in the Philippines Inc. (SEIPI), to share with participants its extensive expertise and industry experience in the area of solar harnessing technology and application.

TÜV SÜD also supports stakeholders in the Philippines in the design, construction, commission and operation of solar power plants. In addition, it helps them conduct project feasibility studies, testing and certification of plants, PV modules and components, as well as provides expert opinion on prevailing regulatory and financial frameworks. ■

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# Shortcuts

## **TÜV SÜD Korea CEO elected President of AUT Korean Alumnae Association**

TÜV SÜD Korea's CEO, Dr. Du-ill Kim has been elected president of the Korean Alumni Association of Germany's Aachen University of Technology. Widely regarded as an expert in the nuclear and energy sectors, Dr. Kim received his doctoral degree in mechanic engineering in 1991, and upon his graduation, has served Germany's nuclear institution, the Korea Atomic Energy Research Institute and Siemens Korea's nuclear development department. ■

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## **TÜV SÜD PSB Malaysia is now an accredited toy testing lab in Malaysia**

TÜV SÜD PSB Malaysia has been appointed as an accredited toy testing lab by the Malaysia Domestic Trade, Cooperatives and Consumerism Ministry. The appointment came as a new national regulation took effect 1 February 2011, for both local and imported toys to be tested and stamped with the Malaysian Conformity (MC) mark as proof of their production conformity to stringent toy safety guidelines. Legislated to address the large influx of toys into Malaysia which do not meet these guidelines, toys found without the MC mark will be confiscated by the Ministry, with businesses or individuals flouting the law prosecuted under the Consumer Protection Act 1999. ■

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## **TÜV SÜD PSB Philippines authorized by Philippines BPS to conduct ICC inspections**

To expedite Import Commodity Clearance (ICC) for the vast volume of imported goods into the Philippines, TÜV SÜD PSB Philippines has been authorized by the country's Bureau of Product Standards (BPS) to conduct mandatory ICC product testing and inspections to ensure all imported products comply with stipulated quality and safety standards. Products covered under the ICC requirements include household appliances, lighting products, wires and wiring devices, cables, building and construction materials, and chemicals among other consumer products. ■

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## **432 new Philippines National Standards developed in 2010**

The Philippine Department of Industry's Bureau of Product Standards (DTI-BPS) developed 432 new Philippine National Standards (PNS) in 2010, governing a wide range of industrial sectors ranging from furniture and textiles, to apparel, leather goods, food products and electrical installations. Out of a total of 7,310 PNS now administered by the BPS Standards Data Center, 79% of them are aligned to ISO, IEC and Codex Alimentarius specifications, to promote the quality and safety of locally produced goods on a global scale. TÜV SÜD PSB Philippines supports local manufacturers with testing and certification services to ensure their compliance to PNS and other international compliance requirements for quality and safety. ■

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## **KOCEN receives A+ credit rating from KED**

KOCEN, a TÜV SÜD company and nuclear energy service provider, has had its credit rating raised from A to A+ by Korea Enterprise Data (KED), a leading provider of business credit reports featuring the most updated credit ratings, financial statements and bank credit histories of Korean businesses. KOCEN's upgraded credit rating takes into account several positive factors, namely, its astute management, extensive experience and expertise, a stable financial structure, good profitability and cash flow generating abilities, and its potential to develop future projects. ■

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## **TÜV SÜD wins "Best of European Business" award**

TÜV SÜD has been awarded the 'Best Mid-Sized Company' accolade at the sixth "Best of European Business" competition organised by Roland Berger Strategy Consultants. Honouring outstanding European companies and top managers in the Asia Pacific, the initiative highlights their regional strategies and inspires other enterprises to emulate their success. The award was presented to TÜV SÜD for its rapid development and broad presence in the Asia Pacific region, particularly within the ASEAN-5 countries. ■

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## TÜV SÜD Korea signs MOU with KTL to cooperate on PV product testing

TÜV SÜD Korea has entered into a Memorandum of Understanding (MOU) with Korea Testing Laboratory (KTL) to improve their mutual cooperation in the reliability and performance testing of photovoltaic products for Korean PV manufacturers.

