THE AWARE CONSUMER

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PROTECTING THE PLANET WITH STANDARDS

WORLD STANDARDS DAY

14 October 2020

INTERVIEW
Shri N K Kansara
Deputy Director General, BIS

RESEARCH FEATURE
Standards For Quality
Of The World

PLUS   ROUND UP • MY MARKET • THE PRESCRIPTION

National Accreditation Board for Testing and Calibration Laboratories (NABL)

(A constituent board of Quality Council of India)

NABL *has established its* **accreditation system** *in accordance with* **ISO/ IEC 17011: 2017** *'Conformity Assessment –Requirements for Accreditation bodies accrediting conformity assessment bodies'.*

NABL accredits Calibration Labs as per international standard ISO/IEC 17025

Around 1000 NABL accredited Calibration Labs ensure trust in the accuracy of result from Equipment

CIPM (BIPM)

CSIR-National Physical Laboratory
(National Measurement Institute of India)

Accredited Laboratories and Government Strategic, Public and Private Sectors
(STQC, BIS, DRDO, ISRO, RRSL, Pharma etc.)

Manufacturers & End Users
(Automobile, Petrochemical, Electrical & Electronics Food and Beverage etc.)

Unbroken Chain of Measurements for Quality

Confidence in Calibration result of accredited labs by meeting the international standard ISO/IEC 17025

Measurements are traceable to SI units through unbroken chain of Calibration

NABL Accreditation ensures competence of laboratory, traceability of measurements, validity of results, quality control measures and many other factors

NABL is a full member and signatory *(since 2000)* **to ILAC** and **APAC** Mutual Recognition Arrangement **(MRA)**. This International arrangement facilitate acceptance of test/ calibration results between countries which MRA partners represent.

Symbol of Trust

CC-XXXX

NABL symbol on calibration certificates of NABL Accredited Calibration Labs

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VIEW POINT

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Standards Help Give
Meaning To Our World

> We all know that as world population grows, everyone has a part to play in using our planet's resources in the most efficient way possible. ISO standards are a proven way of doing just that.

THERE IS A rare field of economic activity where standards are not required. In fact, standards are essential to not only regulate and standardize commercial activities, but also to ensure the quality of our life. Standards are ubiquitous in the world today.

But how exactly do standards help?

Let us look at an example: You have decided to purchase an air conditioner. You go to a multi-brand store and find yourself surrounded by various branded and even non-branded ACs? In a market inundated by products, how is a consumer supposed to decide which product is safe, environment-friendly and energy efficient? In the case of ACs you have BEE star ratings that tell you how much power each AC consumes. Apart from this, there are other International Standards and Indian Standards that each product must conform too. Hence, standards provide us a basis for understanding regarding goods and services. We don't exactly know how a 3-star labelled AC is more energy efficient than a 2 star one. And we don't even need to know such technical details. The star labelling communicates to us and helps our purchase decision depending upon our requirement. This standard is the medium of communication between a manufacturer and consumers. To conclude,
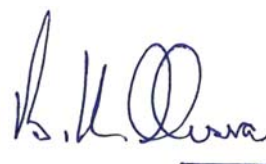
standards facilitate communication, various kinds of measurement, and manufacturing, trade and commerce.

Standards also play an important role in a country's economy by facilitating business interaction; enabling companies to comply with relevant laws and regulations both national and international; accelerating innovation and the launch of innovative products in markets; and enabling interoperability between products, services and processes of different companies and countries, among others. Standards encapsulate knowledge and propagate it in industries enabling interaction between products and processes supplied by various providers.

Standards are also unique in that they are a largely voluntary cooperation among industry, consumers, public authorities, researchers, governments and other stakeholders, who help in the development of technical specifications based on consensus.

In today's increasingly complex and chaotic environment, standards help give meaning and coherence to our world.

It's more than just about innovation in healthcare

It's about creating new ways for a new world

At Glenmark, we are synonymous with innovations in pharmaceuticals. Our track record boasts a legacy of developing medicines and molecules that have been revolutionary in impact. However to us, these innovations serve a greater purpose. We wish to create a world devoid of pain, where every face beams radiantly with joy! We are a world where a brighter tomorrow dwells in the hopes and ideas of today.

DESKTALK

MESSAGE FROM EDITOR-IN-CHIEF

Let's Protect Our Planet With Standards

WORLD STANDARDS DAY is celebrated every year on October 14. It is a tribute to the collaborative efforts of the vast pool of experts worldwide who develop these voluntary technical agreements published as International Standards. This year's theme – Protecting the planet with standards – comes as a reminder to the humankind to get our act together if we want to save the planet.

For centuries, humans have stripped the planet systematically of its vast resources without bothering to give back in any way. It is payback time if we want to continue enjoying the nature's bounty. The planet has been sending drastic reminders of the repercussions of our thoughtless repletion of natural resources, of how we have been adding to the greenhouse gasses, of the rising pollution levels in our oceans, rivers and the air we breathe. Our forests are burning, precious flora and fauna dying, glaciers melting, rivers shrinking – the horrific results of our actions are everywhere to see. The devastating floods that wipe out lives and properties are more frequent and grimmer, the earthquakes are increasing in frequency and intensity, unseasonal and uneven rainfall is the bane of poor farmers, extreme weather and climate are affecting the quality of life… the list is endless.

As our population keeps growing so does the pressure on the planet's finite resources.

Unfortunately, there is widespread lack of awareness and blatant disregard for the consequences of our actions. We need to change our habits and soon. For this to happen, we urgently need global action and political will. We not be able to right the wrongs of centuries, but at the least we can start anew chapter where we respect our planet.

International Standards have a huge role to play in this regard. Standards cover all aspects of energy, water and air quality and lay down standardized processes and methods of measurement, technical challenges and human requirements. International Standards developed by IEC, ISO and ITU act as guides for governments and organizations to implement such protocols and practices that protect the planet.

Consumers must do their part by ensuring that the products and services they use and the practices they follow also contribute to this goal.

