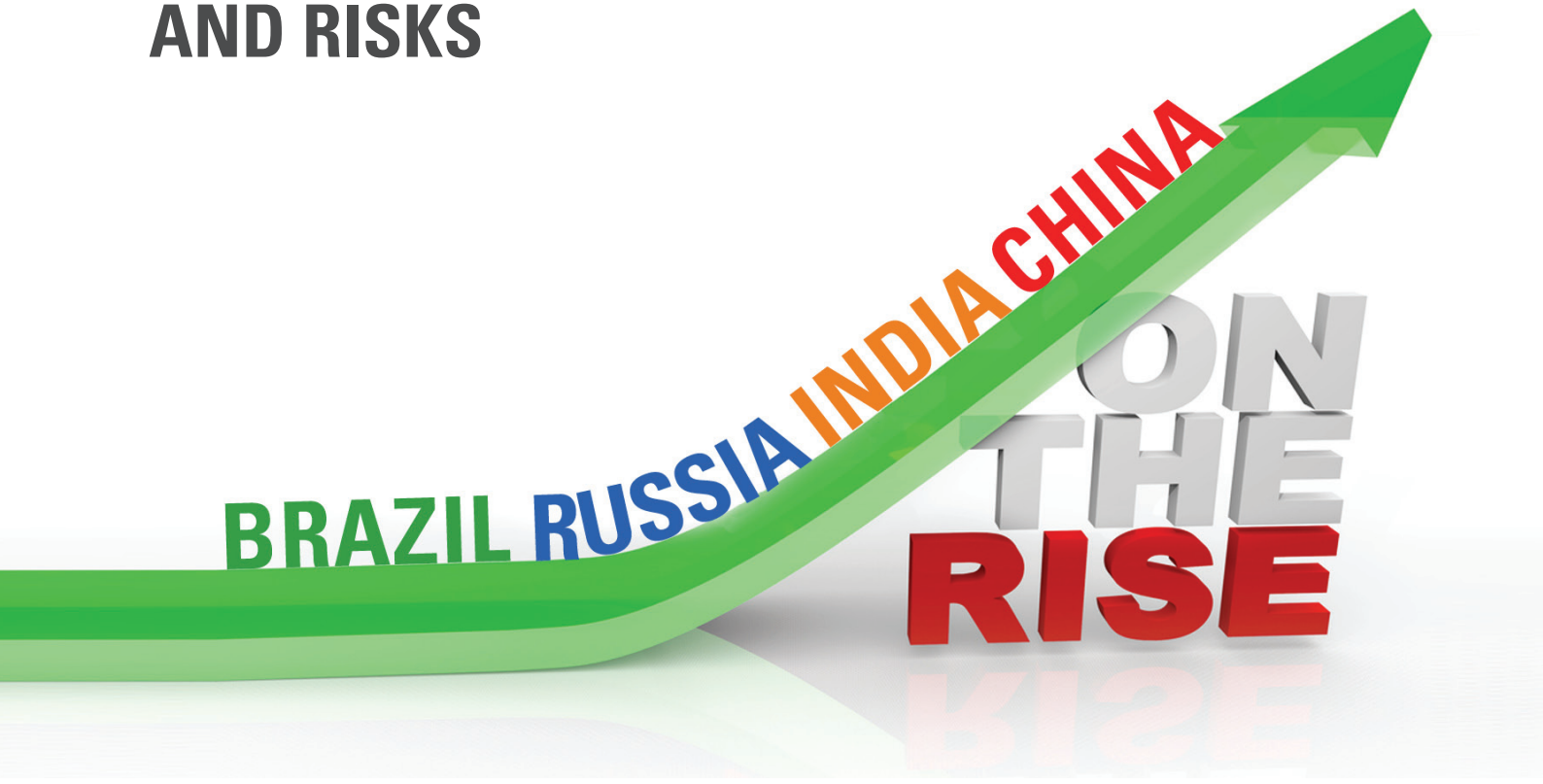
CONSUMER COMPACT

THE CONSUMER PRODUCT PUBLICATION THAT KEEPS YOU INFORMED

MAY • 2012

EMERGING MARKETS: REGULATIONS, REQUIREMENTS AND RISKS



INDIA READY TO PLAY HARD IN WORLD TOY MARKET

TEXTILE AND CLOTHING CHEMICAL SAFETY IN ASIAN COUNTRIES

IMPROVING FOOD SAFETY IN DEVELOPING NATIONS

SGS

DEAR READER,

As the entire world is following with interest the economic ascent of the BRIC countries, our newest Consumer Compact issue brings you a review of the current market access requirements and consumer product standards applicable in Brazil, Russia, India and China, as well as in other emerging economies. Find out more about the steps needed to receive Brazil's INMETRO Certification and see why India is becoming a key market for the toys industry. Read more on the new chemical safety regulations being implemented all around Asia, for various types of consumer products.

Regardless of your product type, SGS can support you with product quality and safety solutions to help you achieve quick market access anywhere in the world. For the entire range of SGS services visit: www.sgs.com/cgnr.

The SGS Consumer Goods and Retail Marketing Team

IN THIS ISSUE

NEW FURNITURE GB REQUIREMENTS IN CHINA

An update of China Furniture GB Requirement was released on 31 October 2011 by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ) and Standardization Administration of Peoples' Republic of China (SAC). Here are some of the main highlights from this update.

GENERAL SPECIFICATION FOR MAHOGANY FURNITURE

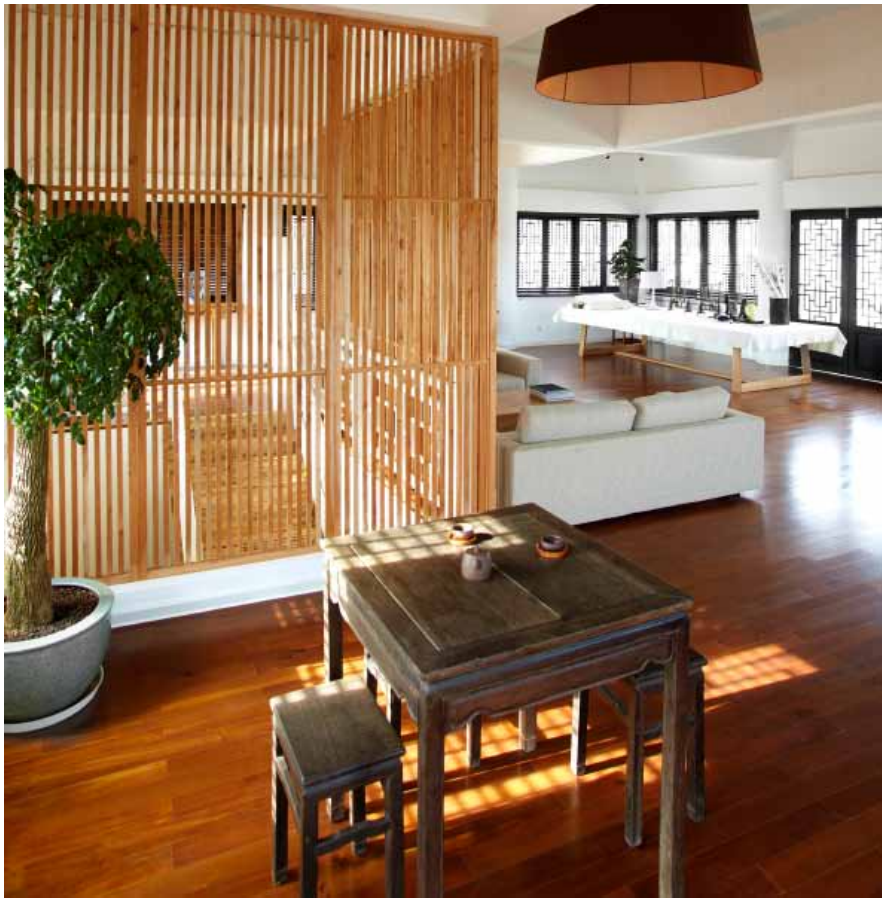
It specifies for the first time that Mahogany Furniture shall be accompanied with a "Product Quality Card" with the special format, in which the manufacturer should detail the testing standards, product workmanship classification, product quality level, scope of application of the product and main materials etc. If the customer finds out that the product is inconsistent with the label description, this label could be used as evidence for lodging a claim.