A non-profit affiliated organisation of Korea's Ministry of Knowledge and Economy, KTL is a leading testing and certification body established in Korea in 1966, for the purpose of improving the country's technological expertise and global competitiveness by supporting its test and assessment initiatives.

The signing ceremony was held in KTL's headquarters in Seoul on 19 July 2011, and was attended by representatives of both organisations including Dr. Josef Du-III Kim, President and CEO of

TÜV SÜD Korea and Mr. Min Nam Gung, President of KTL.

The MOU, in which both companies will share technical and academic information and expertise in PV module testing, will also facilitate greater support provided by both companies to local manufacturers who want to leverage Korea's FTA agreement with the EU to market their products there.

In addition to helping them align their products to EN and IEC standards, both organisations will also provide expert advisory to manufacturers on the latest trends and updates to European quality and safety standards, thereby reducing their development costs and shortening their time to market. ■

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## TÜV SÜD Japan issues its first SQF 2000 certification in Asia Pacific

Having stringent safety management systems in place can help businesses in the food industry comply with hygiene regulations, and eliminate possible food contaminations across their value chain. Properly audited food handling efforts go a long way toward improving a business's trading potential, reducing potential liability and raising overall consumer confidence in its products.

With food security management as one of TÜV SÜD's key areas of expertise, it is committed to helping food businesses in the region achieve the highest levels of food safety and quality. TÜV SÜD Japan recently issued its first Safe Quality Food (SQF) 2000 certification in Asia Pacific to Japanese poultry slaughtering and processing company,

Torikoh Shoji Co. SQF 2000 is a customised food safety and quality management programme that ensures Torikoh Shoji's operations comply with prevailing product trace, regulatory, food safety and commercial food quality requirements.

With the SQF 2000 certification, Torikoh Shoji will be able to improve the transparency of its food operations and enhance information sharing across its supply chain. This will further add to the reputation of the company's product quality, help it differentiate itself from competitors, and improve its relationships with food retailers and end consumers alike. ■

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# No Toying Around

The global demand for toys is thriving and showing no signs of slowing down, a trend that toy brands like Lego, Mattel and Hasbro look almost certain to benefit from. According to a recent report, global toy sales rose to US\$83.3 billion in 2010, with demand from Asia on par with that of Europe and the USA<sup>1</sup>. With more than 8000 toy manufacturing companies, China continues to be the most cost effective toy manufacturing location worldwide, with close to 80% of the world's toys being made there, the bulk of which are exported to Europe and the USA<sup>2</sup>.