Pooja Khaitan

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INSIDE

THE AWARE CONSUMER   OCTOBER 2020

ROUND UP

Bureau of Indian Standards
मानक: पथप्रदर्शकः

PRAMOD KUMAR TIWARI
DIRECTOR-GENERAL, BUREAU OF INDIAN STANDARDS

"IIT, Roorkee's expertise in technology and research is well-known. As the National Standards Body, we are excited to partner in their journey to move a step ahead so as to benefit national standardization.We are also eager to join hands in promoting standards and their integration with curriculum."

A safe water supply is the backbone of a healthy economy, yet is woefully under prioritized, globally.

BIS Draft Standard For Drinking Water Supply

Though the government is not expected to make it mandatory, the standards will improve the quality of water throughout the country by making the supply process even.

THE BUREAU OF Indian Standards (BIS) has prepared a draft standard for the supply system of piped drinking water. Labelled 'Drinking water supply quality management system — requirements for piped drinking water supply service', the standard holds far reaching implication in the country where the water supply is not just uneven but also of deplorable quality in many places. The standard aims to make the process of piped water supply more uniform, especially in rural and underdeveloped areas of the country where the system runs on various government orders and circulars.

The Bureau of Indian Standards (BIS) has invited comments from water utilities, including the Delhi Jal Board (DJB), on the draft standard. The draft has been prepared by the BIS Public Drinking Water Supply Services Sectional Committee with the aim to fulfill the Centre's Jal Jeevan Mission Vision of providing safe and adequate drinking water to all rural households by 2024 through tap connections. The draft delineates the process of water supply right from the sources to household taps.

However, the government is not expected to make the standards mandatory, say reports. After the draft is notified, states or water utilities wishing to implement the standard will need to approach BIS for a license.

What in the draft?

The draft lays down the requirements for a water supplier or a water utility. It outlines the process for the establishment, operation, maintenance and improvement of piped drinking water supply service. For any water utility, the process of water supply begins with identification of a water source, either groundwater or surface water sources such as rivers, streams or reservoirs. While the draft does not lay down the process for water utilities to treat the water, it states that the process adopted should ensure that post treatment the drinking water conforms to the Indian Standard (IS) 10500 developed by the BIS.

The IS 10500 lays down the acceptable limit of various elements in drinking water, including heavy

metals and other parameters like the pH value of water, its turbidity, the total dissolved solids in it, and the color and odor.

Apart from the standards for water quality, the draft also provides guidelines for top officials of water utility regarding accountability and customer focus, establishing a quality policy for service, monitoring water quality, and conducting water audit.

Water supply process

As per the draft, the water supply should begin with the identification of a raw water source. The next step involves pumping the water into the treatment plant and its treatment to bring its quality to the acceptable drinking standards.

The treated water when released from the plant should be stored in reservoirs along the distribution system. There should also exist disinfection facilities to remove any contamination at any stage of distribution.

Further, the draft also mentions that there should be pumping stations or boosters to maintain adequate pressure throughout the distribution system. Control devices as valves and meters must be installed throughout the distribution system for control and for water audit. The draft promotes automation to operate the system.

The concept of district metering area (DMA) is floated in the draft and encouraged where possible. For audit, the draft mentions that the water supplier/utility should provide

bulk water meters in the water distribution system. These provisions should be made for domestic meters also, it adds. To rule out tampering of meters, the draft states that the water supplier/utility shall ensure that the consumers do not have direct access to the meters. It supports automatic meters at household level to facilitate water audit.

To ensure consistent quality, the draft states that water should be sampled at the treatment plant every four hours against the stated quality parameters and in the distribution system, it should be sampled every eight hours at the water reservoirs. It also recommends random sampling at household levels.

Other important features in the draft

The draft lays down the guidelines on water audit. Water audit involves the calculation of the amount of water put into distribution against the amount that is consumed. The draft requires a quarterly water audit should be conducted. Water utilities are expected to bring down the water loss up to 15% of the total water supplied in the system. One important requirement is that water utilities must conduct consumer surveys to obtain feedback on their service.

Other important provisions include guidelines on internal audit, management review, performance indicators documentation, and timely action against non-conformity issues. ◗

FUEL EFFICIENCY TAG FOR TYRES SOON

As India works on improving fuel efficiency through various initiatives, labelling of tyres would add to its efforts and provide consumers choice.

Now buy your tyre for its fuel efficiency.

IMAGE: PIXABAY

TYRES IN INDIA may soon come with fuel efficiency ratings much like your fridge and air-conditioner that bear star ratings for energy efficiency. According to reports, a high-level government panel comprising officials from the Bureau of Energy Efficiency (BEE), Bureau of Indian Standards (BIS), ministry of road transport and highways and automobile testing agencies is engaged in the initiative to label tyres. The labelling would be done as per the fuel efficiency and rolling resistance of the tyres. The move is being seen as part of a wider effort by the government to empower consumers by enabling them to take informed decisions on their purchases.

As of now the status of the exercise is work in progress. There is a wide range and capacity of tyres, and the exercise entails identification of common parameters for testing to assign a particular label. The rating parameters for tyres include wet grip and rolling resistance. Rolling resistance indicates fuel consumption while wet grip is a crucial safety measure that indicates a tyre's braking ability on a wet road.

However, before the rating scheme is implemented, India will have to ramp up its testing facilities, which is crucial before labelling can begin. Currently, this facility is available only with ICAT Manesar and it is not for public use.

With labelling, consumers will get an idea into the kind of tyre they are looking at and buy the one more suited to their needs. Currently, there is no option to choose tyreswhen buying a new vehicle and is factory fitted. The labelling will play a big role in the tyre replacement market which is larger than the new vehicle market.

Tyre labelling exits in European Union, Japan, South Korea among others. As India is working to promote efficient use of fuel in the transport sector through various initiatives including the Bharat Stage VI vehicles and a push towards adoption of electric mobility, labelling of tyresis another step in this direction.