THE GENERAL SPECIFICATION FOR CHILDREN FURNITURE

It applies to furniture products designed and intended for use by children from the ages 3 to 14. The Specification standardizes the scope, terms, definitions, general requirements, safety requirements, warning sign, testing methods, testing requirements, label and instructions. It also covers furniture made from different types of materials: wood, metals, plastic and upholstered material. There are 9 chapters and 2 appendices in the Specification, and the safety requirement and warning sign are mandatory.

THE GENERAL SPECIFICATION FOR GLASS FURNITURE

It specifies the terms, definitions, classification, requirements, testing method, testing standard, labeling, instruction, packaging, transportation and storage for glass furniture.
The requirements of performance, dimension, safety and restricted substances for glass furniture are mandatory whilst the others are voluntary.



IMPACTS ON PRODUCTION AND SUPPLY CHAIN

New GB requirements for furniture set up technical criteria in production and supply chain, which will help manufacturers standardize their designs and production, and furthermore prevent poor quality products being sold on the market.

The General Specification for Mahogany Furniture (GB 28010-2011), General Specification for Children Furniture (GB 28007-2011) and General Specification for Glass Furniture (GB 28008-2011) will be put into practice on 1 August 2012.

SGS can test the compliance of your furniture according to the furniture GB standards. Moreover SGS leads the way in providing specialist expertise to the global furniture market. Our laboratories in Asia, Europe and USA test all types of furniture to applicable standards and regulations worldwide. To know more about SGS' full range of services for furniture, you can visit: www.sgs.com/furniture.

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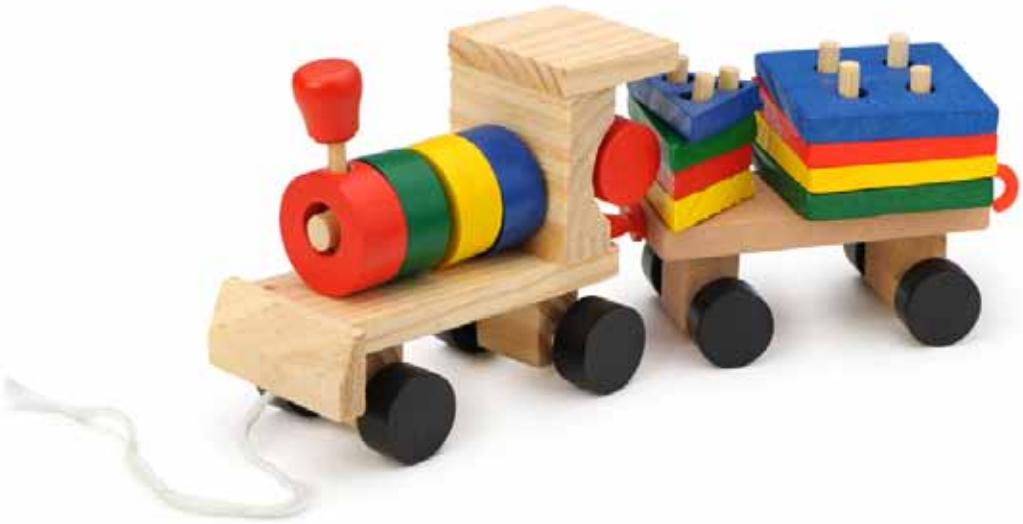
INDIA READY TO PLAY HARD IN WORLD TOY MARKET

India is emerging as a vibrant market for toy manufacturers, exporters and retailers. As per the Toy Association of India (TAI), the country houses around 1500 units in the organized sector. Many of them fall into micro, small and medium business segments, while the large scale industries are still non existent. The industry retail turnover is about $1400 million and there is an additional demand of $1400 million worth of toys in the Indian market. The future of the sector in the country looks highly promising.



The size of the Indian toy industry is expected to reach $2.6B by the year 2015 as against $1.5B currently, due to increasing consumerism and growing population. The toy industry has been witnessing compounded annual growth rate (CAGR) of almost 20%, said the ASSOCHAM study.

INDIAN MARKET ANALYSIS

The past decade has seen the Indian toy industry making quick strides in terms of production and exports. At present, India produces a wide range of toys, namely plastic and mechanical activity toys, plastic and soft dolls, stuffed toys, board games, puzzles, educational games and toys, metal toys, electronic toys and games. Some large/MNCs' toy units like the Mattel, Lego and Funskool are also present in India.

India has various favourable factors like availability of abundant raw materials, low cost skilled labour and wide range of products to select from. These dynamics give the toy industry an immense potential. Parallel to this, the sector has its own set of challenges. Since technical knowledge is fragmented, the Indian toy industry struggles to produce volumes at a globally competitive pricing. In spite of a huge demand the sector still remains largely unorganized. Lack of any regulatory controls leads to a neglect of the quality aspects in the toy supply chain.

The Government of India (via the Bureau of Indian Standards) is working to bring in a new regulation to check product safety in children products. The toy industry is expected to get structured with the implementation of the new regulation thus making the sector vibrant and putting India on the global toy export map.

INDIAN SAFETY LEGISLATION TIME LINE[1]

With an increasing market domestically and abroad, the safety regulations are also getting more stringent year after year. Below you can see the evolution of safety legislations impacting India.

- 1920s: Phthalates are introduced.
- 1931: Plasticizer poly vinyl chloride (PVC) industry booms, with commercial availability of PVC and development of di-2-ethylhexyl phthalate (DEHP).
- IS9873 Part 1, 2, 3 were first published in 1981 and later these standards was revised later by adopting ISO 8124 Part 1,2,3 respectively.
- 1999: European Union (EU) puts restrictions on sale of toys and childcare articles made of soft PVC containing di-n-butyl phthalate (DBP), benzyl butyl phthalate

[1] View time line source

(BBP), Di(2-etilhexil)phthalate DEHP, diisononyl phthalate (DINP), diisodecyl phthalate (DIDP) and di-n-octyl phthalate (DNoP). These restrictions are applicable to toys and articles that are intended to be placed in mouth by children under three years of age.

- 1999: Standard (IS 9873 Part 2) on safety requirements for toys, specifically concerning flammability requirements, is adopted by the Bureau of Indian Standards (BIS).
- 1999: Standard (IS 9873 Part 3) on safety requirements for toys, concerning migration of certain elements, is adopted by BIS.
- 2000: Anti-dumping investigation by Indian authorities finds no evidence of injury to domestic industry due to alleged dumping of toys from China, including mechanical and battery-operated toys.
- 2001: Standard (IS 9873 Part 1) on safety requirements for toys, concerning mechanical and physical properties, is adopted by BIS.
- 2007: Many retailers recall millions of toys following concerns over lead paint and tiny magnets.
- 2007: Mumbai-based NGO files public interest litigation in Bombay High Court seeking a ban on import of Chinese toys due to toxicity.
- 2008: US Congress passes Consumer Product Safety Improvement Act, placing restrictions on use of both groups of phthalate compounds in toys and child care articles starting February 2009.
- 2008: BIS begins review of existing toy safety standards IS 9873 (Parts 1-3).
- 2009: India lifts Chinese toy ban, demands safety guarantees
- January 2009: India prohibits import of Chinese toys, including wheeled toys and dolls, for six months.
- March 2009: India modifies prohibition on Chinese toys, permitting imports which meet international and domestic quality standards on mechanical and physical properties, flammability and migration of heavy metals.
- July 2009: India extends prohibition to all imported toys till January 23.
- April 2011: India revises the toy safety Standard with requirements for Phthalates (SafeGuards N°164/11, Sept 2011).