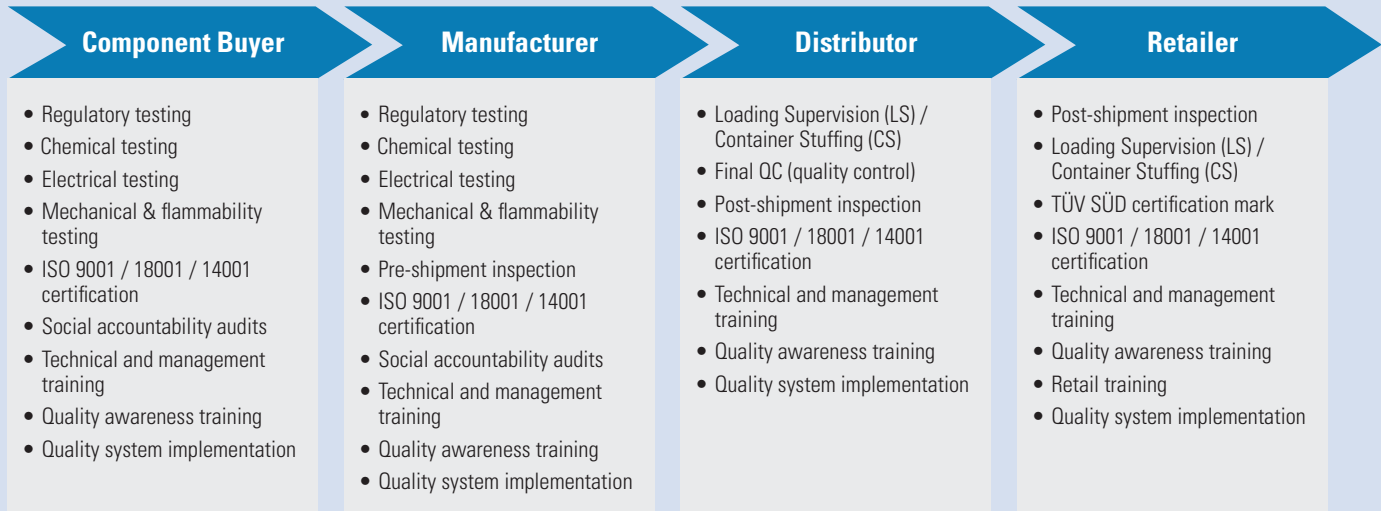


Even before a tide of toy recalls in 2007 - Mattel recalled 21 million<sup>3</sup> of its China-made Fisher-Price toys in the span of five weeks for excessive levels of lead paint. With toy makers facing enormous pressure to contain costs and production times just to be competitive, the risk potential across the Asian toy supply chain is often regarded as significant, especially with some unscrupulous manufacturers commonly using cheaper hazardous substances like phthalates and lead in plasticiser oils and coloured paints respectively. A key challenge for the Asian toy industry is how to deliver cost efficient and quality goods to global customers without the associated safety and regulatory risks.

Frequently changing toy trends have also shortened the life cycle of toys drastically. This means new product development and manufacturing must be carried out rapidly just to meet market demand, further raising the potential for risk across the spectrum of toy development, from mechanical hazards to health and hygiene problems. Manufacturers must ensure their products are aligned to prevailing toy quality and safety standards before they can convince end customers that their toys are really safe for their children.

In recent years however, many toy manufacturers across Asia have been more proactive in implementing stringent measures to control risks in their value chains and align themselves with the quality, safety and the environmental standards and regulations of export regions such as the USA and the EU. In China for example, the Chinese government has imposed mandatory product testing laws to ensure its toy makers conform to international standards. Random factory inspections and sample testing also help to ensure quality control and guard against potential recalls.

## How toy makers can manage quality and safety across their value chain, from design to shop floor:



### Global toy safety directives

With toy trends changing very rapidly, new materials, colours, textures and treatments are being used to make toys to cater to growing demand. However, with each of these new elements, major toy safety issues come into play including the presence of small parts that can cause choking, sharp parts that can cause cuts, and electrical and chemical hazards that could seriously impact a child's health and safety. To ensure the quality and safety of toys they import, major toy markets like the EU and the USA have set up their own toy standards and regulations to adapt to new market requirements.

The EU's toy safety directive 2009/48/EC in particular, was recently updated after a two-year transition period, to make toy imports to member countries even safer. Among other things, the update includes a general ban on carcinogenic, mutagenic and reprotoxic substances in toys, and calls for mandatory testing of more than 800 substances including heavy metals and allergenic fragrances. Warning messages with information such as the minimum or maximum ages for use are also now required to be more visible to consumers, to help them decide whether the toy is suitable. The general provisions of the directive is applicable as of 20 July 2011, while the chemical provisions will be applicable as of 20 July 2013.

In the USA, the Consumer Safety Improvement Act (CPSIA), along with American Society for Testing and Materials (ASTM) and American National Standards Institute (ANSI) guidelines, are regularly updated to restrict the amount of lead and phthalates in toys. For example, the ASTM F963 toy safety standard first introduced in 2009 was recently updated to F963-08 which, among other things, includes sections on magnetic component ingestion, acoustics, flammability and age requirements. These updates are shaped through a variety of considerations including child development research, dynamic safety testing and risk analysis.



### TÜV SÜD helps manufacturers make better toys

To help manufacturers and retailers keep their toys safe for children to play with, TÜV SÜD offers a comprehensive suite of compliance testing and certification services designed not only to help them evaluate the potential for risks along their value chain, but also eliminate harmful substances like phthalates and lead, tiny or sharp parts, and other flammable or electrical threats that could pose a danger to children. It also provides hazard awareness training to help company employees understand the potential risks that toys can pose, and how to address these risks effectively.