However, labelling of tyres would not be free of complications given the constraints in the country. Fuel efficiency is not solely dependent on tyres but is impacted by factors like engine efficiency, transmission design, aerodynamic drag, weight, components, type of fuel, driving technique, AC usage, terrain, road condition, turns, wind, maintenance, etc., hence labelling of tyres might only give a partial picture. ◗

Recycling of construction and demolition waste must be made compulsory to promote sustainability and prevent environmental degradation.

IMAGE: PIXABAY

India Recycles Only 1% Of Construction Waste, Says Study

INDIA RECYCLES ONLY about one per cent of its construction and demolition (C&D) waste, according to a study by the Centre for Science and Environment (CSE). Sadly, the construction waste that remains unrecovered and un-recycled goes into landfills.

This is surprising in a country where the culture of recycling is ingrained in the people. An official estimate by the Building Material Promotion Council, India, puts the C&D annual generation at a staggering 150 million tons. However, CSE puts the unofficial estimate at 35 times this figure. Adding to the problem is the low official recycling capacity at only 6,500 tons per day.

The report titled `Another brick off the wall: Improving construction and demolition waste management in Indian cities', states that of the 53 cities that were expected to set up recycling facilities for C&D waste by 2017, only 13 cities could actually set it up by 2020.

Recycling is urgently required given the growing demand for primary building material, including minerals, stone, sand, iron ore, aluminum and timber. As the sustainability of the planet is increasingly under duress, it is imperative that whatever waste that can be salvaged is funneled back into construction in order to curb the exploitation of naturally sourced material. It is urgently required that we promote a circular economy in which C&D waste is converted into a resource to help reduce our environmental footprints. The fact that the construction waste is not only an eyesore but also

A significant proportion of the construction and demolition-waste can be funneled back into construction.

Helmets Brought Under Bureau Of Indian Standards

This will improve safety of consumers and reduce road accident fatalities due to substandard helmets.

IMAGE: PIXABAY

Standards for helmets are essential to enhance road safety.

chokes waterbodies and public spaces while adding to the poor quality of the air through toxic dust particles from the debris, makes C&D waste recycling even more pertinent. To promote recycling in construction sector, the authorities have also removed many legal hurdles. Unfortunately, this has failed to promote active recycling.

The Bureau of Indian Standards allows use of concrete made form processed C&D waste. The Construction and Demolition Waste Rules and Regulations of 2016 also mandates the use of recycled material. The need for C&D waste management has been formally recognized under the Swachh Bharat Mission too. To further boost these efforts, under the Swachh Survekshan ranking of cities, cities must have a C&D waste collection system in place. The Central Public Works Department has also adopted guidelines for using recycled products.

However, currently, the tax on recycled C&D waste products is higher than conventional building material, which acts as a disincentive.

It is important for cities to include C&D waste in their management plan, provide land for collection and make recycling mandatory. ▶

IN A MOVE that it set to have positive impact on consumer safety on roads, the Ministry of Road Transport and Highways has initiated processes that would bring helmets for two-wheelers under mandatory Bureau of Indian Standards.

"Ministry of Road Transport and Highways (MoRTH) has issued a draft notification for bringing Protective Helmets for two wheelers rider under compulsory certification as per Bureau of Indian Standards Act, 2016," the MoRTH said in a statement.

Once implemented, only BIS-certified helmets for two-wheeler riders would be manufactured and sold in India.

The ministry has sought suggestions and comments from stakeholders.

Close to 70 percent of helmets sold in India fail to meet safety standards set by the Bureau of Indian Standards. Reports from the Ministry say that 43,600 two-wheeler riders have been involved in road accidents during 2018. The numbers include 15,364 pillion riders.

In 2018, the Ministry had announced its intention to ban the sale of non-ISI helmets. The decision was welcomed by the ISI Helmets Association. The sale of foreign helmets had also been banned but has now been allowed and imported helmets will be sold in the country starting 4 September. The rule implemented in 2018 had also restricted the sale of helmets that did not carry an ISI mark, and weighed more than 1.2kg. ▶

Source: Secondary research & media reports

HMD

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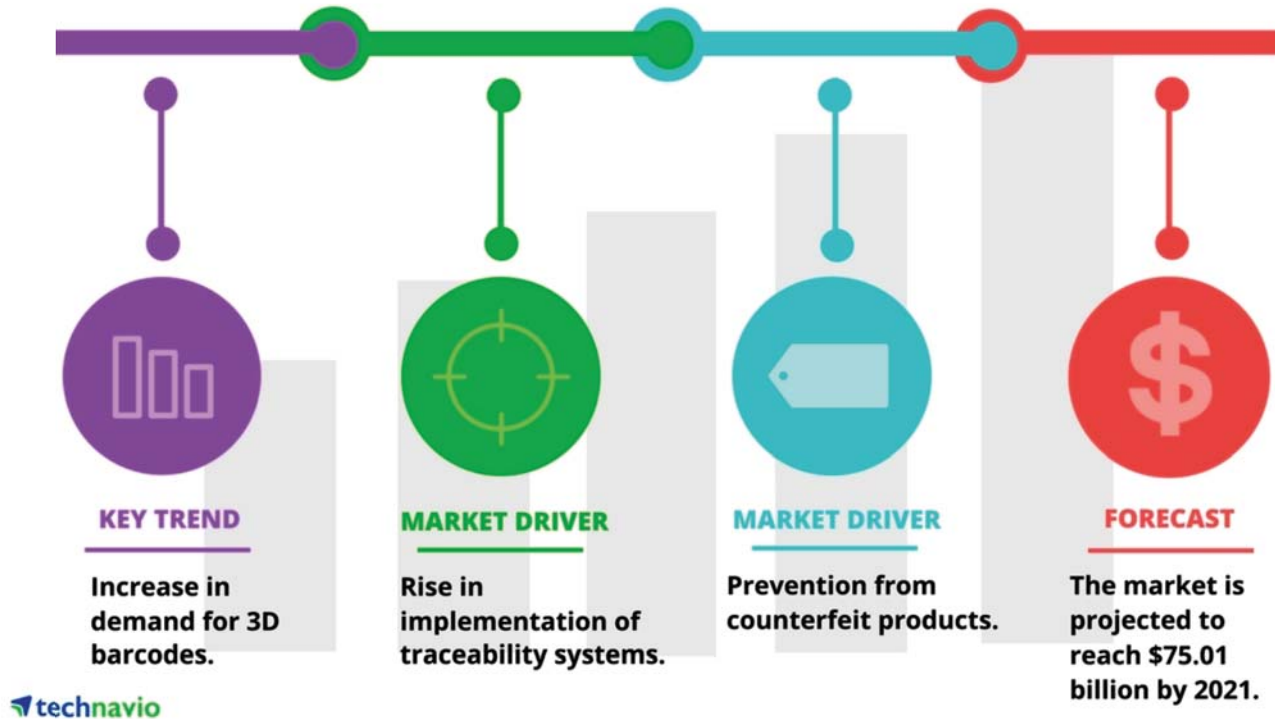
COUNTERFEIT
MENACE