GREEN INITIATIVES UNDERWAY

With active consumerism the toy industry is getting adapted to new safety standards. In order to ensure safe fun for toddlers, toy manufacturers in India are getting embarked on a green drive by initiating a recycling process and the use of non-toxic raw materials.

The department of industrial policy and promotion (DIPP) has already urged all 600-odd members to adopt nontoxic materials only, and if possible, to recycle toys too. TAI has also launched "We Care" campaign for the cause. The Bureau of Indian Standards (BIS) has framed a directive — which is now awaiting DIPP clearance — on the amount of phthalates permissible in toys. SGS is a member of Toys Subcommittee of Bureau of Indian Standards.

SGS India can perform testing as per India standards IS 9873 Parts 1, 2 & 3. SGS is the first and only BIS approved laboratory for all three parts of IS 9873. Backed by a wide network of toy experts and testing facilities worldwide, SGS can help you ensure the compliance of your toys for all markets.

For further information, you can visit: www.sgs.com/toys.

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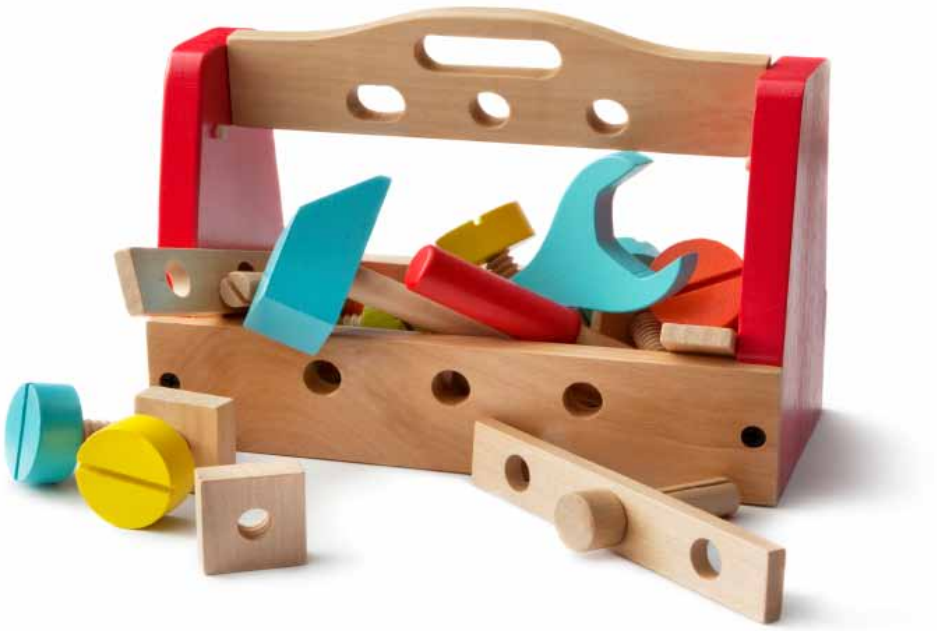

UPDATES IN BRAZIL MARKET ACCESS REQUIREMENTS FOR CONSUMER GOODS

INMETRO the Brazilian Regulatory Agency has been working intensively in the past few years on improving Compliance Evaluation Requirements for consumer products manufactured or imported into Brazil. Consumer Compact offers you a look at some of the latest changes affecting consumer products.

AUTO PARTS

For automotive wheels INMETRO Ordinance # 362 from September 12, 2011 postponed due dates from Ordinance # 445, to January 1, 2013; giving until the end of this year to manufacturers and importers to comply with new requirements. From January 1, 2015 on, only automotive wheels with INMETRO Conformity Identification Mark can be sold in the country.

For the same segment, auto parts such as shock absorbers, electric fuel pumps for the Otto cycle engines, horns or similar equipment used in road motor vehicles, pistons aluminum alloy, pins and lock rings (retention), rings piston, bearings and lamps for motor vehicles, for the aftermarket, have to be in compliance with Ordinance # 301, from July 21, 2011.

The due date for commercialization of certified products will come in force by July 21, 2014, meaning only products with INMETRO Conformity Identification Mark can be sold in national market.

TOYS & JUVENILE PRODUCTS

The highly sensitive industry segments of Toys & Juvenile Products are also under strict regulation in Brazil. Regulatory agencies have tightened requirements for imported toys, demanding the same quality and safety standards as from the national industry for: Plush Toys, Dolls, Ride-on Toys, Projectile Toys, Games, Decorative Collectibles, Figurines, Construction Toys, Battery Operated Toys, Magnetic Toys, Construction Toys, Creative Art Materials, Puzzles, Toys in Food, Books.

Although usually using system 5 (QMS assessment certification) and 7 (batch certification), novelty for toys is the option for System 4, type tests and maintenance tests – conducted on samples collected in retailers' and distributors' plants and warehouses. Products must be in compliance with Ordinance # 369/2007 against Brazilian Standard NM-300 series (Physical & Mechanical Tests, Flammability, Toxic elements, Experimental Sets, Chemical toy sets, Electrical Toy Tests).

Infant cradles are also on focus. Ordinance # 269 from June 21, 2011 demands compliance with ABNT NBR 15860 parts 1 and 2 (for safety requirements and test methodology). It is applicable to finished and ready to use products, produced in national market and/or imported, except for hospital cradles. For further information, you can read our SafeGuards N°133/11 (July 2011).

Recently disclosed, Ordinance # 90, from February 23, 2012 and Ordinance # 481, from December 07, 2010 set new due dates for compulsory certification for school supplies. From December 2012 on, sharpeners, rubbers, ball pens, Nanking pens, glues, compasses, liquid correctives, French curves, squares, crayons, pencil boxes with children characters, pencils and mechanical pencils, modeling and plastic clays, normographe, plastic folders, rulers, blunt-ended scissors, water paints, lunch boxes and protractors will have to comply with ABNT NBR 15236 to be manufactured or imported.

HARD GOODS

Hard Goods such as mattresses produced nationally and/or imported, were also included in the compulsory certification program of Brazilian Government. ABNT NBR 13579 parts 1 and 2 are in force through Ordinance # 79 from February 2011 requiring several tests to ensure quality and product safety, both for foam and fabric coatings.

SGS BRAZIL WIDENS ITS PORTFOLIO FOR PRODUCT CERTIFICATION

SGS Brazil has been qualified by INMETRO as Product Certification Body (CB) for a large number of products, anticipating the demands and possibilities of Brazilian market. Moreover, our technicians have been participating in several technical committees along with other CBs to help INMETRO – Brazilian Regulatory Agency, in the elaboration of Compliance Evaluation Requirements.

Since the last quarter of 2011, SGS Brazil has been qualified as Product Certification Body for steel cables, wires and bars, mattresses, automotive wheels, masks and helmets (PPE), table funs, toys and school supplies.

To help you ensure product compliance for the Brazilian market, SGS offers comprehensive solutions including: update and interpretation of standards and regulations, product hazard analysis/ safety and risk assessment, product and materials testing, factory and social audits, inspections, training and seminars.