In working with TÜV SÜD right from the onset of product development, and taking advantage of its global network of locations and labs worldwide for convenient access to its technical expertise, toy manufacturers are now able to quickly identify hazards in their toys and eliminate them, giving both toy retailers and end consumers across the globe a solid assurance of safer quality toys. ■

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<sup>1</sup> "Global Toy Market Estimates 2011" - The NPD Group

<sup>2</sup> Source: China Chamber of Commerce for Import and Export of Light Industrial Products and Arts-Crafts

<sup>3</sup> Source: The Economic Times: Mattel net falls to \$237m on toy recalls

# ItsImagical Toys

Walk into any ItsImagical toy shop and you'll enter a kids wonderland, one that prides itself on stocking probably the world's best selection of educational toys. With exclusive toy designs that conform to the highest quality and safety standards, ItsImagical toys range from specialised childcare products and developmental toys, to dolls, vehicles, educational games, art and crafts, and a myriad other playthings that offer children and their parents lots of fun and learning.





Part of the Imaginarium Group of Companies, and one of the world's largest specialised toy retail companies today with 350 shops in more than 28 countries, ItsMagical specialises in enhancing children's play and learning via play. Each of its toy collections is designed with the specific aims of educating children, and providing them with the essential values necessary to help them grow up as more responsible, humane and receptive individuals.

To ensure that its toys meet the stringent import requirements of its target markets, and comply with toy safety guidelines, ItsMagical engaged the services and market expertise of TÜV SÜD to carry out product testing and certification of its toy ranges. This covered physical and mechanical testing for factors such as flammability, UV protection, colourfastness and water resistance, and chemical testing to the prevailing requirements for hazardous materials such as phthalates, lead, PAHs and formaldehyde. Stringent testing was also carried out on batteries and electrical components for possible radiation and magnetism leaks.

ItsMagical also sought TÜV SÜD's expert opinion and technical support to help it develop and incorporate better incoming raw material controls via its supply channels. This was a key priority for the company especially after a potential product quality risk was discovered in the production line of one of its materials suppliers.

TÜV SÜD was the obvious choice to support ItsMagical for several reasons, among them its good customer service and technical support, its testing and report accuracy, its flexibility and thoroughness in carrying out comprehensive testing procedures, as well as its solid market reputation for quality within the EU and around the world.

According to an ItsMagical spokesperson, Mr. Julian Chung, "we believe our customers have more confidence in our products knowing they are tested by an industry leader like TÜV SÜD. In working with them, we were also able to tap on their valuable professional opinion in the creation of our new product designs. It helped us facilitate smoother product development and debugging for any potential risks right from the product design stage."

With the successful testing and certification of its toys to the required quality and safety standards, ItsMagical is now looking into future potential collaborations with TÜV SÜD to have its toys qualified with the TÜV SÜD mark. This will help ItsMagical strengthen product recognition for its toys and enhance customer satisfaction, thereby enabling the company to differentiate itself clearly from other toy companies. ■

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## New TÜV SÜD certification service for Building Integrated Photovoltaics

TÜV SÜD has launched a new certification for Building Integrated Photovoltaics (BIPV). The new certification ensures that PV modules and installations are compliant to the relevant national and international standards of quality and safety. The certification, which also facilitates full building PV compliance, will benefit all stakeholders from builders and architects to developers and investors.

BIPV certification involves verifying criteria such as mechanical resistance, stability, and module and system safety during normal building operations or in the case of a fire. Other key aspects assessed within the scope of the certification include noise protection, energy efficiency and thermal insulation, core elements in ensuring that newly installed PV systems fall within the scope of the prevailing building codes.

With the certificate, building stakeholders will be able to prove the technical safety compliance of their PV modules and installation techniques, efforts which may, in turn, be helpful in applying for government grants for PV components such as roof-integrated solutions.