Fake and spurious goods not only rob consumers but are a big drain on the economy as well. Governments must promote the culture of anti-counterfeit to counter the threat.

IMAGE: PIXABAY

Digital technologies have facilitated the manufacture and sale of fake products online.

GLOBAL ANTI-COUNTERFEIT PACKAGING IN CONSUMER GOODS MARKET

KEY TREND
Increase in demand for 3D barcodes.

MARKET DRIVER
Rise in implementation of traceability systems.

MARKET DRIVER
Prevention from counterfeit products.

FORECAST
The market is projected to reach $75.01 billion by 2021.

technavio

THE RAPID PROLIFERATION of digital technologies while empowering the consumers has also made it easier for frauds to be conducted. According to a report, since March 2020, online shopping has witnessed tremendous growth of 74 per cent. The spike is partly being attributed to the COVID-19 pandemic that has made more and more people opt for contactless purchases and delivery mechanisms.

A deep menace of this digital uptick has been the enhanced ability of unscrupulous players to manufacture and sell fake products and services. For example, more than 30 per cent of the drugs sold online are fake, a serious threat to consumers, as more than a million people die every year due to counterfeit drugs.

Making fake copies of drugs has become easier than ever, thanks to the advances in technology like computer vision and machine learning that make it easy to copy the design of products and packaging. For consumers, distinguishing between the fake and the real products has also become difficult as the advancements in technology enable fakes that are clone real products closely in at least all external attributes. Reports forecast the global economic value of counterfeit to reach 2.3 trillion dollars by 2020.

Fakes not only harm consumers but are also a business hazard. Companies across the world are hence invested heavily in anti-counterfeit technologies to counter this menace.

However, for consumers such technologies that detect fake are hard to come by whichmakes them even more susceptible to these fraudulent practices.

The culture of fakes is largely promoted by consumers' desire for couture and high-end products. Theseproducts grant status but are unaffordable for most.Many consumers, especially the young aspiring millennials, actively seek fake copies. This has given rise to an industry of fake and counterfeit goods.

However,hope is in sight with many anti-counterfeit technologies being developed that can enable companies to safeguard their products and services.

What are anti fake technologies?

Currently, two types of anti-counterfeit technologies are available – overt or visible like a hologram, watermark, barcode, QR code and covert, that is not visible to naked eyes. The latter can be identified only with special devices that detect hidden codes or information. Using advanced technologies like Artificial Intelligence and Blockchain, anti-counterfeit technologies solutions are becoming more sophisticated.

India and counterfeit industry

Counterfeit menace is deep rooted in India. According to a 2015, FICCI CASCADE (Committee Against Smuggling and Counterfeiting Activities Destroying the Economy) study, grey market of FMCG products cost the government nearly Rs 6,000 crore.

Counterfeiting menace is not just limited to high-end luxury items. It is so prevalent that even daily household items from cumin seeds, cooking oil, ghee, to hair oil, soaps, baby care products, vaccines and medicine are all being counterfeited.

Gets product information for authentic product

Gets options to report the fake product
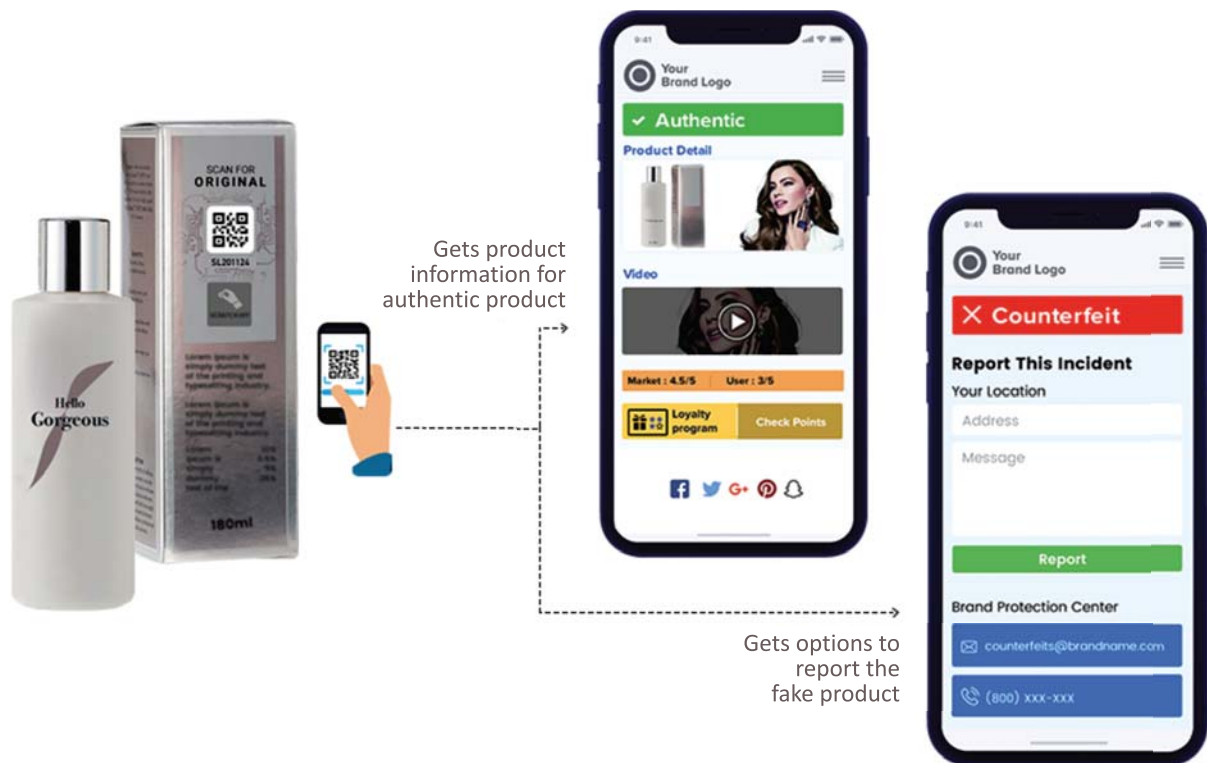
Counterfeiters even tried to milk the pandemic flooding the market with fake hand sanitizers, masks, and PPE kits. An industry of fake corona related essential items was being spun and between February and April, more than 150 cases of fakes were reported including fake PPE kits, sanitizers and masks.