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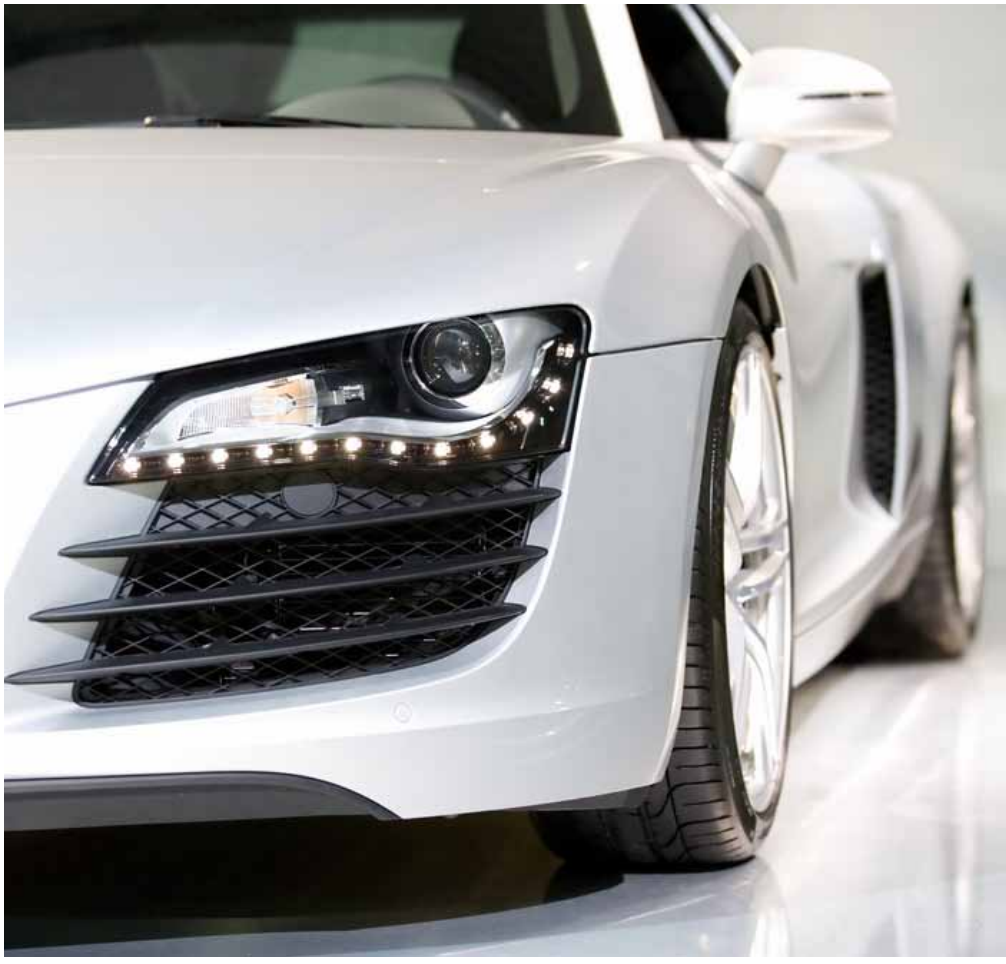
A FAST PACED SMART AUTO LIGHTING TECHNOLOGY: LED

As one of the most important active safety device, automotive lighting plays a very important role in ensuring a safe driving experience. New technologies are developing very fast and today we see an extensive use of new light sources including LED / LED modules, "smart" automotive lighting systems such as automatic bending lighting, headlamps that alternately provide driving beam and passing beam and adaptive front-lighting systems (AFS). But what are the challenges the LED poses to the Automotive industry?

These technologies bring us many advantages: better performance, less energy consumption, better reliability, shorter ramp up time, anti-vibration and shock, smaller size and more design possibilities.



CHALLENGES OF LED TECHNOLOGIES

LED lighting solutions also bring some new problems. For LED light sources, the sensitive thermal characteristic influences the stability of photometric performance and UV-radiation from LED light sources may deteriorate light transmitting components.

Threrefore, thermal design, stability tests, usage of low-UV-type LED modules and UV-resistance tests of internal materials become extremely important. The newer versions of ECE Regulation No. 6, No. 7, etc., for signal lamps require one minute and thirty minutes photometric tests for vehicles equipped with light sources other than filament lamp(s). Also, new ECE Regulation No. 112 introduces a set of tests for LED modules including color rendering measurement, UV-radiation measurement and temperature stability tests.

For these "smart" lighting systems, more complex structures and lighting "modes" are introduced. In a newer version of ECE Regulation No. 112 and No. 123, mechanical, electromechanical or other devices for head lamps, alternately providing driving beam and passing beam or bend lighting, are required to withstand endurance tests and function failure tests. For AFS, different "modes" are defined, Class C, E, V, W for passing beam. Each system shall provide a Class C passing beam and one or more additional class(es), and each class should fulfill the photometric requirements specified in ECE Regulation No. 123.

SGS-TUV Saar Homologation Experts in China are dedicated to research support the new technology and requirements of automotive lighting testing & homologation. We offer consulting and training regarding requirements as well as testing and certification services for an increasing number of indigenous and foreign automotive lighting manufactures.

For more info on how SGS can support your LED lighting solution, take a look at our Homologation service portfolio.

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IMPROVING FOOD SAFETY IN DEVELOPING NATIONS

Despite numerous improvements in the production and handling of food, safety concerns continue. Not only are the types of foodborne diseases constantly changing and new foodborne infections being discovered, the increasingly global marketplace has added new challenges to food safety.

More foods – such as fresh fruits, vegetables, seafood and processed foods – are imported today than ever before. In the United States, U.S. food imports grew from $41 billion in 1998 to $71 billion in 2007, according to the Department of Agriculture's Economic Research Service (ERS).

DISEASE OUTBREAKS ON THE RISE

The number of foodborne disease outbreaks resulting from imported foods may be on the rise. According to the U.S. Centers for Disease Control and Prevention (CDC), foodborne disease outbreaks caused by imported food appeared to rise in 2009 and 2010, according to findings from the CDC's review of outbreaks reported to its Foodborne Disease Outbreak Surveillance System from 2005-2010 for implicated foods that were imported into the United States. During that five-year period, 39 outbreaks and 2,348 illnesses were linked to imported food from 15 countries. Of those outbreaks, nearly half occurred in 2009 and 2010. Fish were the most common source of implicated imported foodborne disease outbreaks, followed by spices. Nearly 45 percent of the imported foods causing outbreaks came from Asia.

STEPS TAKEN TOWARDS PREVENTION

Needless to say, it can be difficult to verify and monitor food safety standards in other countries, especially in developing countries. Nonetheless, businesses and consumers want and need the confidence that foods meet high levels of safety in order to diminish and prevent foodborne illnesses.

That's a primary goal of the Global Food Safety Initiative (GFSI), a non-profit created under Belgian law in May 2000 and managed by The Consumer Goods Forum. GFSI measures existing food standards against food safety criteria, fosters information exchange in the supply chain, builds consumer awareness and reviews existing good retail practices. It's "GFSI Guidance Document" of which the most recent version was released in January 2011, defines the processes, such as implementing specific requirements defined by the GFSI, by which various commercial food safety programs (or schemes) may gain recognition by GFSI.

In June 2007, eight major food retailers agreed to GFSI benchmark food safety schemes, and each of these is now aligned with common criteria defined by food safety experts from the food business, with the objective of making food production and manufacture as safe as possible. In addition to the original retailers Carrefour, Tesco, ICA, Metro, Migros, Ahold, Walmart and Delhaize who agreed to reduce duplication in the supply chain through the common acceptance of any of the GFSI benchmarked schemes, many other food service, retail and manufacturing companies have now joined this approach, according to the GFSI.

SOLUTIONS FOR SMALL BUSINESSES

In part because implementing GFSI requirements and becoming certified can be a large upfront investment – something food producers in developing countries don't always have – the GFSI in mid 2011 announced the Global Markets Capacity Building Program. Creation of the step-by-step program began in 2008 after the GSFI identified a need for technical assistance and support for small and/or less developed businesses in the development of their food safety management systems.