The certification adds to TÜV SÜD's comprehensive suite of technical services in the field of photovoltaic qualification. These range from testing and certification of PV systems, modules and components to national and international standards, to profitability checks, feasibility studies, site and environmental assessments, supplier evaluation and technical due-diligence. ■

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## TÜV SÜD Japan to offer radioactive contamination analysis services

In the recent devastating 9.0 magnitude earthquake and resultant tsunami that rocked Japan and damaged the country's north-eastern Fukushima nuclear power plant, a series of events resulting from the damage further sparked fears of a more serious threat from possible radioactive leaks.

To address concerns of radiation contamination in locally-produced goods in the wake of the incident, Japan's Ministry of Economy, Trade and Industry (METI) has launched a subsidy program to help small and medium companies check for radiation contamination in their products using government-approved test agencies. TÜV SÜD Japan was selected as one of only 13 qualified agencies who met METI's stringent criteria based on its experiences and capabilities in this field.

With the appointment, TÜV SÜD Japan now offers manufacturers and suppliers, radioactive surface contamination measurement services

to help them monitor possible radiation levels in their facilities and products based on prevailing safety standards. Backed by the extensive nuclear engineering and safety knowledge and experience of TÜV SÜD in Germany, the service includes the comprehensive identification and analysis of radionuclides such as I 131, Cs 134 and Cs 137 in products such as food, water, bulk materials, cosmetics and pharmaceuticals.

Adding to the range of services it provides to address concerns of radioactive contamination in the Japanese supply chain, TÜV SÜD Japan also offers consultancy and expert opinion in surface contamination measurement and consultancy for companies seeking to establish their own radiation measurement and decontamination procedures, and quality and safety management systems. ■

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## TÜV SÜD PSB Singapore expands environmental testing scope with new dust chamber

Today's modern electronic products need to be designed and manufactured to withstand a reasonable amount of environmental abuse. Poorly designed or tested products could potentially fail, leading to both economic, environmental and social costs for manufacturers.

To address this need, TÜV SÜD PSB Singapore recently enlarged its environmental testing scope with the addition of a new Aerial Dust Chamber, the Aerial-1800-I-CB, capable of handling product sample sizes of up to 1500x800x800mm. The new chamber evaluates the effects of a dust-laden environment on electronic components and is

capable of testing for various dust types including talcum powder and Arizona test dusts A1 to A4, in line with ingress and corrosion standards such as IEC60529 and IEC-6-68-2-68.

With this addition, TÜV SÜD PSB Singapore becomes the first environment test lab in Singapore to have an standards-compliant dust chamber capable of helping manufacturers test their products to the most exacting environmental demands. ■

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## TÜV SÜD PSB Vietnam Rolls Out New Forestry Chain of Custody Audit Services