Per this report, in India 31.6 per cent of FMCG personal goods market is dominated by spurious products. The menace of fakes is more serious in the automobile space as it is responsible for nearly 20 per cent of road accidents. Reports attribute these accidents to fake automotive components. Another sector that is in the grip of fakes is the auto aftermarket which is worth Rs 40,000 crore. Reports peg that 36 per cent of aftermarket is dominated by fakes. Spurious medicines in the pharmaceutical sector are endangering lives and the reputation of the industry. Nearly 30 per cent of the drugs sold in the country are reported to be fake. Across the counter medicines for cold and cough or a headache are mostly fake or of poor quality. In 2017, a World Health Organization report stated that 10.5 per cent of drugs sold in low and middle-income countries, including India, are substandard and fake.

Counterfeiting has been rising steadily these past few years and in 2019, it was estimated to have increased by 24 per cent as compared to 2018, as per the Authentication Solution Providers' Association (ASPA). ASPA is a self-regulated industry body of Anti-Counterfeiting and Traceability Solutions providers.

Counterfeiting is most prevalent in currency, FMCG, pharma, content, farming, infrastructure, auto and lifestyle segments with currency, alcohol and FMCG topping the list with the highest number of counterfeit incidents in the last two years. In the FMCG sector, reports estimate counterfeit incidents rose up 63 per cent between 2018 to 2019. Reports peg the total annual economic loss due to counterfeit products in various sectors at over Rs 1 lakh crore.

Anti-counterfeit technology

According to reports, globally anti-counterfeit solutions are expected to reach $120 billion by 2025 as consumer awareness and the need for countering fakes rises.

Consumers are seeking solutions that can tell them about the authenticity and provenance of the products they are buying. Products that go beyond being just an anti-counterfeit solutionand can provide more information on the product are in demand.

The current crop of anti-fake solutions requires high investment in machinery and are overt in nature. Companies are not inclined to invest in such technologies for various reasons, but primarily that any visible product has a maximum shelf life of three months and by then a copy of the original is in the market.

Given the serious repercussions of fakes that can even prove fatal for consumers as in the case of spurious drugs, it is important that governments come up with laws that make the adoption of anti-counterfeit technologies by companies mandatory. Standards have a huge role to play in this. Government must also invest in awareness campaigns on fakes and promote the development of anti-counterfeit solutions for consumers. ◗

Source: Secondary research & media reports

Standards For Quality Of The World

International Organization for Standardization provides a suite of standards aimed at improving quality of human life with the guidance of collective wisdom.

IMAGE: PIXABAY

Standards provide access to the best pool of knowledge and expertise.

FOR CONSUMERS, A world without standards would be that of confusion and mayhem. Especially in a global world, it is important the similar standards govern the various aspects of activity. ISO standards tell us the best way of doing something. And that something could be how to make a product, manage a process, deliver a service or supply materials. Standards cover almost all areas of human endeavor. Standards are not the handiwork of individuals. Rather, in standards we find distilled the wisdom of international experts who represent the needs of diverse sections – manufacturers, sellers, buyers, customers, trade associations, users or regulators.

ISO, an independent, non-governmental international organization with a membership of 165 national standards bodies, ensures standards are developed for the global good by bringing together experts who share knowledge and work on formulating voluntary, consensus-based, market relevant International Standards to support innovation and provide solutions to global challenges.

Members have a vital role to play in how the standards body operates. The members meet once a year for a General Assembly to decide the strategic objectives of the organization. ISO operates through its Central Secretariat in Geneva, Switzerland, that coordinates the system and runs day-to-day operations. The functions are overseen by the Secretary General. The ISO Council is the core governance body and reports to the General Assembly. The council meets thrice a year and comprises 20 member bodies, the ISO Officers and the Chairs of the Policy Development Committees CASCO, COPOLCO and DEVCO. The Council has direct responsibility over a number of bodies reporting to Council.

A glance at some of the important standards tells us how they work to ensure quality in every aspect of life.

Quality management standards: Quality ensures efficiency and reduces product failures.

Environmental management standards: These standards help reduce environmental impacts, waste and promote sustainability.

Health and safety standards: These standards make our workplaces safe be it a factory a corporate office or a construction site.

Energy management standards: Energy is a precious resource and must be conserved. These standards help us cut energy consumption.

Food safety standards: Consumption of contaminated or low-quality food impacts human health. With these standards in place we can hope to prevent food from being contaminated.