In a prepared statement, Jan Kranghand, former Chairman of the Technical Working Group and current Head of Quality Assurance at METRO Jinjiang Cash & Carry, China, said the goal "is to ensure that through the adoption of this program, businesses can progress over time in a harmonized, systematic way towards obtaining certification against one of the GFSI recognized schemes."

This month GFSI launched its Global Markets Programme for Primary Production. The Primary Production Technical Working Group began in 2010 and numerous pilot programmes were conducted globally. The scope of the programme covers crops, fruit and vegetables and has two levels - basic and intermediate - to guide primary producers towards full certification against one of the GFSI recognized schemes for primary production.

The GFSI's overall efforts are having an impact. A recent study conducted by the University of Arkansas and commissioned by Walmart shows that food manufacturers required to achieve certification on one of GFSI's internationally recognized benchmarked schemes strengthen their food safety programs resulting in safer food products.

The study found that those suppliers implementing a GFSI benchmarked scheme had a thoroughly documented food safety management system, felt their products' safety was improved, and that employees were better trained.

Find out more about SGS Food Safety Solutions.

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VIRAL AGENTS IN FOOD: THE OVERLOOKED RISK

Nearly each week a new foodborne outbreak linked to viruses is reported in the media. These food poisoning cases usually implicate norovirus (NoV) or hepatitis A virus (HAV) such as when dried tomatoes were contaminated with HAV in France 2010 with 59 people affected.[1] In the same timeframe three other hepatitis A outbreaks were associated with eating semi-dried tomatoes: in Australia in 2009 and in the Netherlands in 2010. In the European Union (EU), viral agents were responsible for 11.9% of the foodborne outbreaks reported to the European Food Safety Authority (EFSA) during 2007 and were identified as the second most common causative agent group, after Salmonella.[2]

UNDETECTED VIRAL INFECTIONS

Foodborne viral infections differ from bacterial infections. Unlike bacteria, once present in food, viruses will neither modify the taste nor the aspect of the product so viral infections often go undetected. Numerous foodborne outbreaks caused by viruses have been seen in the world. There are estimated to be 9.2 million foodborne illnesses related to Norovirus in the US each year. In 2008, 19 member states of the EU reported a total of 697 outbreaks. For those outbreaks that were verified, noroviruses were the most frequent cause, followed by HAV.

Viruses can be very infectious. Norovirus inoculums as low as ten viral particles may be sufficient to infect an individual, leading to very high excretion of viruses in stool for several weeks. Enteric viruses, like hepatitis A virus and norovirus, can survive for long periods in food and water. Generally viruses are more resistant to chemical and UV disinfection, filtration and pasteurization than microorganisms. However, viruses may be removed by ultrafiltration membranes or inactivated by prolonged heating or optimal UV treatment. In general, viruses will survive reasonably well in adverse conditions, microbial proteolysis and fermentation. As they are resistant to several food processes, consumption of these processed food products may lead to new human outbreaks. Additionally, infected people may also represent a risk as a great number of foodborne outbreaks are linked to food handlers.

[1] Hepatitis A Associated with Semidried Tomatoes

REGULATORY STEPS TAKEN

To help overcome the risks associated with food-borne viruses, regulatory officials have and continue to pursue several measures:

- European Commission Regulation (EC) No 2073/2005 of 15 November 2005 indicates that "Foodstuffs should not contain micro-organisms or their toxins or metabolites in quantities that present an unacceptable risk for human health", underlining that methods are required for foodborne virus detection.
- This year, an expert working group created by the European Committee for Standardization (CEN), is expected to publish a standard method for the detection of norovirus and hepatitis A virus in food products (shellfish, fruits and vegetables, surfaces and bottled water). The standard method will include qualitative and a quantitative measures.
- The CODEX Committee on Food Hygiene (CCFH) is working on a guideline for the application of general principles of food hygiene for the control of viruses in food, which is now ready for final adoption.
- EFSA published a report in 2011 on "scientific opinion on an update on the present knowledge on the occurrence and control of food-borne viruses".

Food may be contaminated by viruses during all stages of the food supply chain, and transmission may occur by consumption of food contaminated during the production process (primary production, or during further processing), or contaminated by infected food handlers. Viruses do not multiply in foods, but may persist for extended periods of time as infectious particles in foods. Therefore, the EFSA panel recommends focusing controls on preventive measures to avoid viral contamination rather than trying to remove or inactivate viruses from food.

[2] EU Summary Report on Food-Borne Outbreaks

GET THE BEST SUPPORT AVAILABLE

Foodborne viruses are no longer emerging but constitute a real concern to the safety of food. To help organizations meet diverse regulation requirements and to support their internal risk assessment studies, SGS has implemented analytical methods based on the expected standard method from CEN.

As validated methods are available for many types of food and environmental samples, SGS can offer analytical services to food companies. Our services will help food companies to measure viral risks and integrate foodborne virus testing in their analytical surveillance plans.

Find out more about SGS Food Safety Solutions.

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TEXTILE AND CLOTHING CHEMICAL SAFETY CRITERIA IN ASIAN COUNTRIES - WHEN EAST MEETS WEST

The expectation that Asia would become a global market in the 21st century is now gradually being realized. Global apparel brands can now be found in malls in Shanghai, New Delhi, Seoul, and Doha. Where is your next selling destination?

CHEMICAL REGULATIONS THROUGHOUT ASIA

Aside from the long established Japan Law 112 which restricts the formaldehyde content in apparel, the earliest textile chemical regulation in an Asian country was launched by India in 1997. That regulation was banning certain Azo dyes from textile and apparel products. It was followed by the GB18401-2003 regulation from China which was launched in 2005 and includes restrictions on azo dyes, formaldehyde, pH value plus some colour fastness tests in order to address chemical and dyestuff safety as well as safety in wet processing .

Following the lead of the EU and USA for consumer safety and restricted substances regulations, many Asian countries have become very responsive and have drafted or established their own consumer safety regulation for textiles and clothing. These new regulations require brands and retailers to seek out information and take great care when expanding their market in Asia. South Korea in 2010, Taiwan in 2011 and Egypt in 2012 have launched sophisticated official control systems for imported apparel that must be followed by all retailers and brands selling products in those countries.

Below are the common chemicals restricted by China, Egypt, India, Japan, South Korea, Taiwan, and Vietnam.

COMMON RESTRICTED CHEMICALS	CHINA	EGYPT	INDIA	JAPAN	SOUTH KOREA	TAIWAN	VIETNAM
Azo Dyes	●	●	●		●	●	●
Formaldehyde	●	●		●	●	●	●
pH	●				●		
Organotins				●	●	●	
Phthalates		●			●		
Flame Retardants		●		●	●		
Lead		●			●	●	
Cadmium		●				●	

BANNED AZO DYES

Azo dyes are dyes which contain at least one azo bond (-N=N-) within the molecule. In textiles and apparel, azo dyes are commonly used as colorants. Certain azo dyes, when in a basic chemical environment or under certain enzyme conditions, might release harmful aromatic amines. Some of these aromatic amines are classified as carcinogens and are therefore banned.

CADMIUM COMPOUNDS

Cadmium is a naturally occurring and abundant metal. In textiles and apparel, cadmium is usually used in plastics, dyes (usually red, orange, yellow and green) and metal accessories. Cadmium also is a well known stabilizer used in the manufacturing of polymers like PVC. As cadmium is relatively hard to oxidize, it is often used as a coating agent. Nevertheless, cadmium and its derivatives are often suspected to be carcinogens.

FLAME RETARDANTS

Two classes of flame retardants involving halocarbons are commonly regulated. These include brominated flame retardants such as polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDEs), which can be further broken down into pentabromodiphenyl ether (pentaBDE), octabromodiphenyl ether (octaBDE), or decabromodiphenyl ether (decaBDE). Another class of flame retardants are organophosphate flame retardants such as tris(2,3-dibromopropyl) phosphate (TRIS), bis(2,3-dibromopropyl) phosphate, tris(1-aziridinyl)-phosphine oxide (TEPA).