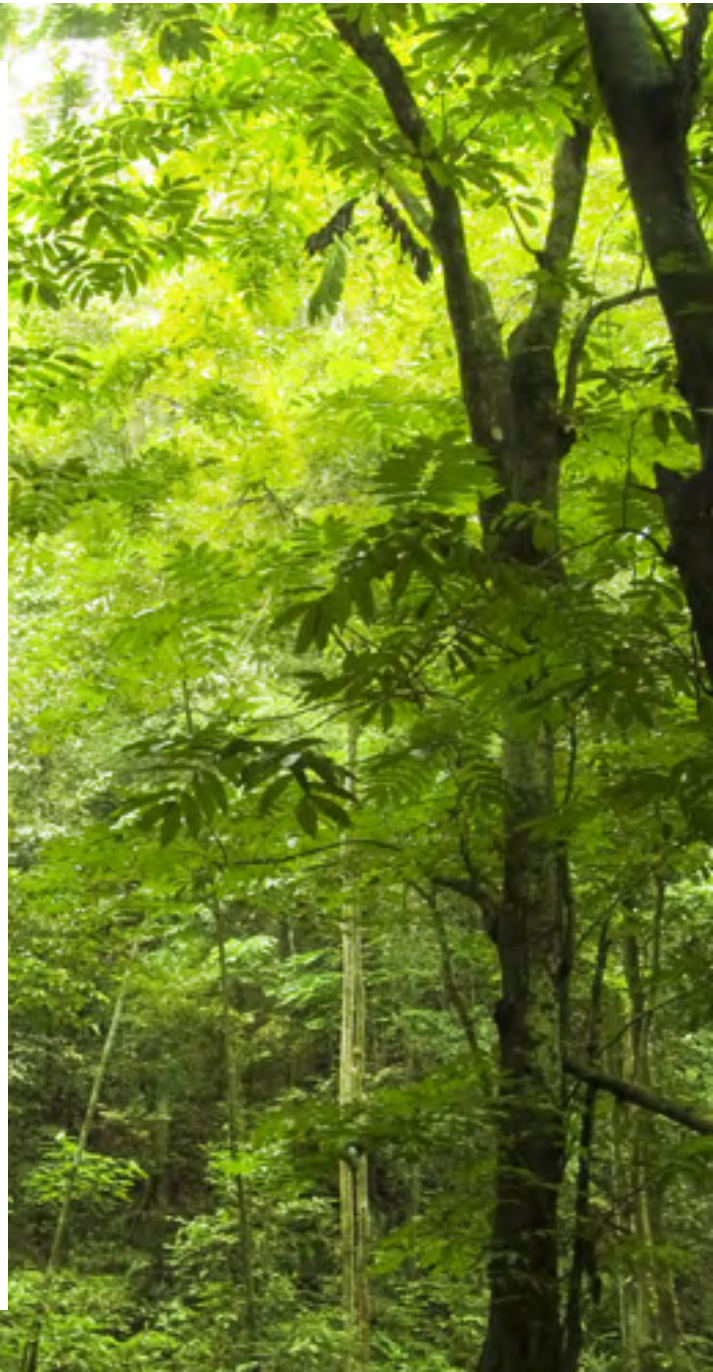
Today, few are aware of where the raw material used in making wood products come from. Yet, whether it is lumber, wood cuttings or wood pulp, increasing demand from environmentally conscious customers, together with stringent mandatory requirements governing such products, have pushed wood-based product manufacturers to ensure the wood they use comes from certified and well-managed forests.

Companies that make products using wood raw materials face a challenge when having to demonstrate environmental consciousness to their stakeholders. This is because these raw materials are increasingly supplied by different global sources, making their tracking more complicated. In order to prove their responsibility to the environment, these companies need to provide properly certified traceability for their wood across their supply chain.

TÜV SÜD PSB Vietnam is aiming to help businesses improve the traceability of their wood products with its recently rolled out Chain of Custody (CoC) audit services for local and regional forestry industries. Launched in the first quarter of 2011, this service helps to track the origins of the wood used in product manufacturing and guarantee its authenticity across the supply chain. In addition, TÜV SÜD PSB Vietnam provides certification for finished wood products, to verify that the wood is sourced strictly from certified forests. The certification comes with a five-year validity.

Offered in full adherence with the regulations set forth by the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC), the new service will enable businesses to demonstrate responsibility for, and a commitment to, sustainable forest management. Apart from improving market access for manufacturers and enhancing their corporate image, it also helps assure end consumers that these manufacturers make products that contribute to global conservation and community well-being. ■

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# Stepping into the light

Come September 2012, those living in the EU can expect to see the complete phase-out of the incandescent light bulb from the EU market. Other countries around the world including the USA, Russia, Canada, Argentina and Mexico have also begun a progressive ban on this traditional lighting technology as well.

With Asia expected to become one of the largest energy consumers in the years to come - primary energy consumption is projected to grow at 2.8% per annum to 6.2 billion tons oil equivalent by 2030<sup>1</sup>, many governments are now legislating the phase-out of incandescent lighting for energy-efficient alternatives such as Light Emitting Diodes (LEDs) and Compact Fluorescent Lamps (CFLs). India, for example, aims to replace 400 million incandescent bulbs across the country with CFLs by 2012, saving it about 55 million tonnes in carbon emissions annually<sup>2</sup>. Similarly, Malaysia aims to stop all production, import and sales of incandescent bulbs by January 2014<sup>3</sup>.