IT security standards: Consumer safety and privacy are a huge concern in the digital space. These standards help keep sensitive information secure.

ISO 9000 Family for Quality Mamangement

In a world of competing products and services, for a product to succeed it is important that it exhibits and fulfills minimum quality requirements. Organizations are faced with the task of consistently improving the quality of their products and services to meet customers' expectations. But how? ISO provides the answer by addressing various aspects of quality management. It provides some of best-known standards – the ISO 9000 family.

Why ISO 9001?

That more than one million companies and organizations in over 170 countries certified to ISO 9001, indicates the importance of this standard. ISO 9001 lays down the criteria for a quality management system that any organization, irrespective of size or its field of activity can use. The standard is informed by a number of quality management principles including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement. Companies that use ISO 9001 can better ensure that their customers get consistent, good-quality products and services. This assurance of consistent quality translates into many business benefits.

ISO 14000 Family for Environmental Management

Organizations have a responsibility towards the environment and must ensure that their processes and practices do not contribute to environmental degradation. The ISO 14000 family helps companies and organizations of any type with practical tools to manage their environmental responsibilities.

In the light of the World Standards Day 2020 theme – Protecting the planet with standards – ISO 14000 family assumes huge significance.

Why ISO 14001?

ISO 14001 is a set of criteria that organizations can adopt for an environmental management system. This standard can be certified and lays down the framework to set up an effective environmental

management system for a company or organization wishing to manage their environment responsibilities.

This standard too can be adopted by any type of organization, regardless of its activity or sector. A company with ISO 14001 provides assurance to company management, employees and other stakeholders that it is measuring and improving its environmental impact. It acts as a certificate of a company's commitment to keeping our planet safe.

The ISO 14000 family of standards are developed by ISO Technical Committee ISO/TC 207 and its various subcommittees. For a company, ISO 14001 not only provides requirements but also the guidance for use that relate to environmental systems.

Other standards in the family lay down the criteria for specific approaches such as audits, communications, labelling and life cycle analysis, as well as environmental challenges such as climate change.

There are more than 300,000 certifications to ISO 14001 in 171 countries around the world.

ISO's Climate-Smart Future for Local Governments and Communities

The world is reeling under the impact of degradation of our planet brought about by our unmindful exploitation of natural resources. The results of this degradation can be seen in the increasing numbers and natural disasters like droughts and floods, in the rising seas, extreme weathers and the increased climate impacts. Across the globe governments are struggling to contain the threats to life, property, economic well-being and ecosystems.

> Human-driven nature and biodiversity loss is threatening life on our planet. Understanding nature's benefits could help societies leverage opportunities to stem the planetary emergency.

ISO has come up with new guidance to help local governments and communities to better prepare for such threats and the resultant risks.

The new ISO technical specification ISO/TS 14092:2020, Adaptation to climate change – Requirements and guidance on adaptation planning for local governments and communities, is designed to help local governments and communities take initial action that would lead to the creation of a safe, socially and economically secure and sustainable society that is resilient to current and future impacts of climate change.

The World Economic Forum's (WEF) Global Risks Report 2020 states that all of the top five risks facing the world are linked to the climate crisis. Extreme weather events, major biodiversity loss and a failure to halt global warming have been identified as the biggest threats that key global decision makers are grappling with.

An important aspect of the new ISO/TS 14092 is its recognition that the impacts posed by climate change are not the same across the globe but vary widely from region to region. For governments, these environmental issues shape their responses as they affect the public services they offer, as well as the safety and security of communities within their jurisdiction. The new standards support local governments to adapt their responses to climate change based on vulnerability, impacts and risk assessments. The standards help in setting of priorities for tackling the deep-rooted risks.

It is imperative that local governments prepare for risks posed by climate change and are prepared to tackle it. ISO/TS 14092 presents the step-by-step process for local authorities to tailor the local adaptation plan to suit the climate, environmental and societal conditions of each individual case. The standards will help governments develop a robust, effective adaptation plan to promote localized climate action not just as the current response but also as the future response.

Governments will find clear guidance in the new ISO specification on developing an adaptation plan at the local government and community levels, why and how to establish an appropriate governance structure which is collaborative and the elements of the adaptation planning and implementation processes. The clear guidance will enable authorities to establish a facilitation team, assess risks and develop an effective plan. The plan also includes monitoring the progress of adaptation implementation and evaluating its achievement which will in turn help in continually improving the plan.

Time for Nature

The world celebrated the World Environment Day this year with the theme "Time for Nature" – a timely and effective call to action to save the planet. In response to this call, a new ISO committee on biodiversity has been established to help us achieve this goal.

Our planet is bleeding. The extreme weather events that have unleashed misery on the people and COVID-19 pandemic that has tossed our world upside down among other worldwide phenomena are a stark warning that we must stop our exploitation of nature and pay attention to its cries urgently. Our lives are dependent on the nurture nature provides and if we do not pay heed and pay our debts by taking action to protect it and at least slow down its destruction, nothing can save us from annihilation.

Governments and organizations can turn to ISO for help and guidance in this regard as it has thousands of standards that help improve environmental performance and make our future more sustainable. ISO 14001 for environmental management and standards in the ISO 14000 series also provide ample direction on good practices in land management that can prevent or minimize land degradation and desertification.

To add to these standards aimed at environmental protection, ISO is also creating a new technical committee that will develop standards in the field of biodiversity. These standards will help organizations improve their contribution to sustainable development by prioritizing nature over profit.

These standards will harmonize terminologies and principles related to biodiversity, lay down methodologies for impact analysis and guide organizations on defining strategic actions. Organizations will also be able to monitor their progress in this regard while helping them integrate biodiversity concerns into their activities. Organization will find help in making appropriate decisions and receive guidance on specific biodiversity including ecological engineering, specific species and new technologies.

The aim of these new standards is to contribute to the implementation of the United Nations Sustainable Development Goals (SDGs), especially SDG 13 (Climate Action), SDG 14 (Life below Water) and SDG 15 (Life on Land). These SDGs are together expected to reduce human impact on the environment by 2030.