Because of their stability and heat resistance, Brominated flame retardants are used in a wide range of products like automobiles, electronics and textiles. PBBs and PBBEs/PBDEs are as toxic as PCBs and DDT. These compounds are suspected to be carcinogenic, and their stability also makes them dangerous to wildlife. They persist once they enter the environment and food chain, and are likely to pass up the food chain. TRIS and TEPA, the organophosphate-based flame retardants, also are suspected carcinogens.

FORMALDEHYDE

Formaldehyde is a volatile organic compound whose chemical properties make it suitable to be used as an anti-creasing and anti-shrinking agent. It can even be blended with phenol and urea to form polymeric resins. In textiles and apparel, formaldehyde may be found in stiffened and permanent press fabric. Recently, pigment prints have been identified as a high risk material for formaldehyde failures. Despite its multi-function properties, formaldehyde is a highly toxic chemical which can induce irritation to mucous membranes and even cause cancer.

LEAD COMPOUNDS

Lead is a metal which can be found naturally in some ores. In textiles and apparel, lead is associated with plastics, paints, dyes and metal accessories. Lead and its derivatives are suspected carcinogens and lead itself can adversely affect the human central nervous system, kidneys and immune system

ORGANOTIN COMPOUNDS

Organotins are those compounds containing at least one tin-carbon bond. The major commercial applications of organotin compounds are as plastic stabilizers, catalytic agents, industrial biocides, antifouling paints, glass coatings, and pesticides.

Organotin compounds are environmental pollutants and particularly harmful to aquatic environments. Organotins are very toxic to marine and freshwater organisms even in very low concentrations. Seafood is the primary source of human exposure to organotin compounds, and the most common harmful effect is immunological impairment. Among these compounds, tributyltin (TBT) and triphenyltin (TPhT) are the most commonly used in the textiles and apparel industries since DBT is still used as stabilizer in many PVC applications and plastisol prints.

PHTHALATES

Phthalates are a ubiquitous class of compounds used most commonly as a softener for products made with polyvinyl chloride (PVC). The term "phthalate" refers to the di-ester derivatives of phthalic acid and thus represents a group of different, though structurally related compounds.

Phthalates have diverse uses in modern commerce. One of their primary uses is as a plasticizer in flexible polyvinyl chloride (PVC) products such as blood bags and children's toys, etc. They are also used as fixatives, detergents, lubricating oils, and solvents. As a result of these diverse uses, phthalates are found in many consumer products, such as textiles, footwear, and cosmetics, thus inevitably creating opportunities for human exposure. Phthalates are very often found in plastisol prints on garments and in PVC based materials used for coating, soles in shoes and many PVC based accessories used in the garment and footwear industry. Recently, it has been demonstrated that exposure to phthalates can alter the estrogen level in human and animal hormonal systems, resulting in serious health problems such as cancers and reproductive and developmental impairments.

Over the years, these chemical hazards have been communicated to the public. It is not just an issue to manage country regulations to get your merchandise through the border. Executing chemical safety control in your supply chain shows social responsibility and protects your brand image.

Find out more info on SGS Services for the Textile Industry.

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BRAZIL INMETRO MARKET ACCESS PROCESS FOR ELECTRICAL HOUSEHOLD APPLIANCES

On 29 December 2009, INMETRO, the Brazilian quality, standards and metrology bureau, issued Ordinance 371 stipulating that any electrical household appliances made in or imported to Brazil need to pass mandatory product certification before being sold on the Brazilian market. The Ordinance's implementation was divided into three stages spanning over 2011, 2012 and 2013. On August 8, 2011, INMETRO issued Ordinance 328 as an amendment to explain, clarify and supplement parts of Ordinance 371. Below is a detailed review of the two ordinances.

These Ordinances are a clear sign of a transition from voluntary to mandatory certification for Brazilian electrical appliances. With this new requirement to electrical appliances exported to Brazil, exporters should become acquainted with the specific requisites of mandatory technical certification in Brazil as soon as possible. Designs need to be updated and products need to be better prepared for export in this growing consumer market.

INMETRO'S EFFECTIVE DATE ON ELECTRICAL HOUSEHOLD APPLIANCES

Ordinance 371 is being implemented in three stages. In the first stage, which came into effect on July 1, 2011, manufacturers or importers of electrical household appliances are forbidden to import products without mandatory certification. The second stage, coming into effect on July 1, 2012, forbids manufacturers and importers to sell products to wholesalers and retailers without the mandatory certifications. In the third stage, from January 1, 2013, wholesalers and retailers of electrical household appliances will be forbidden from selling products without the mandatory certifications.

The implementation date of these three stages has been postponed by one year for a series of products mentioned in Ordinance 328/2011, which supplements the product range stipulated in ordinance 371/2009. These products are: compressors, electrical stoves, electrical ovens (except those covered by IEC 60335-2-36 and IEC 60335-2-42), commercial microwave ovens covered by IEC60335-2-90, jacuzzis, dryers, dishwashers, wine fridges, freezers, commercial refrigerators, hybrid accumulation water heaters and heat pumps.

PRODUCTS COVERED BY ORDINANCE 371

Ordinance 371 applies to most electrical household appliances included in ABNT, NBR, NM, NM National Standards or IEC 60335-2-X, except:

- Products included in other clauses of INMETRO, e.g. water dispensers (Ordinance 191), gas furnaces (Ordinance 18), electric heat showers (Ordinance 211), refrigerator and freezers (Ordinance 20), air conditioners (Ordinance 14), washing machines (Ordinance 185), etc.
- Products excluded in Ordinance 328: centrifuge covered by IEC 60335-2-4, microwave ovens covered by IEC 60335-2-25, commercial electric ovens covered by IEC 60335-2-36 and IEC 60335-2-42, water pumps covered by IEC 60335-2-41, motor-driven pumps in IEC 60335-2-51(stationary circulation pumps for heating and service water installations), UV and IR radio skin exposing devices covered by IEC 60335-2-27, massagers covered by IEC 60335-2-32, projectors and similar equipment covered by IEC 60335-2-56.

REQUIREMENTS OF ORDINANCE 371

TESTING REQUIREMENTS. Ordinance 371 only sets requirements for safety tests, without requirements for EMC or energy efficiency testing. According to the Ordinance, all products covered should be in compliance with IEC 60335-1 and IEC 60335-2-X, as well as any Brazilian national deviations. But, at present, only electric irons covered by

IEC 60335-2-3 are required to comply with the following deviation: Power cords of electric irons should be in compliance with Ordinance 286.

Meanwhile, electric plugs or sockets incorporated in household appliances exported to Brazil should acquire INMETRO NBR14136.

TEST REPORT REQUIREMENTS. To apply for the INMETRO mandatory product certification, test reports issued by ILAC labs (International Laboratory Accreditation Cooperation) can be accepted. Furthermore, because Brazil is IECEE member, exporters can use their CB reports and certifications to acquire national certification in Brazil.

IMPORTER REQUIREMENTS. The Ordinance also stipulates that importers who apply for the mandatory INMETRO Mark shall establish a Customer Service Center to provide the relevant support to Brazilian consumers.

EXPORTER/FACTORY REQUIREMENTS. Ordinance 371 stipulates that regular assessments of manufacturers shall be conducted to ensure their compliance with the requirements.

As for domestic exporters of electric household appliances, because most requirements in Ordinance 371 are similar to those of CE and GS in the European Union, they can use the certification for export to Brazil if they update the product design and make timely preparations for certification.

INMETRO MANDATORY CERTIFICATION MARK

Products with mandatory certification, certified through a certification body officially recognized by Brazil, should be labelled with the INMETRO Mandatory Certification Mark.