## Traditional or energy saving lighting?

While the incandescent light bulb uses a filament wire that is heated by an electrical current and produces light from the glow, CFLs consist of a glass tube containing a noble gas mixed with mercury. When a switch integrated into the lamp is turned on, electricity heats up the mercury-gas mixture to form mercury vapor which emits UV light. This is absorbed by the bulb's fluorescent coating and, in turn, re-radiates the energy to emit visible light.

CFLs are increasingly being used today because they are more energy efficient as compared to incandescent bulbs. A CFL bulb uses about 75% less energy than a traditional light bulb<sup>4</sup>. However, even energy-saving light bulbs like CFLs still have much developmental potential in terms of their starting times, color rendering, energy performance and the health risks posed by mercury gas from broken bulbs.

LED bulbs are slowly gaining favour in many countries as the answer to sustainable future lighting. Compared to CFLs, LEDs use very little energy and last up to 50,000 hours or about 10 years even with heavy usage. The US Department of Energy estimates that replacing regular light bulbs with LEDs could potentially save 190 terawatt hours annually,



The incandescent light bulb: it is produced in an **environmentally friendly** way, can be **used everywhere** and is inexpensive. Broken bulbs can be disposed of as **normal household waste**.



Many people like the lighter, more uniform light spectrum of the incandescent bulb because it is more **similar to daylight** and does not flicker or emit medium-frequency electromagnetic radiation and UV light.



When switched on, the bulb reaches full brightness **immediately**.










But: It has a relatively **short life span** of around 1,000 to 2,000 operating hours.



The main drawback of the incandescent light bulb: it **consumes too much electricity**. Lamps convert only a small amount of the consumed electricity to light. Around 95 percent of the power needed by these lamps to heat the filament is uselessly emitted as heat.





-  Energy-saving light bulbs primarily earn points with their high level of energy **efficiency**: less electricity is needed to generate comparable brightness. Incandescent lamps consume around five times more energy than energy-saving light bulbs.
-  The **life span of an energy-saving light bulb** is around 10 times longer than a conventional light bulb, about 10,000 to 20,000 operating hours
-  To produce an energy-saving light bulb, a number of different components and substances are needed for the gas in the tube to emit light. As a result, manufacturing and disposing of energy-saving light bulbs are **more harmful** to the environment than incandescent lamps.
-  Should an energy-saving light bulb break, this can pose **environmental and health risks**. In a study commissioned by the German Federal Environment Agency (UBA) and conducted by the Fraunhofer Institute for Wood Research Wilhelm-Klauditz-Institute (WKI), the mercury concentration in the air in a testing chamber was 20 times higher than the accepted standard for interior spaces of 0.35 µg/m<sup>3</sup>. This value is used in Germany to determine potential health risk.
-  The **light** emitted by the lamp is viewed as **unnatural** and cold by many customers. And colors are distorted.
-  Because the lamps contain mercury, they must be disposed of as **hazardous waste**. Another potential **source of danger**: the small amount of UV light that is emitted in particular by low-quality energy-saving light bulbs.
-  Depending on the technology used in the lamp, an energy-saving light bulb **needs up to 60 seconds** before it can emit about 60 percent of its light intensity.



the equivalent of lighting over 95 million homes<sup>5</sup>. In addition, they emit no UV light and produce very little heat, thereby reducing the strain on air conditioning. Easily retrofitted into most standard light fixtures, they are also mercury-free and come in an extensive range to suit many residential and commercial applications.

No doubt the future of lighting, LED technology is still however, slow in its proliferation due significantly to its high initial cost. Although LED manufacturers claim these costs will be offset by long-term savings, the adoption of CFLs over incandescent bulbs will still be more prevalent in the near term. However, as technology continues to advance, LED prices are projected to drop to more affordable levels for the average consumer. ■

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<sup>1</sup> "Asia Energy Outlook To 2030 - World Energy Council

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<sup>3</sup> "Jimat Tenaga: Penggunaan Lampu Pijar Bakal Dihentikan" - Utusan Malaysia - 18 March 2010

<sup>4</sup> Energy Star - <http://www.energystar.gov>

<sup>5</sup> "Energy Savings Potential of Solid-State Lighting in General Illumination Applications" - USDE February 2010



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