Green Communications

It is not enough to implement standards for a greener world, organizations must also be vocal about communicating their policies and commitments and the implications of their actions to the stakeholders and how these will help achieve the global climate goals. Experts feel that by communicating about their actions effectively, organizations can actually promote change. The International Standard for environmental communication provides guidelines for organizations in this regard.

It is important that organizations clearly share their ideas and actions on how they are working on their green commitments, as clear and compelling communication on environmental issues and activities will generate faith in stakeholders and will drive this change. A clearly demonstrated commitment will also improve the reputation of the organization while acting as a catalyst for change by raising awareness of the consumers on urgent environmental issues. It will also help companies demonstrate how aligned they are to national and

international regulations on environment.

For guidance on communication, companies can refer ISO 14063, Environmental management – Environmental communication – Guidelines and examples, that provides principles, strategies and activities related to environmental communication based on international best practices. These standards were harmonized with other International Standards on environment.

A company's environmental communication reflects its culture and hence it must be clear, transparent and compelling in the message it is desires to send out to the public. With this standard, organizations can develop strong environmental communications strategies and policies that will create impact.

ISO 50001 and 5004 for Energy Management

Another standard that contributes to environmental conservation is ISO 50001. This standard lays down the criteria for energy efficiency and supports organizations in all sectors in this endeavor. Organizations will get practical guidance on how to improve energy use, through the development of an energy management system (EnMS). This standard is a must for organizations that are committed to minimizing their impact on the environment, conserving resources and improving the bottom line through efficient energy management.

Based on the management system model of continual improvement, ISO 50001 makes it easier for organizations to integrate energy management into their overall efforts at environmental management. ISO 50001 provides a framework of requirements for organizations to:

- Develop a policy for more efficient use of energy
- Fix targets and objectives to meet the policy
- Use data to better understand and make decisions about energy use
- Measure the results
- Review how well the policy works, and
- Continually improve energy management.

Certification to ISO 50001 is not obligatory and organizations can opt to implement the standard only for the benefits it provides if they are not desirous of getting certified.

ISO 50004 is a new entrant to the ISO's energy management suite of standards. ISO 50004, Energy management systems – Guidance for the implementation, maintenance and improvement of an ISO 50001 energy management system, provides organizations with a systematic approach to overall energy management to achieve continual improvement in energy performance.

It's a user-friendly toolset to identify, track, report and act on all energy improvement initiatives. ISO 50004:2020 applies to organizations with varying levels of energy management and energy management system (EnMS) experience.

ISO 22000 for Food Safety Management

Irrespective of the size, any organization in the business of food production has a responsibility to ensure that it is providing food that is safe and not detrimental to consumer well-being. ISO 22000 provides safety management standards to help organizations identify and control food safety hazards. These standards work with other ISO management standards, such as ISO 9001 to provide a complete suite of standards. ISO 22000 is applicable to all types of food producers and provides an assurance that the producer is following the laid down standards within the global food supply chain. It facilitates safe product supply throughout the globe. ISO 22000 sets out the requirements for a food safety management system and can be certified. It lays down the criteria for organizations to demonstrate their ability to control food safety hazards.

ISO 45001 for Occupational Health and Safety

There can be no compromise on employee safety and organizations serious about ensuring this need to reduce workplace risks and create better, safer working conditions. In this endeavor they can seek guidance from ISO 45001. This International Standard has the potential to save almost three million lives each year.

ISO 45001 enables organizations to put in place an occupational health and safety (OH&S) management system.With this standard, organizations can develop and implement effective policies and objectives that ensure employee safety. The standard can help reduce of workplace incidents, absenteeism and staff turnover, and increase productivity. The organization will also be able to reducecost of insurance premiums while creating a health and safety culture. ISO 45001 sets the minimum standard of practice to protect employees worldwide.

Conclusion

ISO's vast family of standards provides a global gold standard for quality governance that ensures consumer protection in every field of human activity. Organizations must actively implement these international standards and benefit from the guidance they provide as also demonstrate their commitment to the global good. ◗

Source: Secondary research & media reports

TIME WORLD GOT A
UNIVERSAL STANDARD
ELECTRIC PLUG

The absence of standard electric plug and voltage across the globe is a consumer's nightmare.

HOW OFTEN HAVE you rued the absence of a universal standard electric plug? Perhaps on your last trip abroad when you couldn't plug in your device to the hotel room socket? Or was it when you tried plugging a device you received from a foreign domiciled relative and to your dismay found you cannot? Many of us have faced such situations and wished for a universal standard electric plug that could end our troubles.

History tells us that the primary use of electricity in the domestic environment initially was for lighting. Soon, with the invention of heating and other appliances that saved domestic labor, a means of connection to the supply other than via a light socket was required. This led to the invention of the two-prong electric plug by TT Smith in 1883.

This was the time when some electricity companies operated a split tariff system, meaning that the cost of electricity for lighting was lower than electricity used for other purposes. This led to the development of low wattage appliances like vacuum cleaners, hair dryers, etc., being connected to the light fitting. However, soon people began feeling the need for safer installations and this led to the development of the three-pin outlets, with the third pin on the outlet being an earth pin. The purpose of this pin was to connect to earth, at the same potential as the neutral supply line. The idea was that in the event of a short circuit to earth, a fuse will blow, thus disconnecting the supply.