As for the product mark, the first priority is the orange certification label, the length of which should be a minimum of 50mm (see image 1 below). The second option is a black and white label, the same length as the colour version (image 2). If the size of the product is too small and the first two kinds of labels cannot be attached, a third simplified label version can be used (image 3).

INMETRO MANDATORY CERTIFICATION DOCUMENT

The rated voltages in Brazil are 127v and 220v, 60Hz. In many households, 127v and 220v are both available. Thus products exported to Brazil may have two versions of rated voltage in one model.

The INMETRO Certification is a one model one certificate type, and there are two definitions to "one model":

- Same model no. name with two different rated voltage versions (127V and 220V)
- Two different model no. names, the only difference due to the voltage difference (127V and 220V).

Other INMETRO Mandatory Certificate restrictions include: the Certificate owner should be a Brazilian importer; one Certificate can only use one trademark, which has a validity of three years.

SGS SUPPORT WITH INMETRO MANDATORY CERTIFICATION

SGS Brazil is accredited to directly issue INMETRO certifications and has already helped many customers to acquire the Brazilian INMETRO certification. The SGS INMETRO code is: OCP 0040.

SGS can provide you a complete one-stop service, covering tests, rectifications, factory inspections and document application for the INMETRO Mandatory Certification for electrical and electronic products.

For more info on SGS INMETRO certification, visit our Solutions for Household Appliances web page or contact:

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Image 1
SGS INEMTRO Certification Mark - orange version

Image 2
SGS INEMTRO Certification Mark - black and white version

Image 3
SGS INEMTRO Certification Mark - small size version

ELECTRICAL & ELECTRONICS MARKETS - CHALLENGES IN INDIA AND TURKEY

Indian regulators and the electronics industry are focusing on improving market surveillance for e-waste laws and hazardous substances standards, with new regulations coming into effect in 2012. Market surveillance has also intensified in Turkey for all types of electrical and electronic products. Find out below how to stay compliant or gain quick market access in India and Turkey.

INDIA FOCUS ON E-WASTE AND HAZARDOUS SUBSTANCES

Even though E-Waste & hazardous substances regulations, similar to EU RoHS, have been in place in India for a few years, market surveillance has been proving quite challenging on this immense market. But with over 19,000 tonnes of electronic waste generated in Mumbai alone, in 2009, the Indian Government has made the implementation of its E-waste & hazardous substances regulations one of its top priorities.

In May 2010, the Indian Ministry of Environment and Forests, proposed a draft notification of its E-waste (Management and Handling) Rules 2010, aimed at creating an effective mechanism to supervise the generation, collection, storage, transportation, import and export of EEE. The draft rules focused mainly on setting up requirements for viable recycling, treatment and disposal of E-waste, but it also included a chapter on reducing the amount of hazardous substances used in EEE manufacturing.

After a period of stakeholder consultation, the new E-Waste (Management and Handling) Rules 2011 have been published and will enter in effect from May 1, 2012. The Rules cover two primary areas - similar to the EU WEEE and RoHS Directives. The Indian E-waste Rules 2011 limits the use of 20 substances in EEE for sale in India. Additionally, it bans several substances, including some flame retardants, that currently have no viable alternatives. As in the EU, the Indian Government requires manufacturers and importers to provide written documentation supporting compliance to the E-Waste Rules.

The new piece of legislation will prove challenging at first for manufacturers and importers, as the new rules on documenting compliance require the disclosure of information that component makers may regard as proprietary. In light of the liabilities and penalties that manufacturers and importers may face if their products fail to meet the new compliance criteria, more and more companies have now introduced precautionary measures, by implementing screening procedures for products and submitting relevant raw materials, components and final products to precision testing in dedicated third-party labs.

TURKEY - ALIGNMENT WITH EU LEGISLATION

Typically all consumer EEE destined for the Turkish market needs to be accompanied by its CE declaration of conformity, as well as LVD and EMC test reports, in accordance with their product category standards. Products must also strictly follow the applicable CE marking rules.

Starting with 2012, Turkish Customs officers have intensified checks of EEE imported to Turkey and are increasingly denying entry to products that are not accompanied by all the required documentation. The Turkish Industry Ministry has also intensified its market surveillance, randomly collecting E&E products already on sale and submitting them to the tests to determine their compliance to relevant standards. Products that do not pass testing are immediately removed from the market and their manufacturers or importers are being fined.

As with all other EEE, batteries of all types and for all purposes are also under intense scrutiny from Customs and market surveillance agencies. To gain access to the Turkish market, batteries have to be accompanied by the relevant test reports.

CE declaration of conformity is also mandatory for all gas appliances (ovens, heaters, etc.) and all the applicable tests have to be performed by authorized third party labs that have worldwide recognized authorization numbers.

Together with an increased market surveillance, the Turkish Government has also increased its efforts to support local manufacturers to achieve compliance with ecodesign norms and other EU legislations, such as RoHS, REACH, WEEE and EuP, etc. Through the Ellen projects, the Government offers economic advantages to manufacturers that manufacture and test their products in accordance with relevant regulations, within a specific timetable. SGS Turkey is one of the partners of the Ellen projects.

SGS can support your company with achieving quick market access in India and Turkey, as well as on any other market worldwide. For more information on our service portfolio visit the SGS E&E web page or contact:

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WHY LED LIGHT MIGHT SOON ILLUMINATE THE WHOLE WORLD

In recent years, in an effort to increase energy savings and environmental protection, relevant regulations have been successively issued in the largest consumer markets prescribing a gradual phase out of the widely used incandescent lamps. Whether consumers like it or not, in the near future, lighting products used for household and commercial purposes will change. It is widely agreed within the lighting industry that in the long run LED will be the ideal technology to replace incandescent lamps.

As the 16th Guangzhou International Lighting Exhibition showed, the lighting industry is all about the LED. Held in June 2011, 12 of its 20 exhibition halls were filled with LED products, which represented 80% of all exhibited products. Such trends show that the LED is heading towards becoming the main lighting solution.

INCANDESCENT LIGHT HAS ITS DAYS NUMBERED

Without a doubt, the ascent of LEDs has been accelerated by regulators' decision to remove the century-old incandescent light bulbs from consumer and commercial use. The US Energy Independence and Security Act of 2007 completely forbids the use of 100 W incandescent light from 2012 onward. In 2013, the US will phase out 75 W incandescent light, with 60 W and 40 W incandescent light following in 2014. In the EU incandescent light bulbs are also gradually being phased out in accordance with ErP IM 244/2009. From September 2009 to 2012, the 100 W, 75 W and 60 W incandescent lamps will be gradually removed from the market. In China, experts from the China Association of Lighting expect the "The Twelfth Five-Year Plan" to incorporate LED into new strategic industries, and pushing energy-saving and environmental protection to become a target for local governments.

LED ADVANTAGES

LEDs proved to be more efficient than incandescent lamps going by almost all criteria. Considering the electricity consumption, incandescent lamps can only transform 10% of electricity into light, while the remaining is turned into wasted thermal energy. With the incessant improvement of the luminous efficiency of LEDs, they can now provide 54 lm/W, while the incandescent lamp can only achieve 18 lm/W. Such improved efficiencies can help reduce fossil fuels consumption and reduce greenhouse gases emissions.

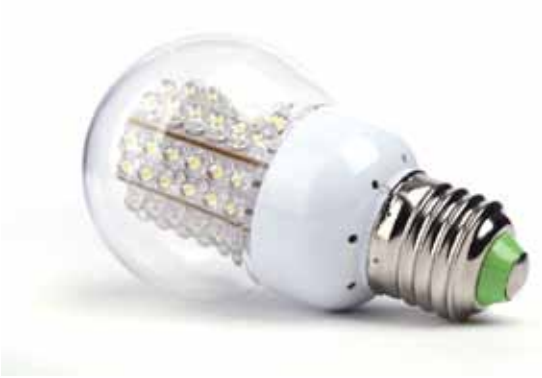
Another cutting-edge advantage is the long lifetime of LEDs. At present, the LED is proven to have a lifetime of over 20,000 hours, and some even reach 100,000 hours. Meanwhile the incandescent lamp lasts for about 1,000 to 2,000 hours. But the lifetime of LED lighting products depends not only on the LED itself, it also relies on the performance of LED power supplies.

LED CHALLENGES

Although the future of LED lighting looks great, there are still a few hurdles that need to be faced. The most urgent problems are heat dissipation and light distribution. The life of an over-heated LED is dramatically shortened, while at low temperatures, the higher the electric current, the brighter the LED becomes. The most common way to ensure heat dissipation is physical cooling, either by heat conduction with integrated heat sinks or by thermal radiation using fans.

Light distribution relates to the light shape of the LED. The LED typically shed light in one direction and as a result they work great as signal lighting. But to adequately replace incandescent lamps, LED light distribution must be scattered into a surface-distribution shape.

Before the LED can make a significant entry on to the general lighting market,



such technological drawbacks need to be addressed. But with the largest players in the lighting industry heavily investing into semi-conductor technologies, reaching the relevant technological advancements is just a matter of time. Furthermore, regulators around the world are keeping a watchful eye on this industry, releasing standards that set detailed requirements for the performance and technical parameters of LED luminaries. New LED standards are currently being prepared or are undergoing improvements, particularly IEC standards.

Quality assurance and quality-control go through the whole course of product manufacturing and usage from research and design, selection of raw material, production techniques, package production, after-sale service, to recycling of used products.

SGS LED Expert Solutions offer support in the development and integration of LED solutions into your product.

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ABRIN	Brazil	Sao Paulo State	April 9 - April 12	Toys	Trade Show	No. 9, Street M	karina.tagata@sgs.com
EVS 26 - International Electric Vehicle Symposium	USA	Los Angeles, CA	May 6 - May 9	Automotive	Trade Show	951	jennifer.dwyer@sgs.com
CTIA	USA	New Orleans, LA	May 8 - May 10	Electrical & Electronics (E&E)	Conference	N/A	johee.klein@sgs.com
AAFA International Product Safety and Environmental Compliance	Vietnam	Ho Chi Minh City	May 17	Softlines	Conference	N/A	karen.kyllo@sgs.com
AAFA International Product Safety and Environmental Compliance	China	Shanghai	May 22	Softlines	Conference	N/A	karen.kyllo@sgs.com
SYNERPA	France	Paris	May 31 - June 1	Consumer Goods	Conference	N/A	charlene.demilly@sgs.com
Toy Biz International 2012	India	Pragati Maidan, New Delhi	June 30 - July 2	Toys	Trade Show	TBC	bhawna.sachdeva@sgs.com
IV Food Forum SGS	Russia	Moscow	July 12	Food	Conference	N/A	tatiana.apatovskaya@sgs.com

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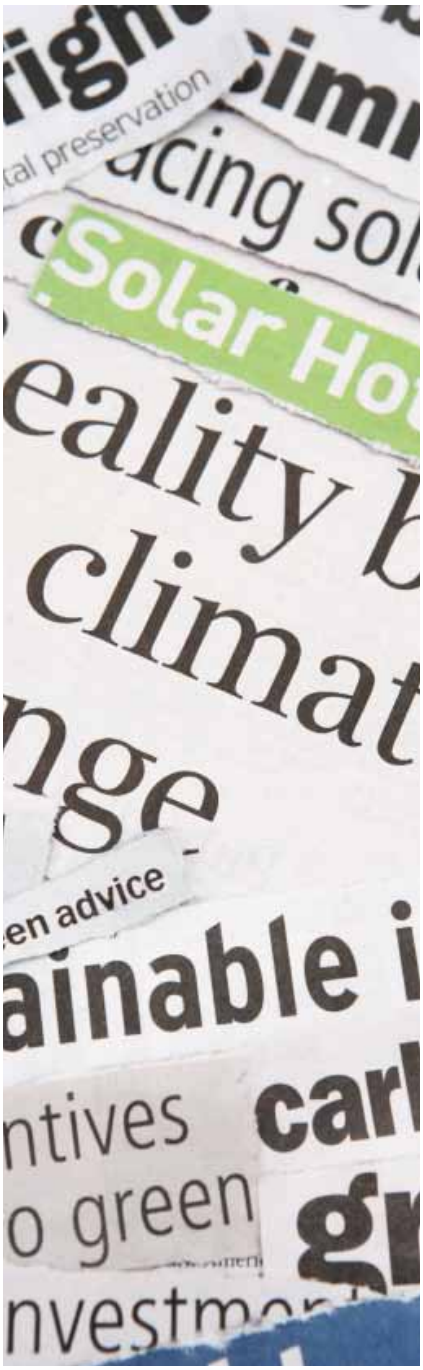

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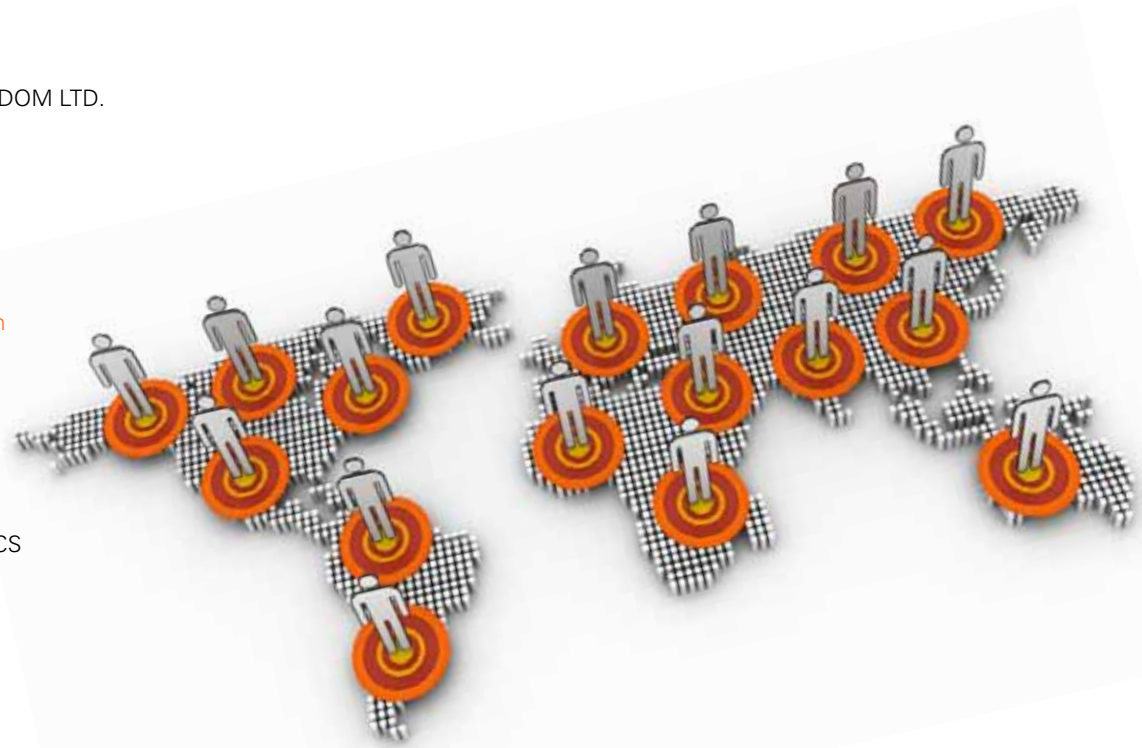

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