Coming to the reasons for the multiplicity of plugs and wall outlets, primarily this happened because many countries developed their own plug, instead of adopting the US standard. The result: we are today stuck with 15 different styles of plugs and wall outlets. This is not to say

that American plugs were perfect. In fact, they are unstable and their uninsulated prongs are practically prehistoric in terms of design. They are also famously unsafe.
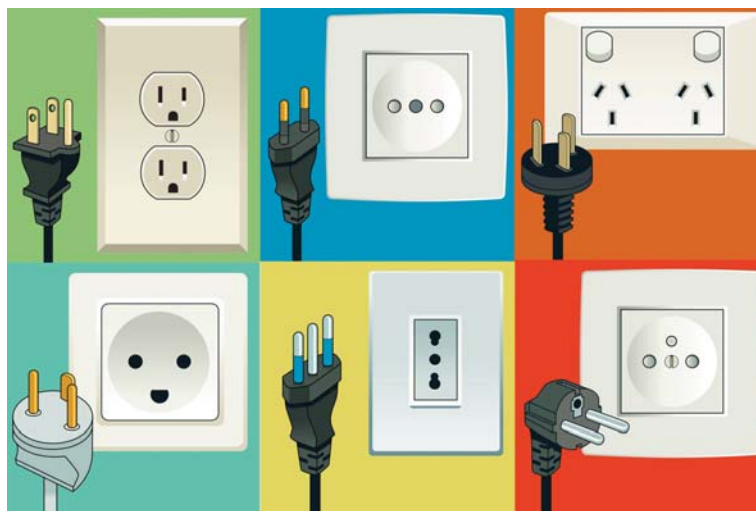
That we do not have a universal plug is not for the lack of trying. If truth be said, the International Electrotechnical Commission (IEC) tried for decades to develop a universal domestic power plug. But the attempts failed in the face of political and economic issues. IEC's attempts finally bore fruit in 1986, and it presented the universal standard plug (type N) to the world. However, by then the world had lost its

How often have you rued the absence of a universal standard electric plug?

enthusiasm for a universal plug and it fails to create a ripple.

Much later in 2007, Brazil adopted type N as its standard wall outlet and plug top. The first country to do so, Brazil's adoption of type N as the sole standard was to eliminate the motley collection of plugs that were being used in the country.Brazil was not alone in struggling with its plethora of plugs problem. Many Latin-American, African and Asian countries are in fact still grappling with a similar situation and some of these have taken a rather short-sighted and drastic approach to solving the problem – allowing so-called "universal" or "multi-standard" wall outlets to be installed in

properties. But these wall outlets are a safety hazard.

This has led to calls for standardizing type N or another safe and widely used earthed plug system such as F, G or I, as universal option. Instead of countries coming to a consensus on this, some like Thailand (in 2006) decided to develop their own power outlet system. Thailand's system is compatible with type C, which is currently being phased in.

Hence the world continues to use different plug types, with some using type A & B plugins, some adopting types C & E/F, some using type D, some theBritish type G plug, some like Israel adopting types C & H, some others opting for Australian type I system, some using C & J, some countries using types C & L, some using the South African type M, some adopting international type N in combination with type C, and some like Thailand using types C & O.

If the type and variety is confounding, it becomes even more confusing when within one country multiple systems are used.

Standard voltage anyone?

When it comes to voltage, it fluctuates widely too. Europe and most other countries use a voltage which is twice that of the US, between 220 and 240 volts. On the other hand, Japan and most of the Americas use voltage between 100 and 127 volts.

The credit for creating the three-phase alternating current electrical generation and distribution system goes to nineteenth century creative genius Nikola Tesla. The story says that Tesla made several careful calculations and measurements before he discovered that 60Hz was the best frequency for alternating

current (AC) power generating. Tesla preferred 240 volts and was at odds with Thomas Edison whose direct current (DC) systems were 110 volts. True that Edison's system was safer at lower voltage, but DC failed to provide the power to a distance that AC could.

Interestingly, when AEG, the German company, built the first European generating facility, its engineers decided to fix the frequency at 50Hz. The reason for this decision being that 60 did not fit the metric standard unit sequence (1, 2, 5). As AEG had a virtual monopoly in the field, their standard was widely accepted. But in Britain, differing frequencies existed and the 50-cycle standard was established only after World War II.

In Europe 120 V proliferated, like Japan and the US today. However, it became necessary to increase voltage to get more power with fewer losses and less voltage drop from the same copper wire diameter. At the time US could not go for this change due to cost reasons as replacing all electric appliances would be expensive. The average US household already possessed a fridge, a washing-machine, etc., though not in Europe, and hence for the US switching would have entailed high costs.

The decision though meant that the 20th century was the period when US households had to cope with problems such as light bulbs burning out rather quickly in the proximity of transformer (due to high a voltage), or not enough voltage at the end of the line. The US eventually overcame this problem by supplying all buildings and houses with 240 volts split into two 120-volt circuits which, between them, feed all the house's receptacles. The common neutral wire is connected at the center point of the split 240 volts on the main panel. The full 240 volts is used for powerful appliances such as ovens and clothes dryers. But European equipment users in America cannot connect their appliances to these outlets, since the phasing is wrong.

While domestic voltage and frequency varies from country to country with some countries using 220-240 and others using 100-127 V, it is not surprising to find voltage differences within the same country too.

Conclusion: Standardization of plugs and volts is high priority. ▶

Source: Secondary research & media reports
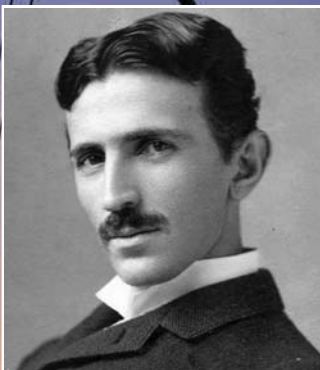
NIKOLA TESLA,
nineteenth century creative genius, created the three-phase alternating current electrical generation and distribution system.

Bureau Of Indian Standards

KEEPING QUALITY ON TRACK

BIS standards certify the quality of all your consumer goods.

BIS is India's standards body responsible for quality in every field of economic activity.

IN INDIA, BUREAU of Indian Standards (BIS) is the National Standard Body responsible for promoting all activities related to standardization, marking and quality certification of goods and all other matters related to standards.

Consumers have the right to quality and BIS through its core activities of standardization and conformity assessment has been ensuring that not just the consumers but also the national economy is benefitted through the assurance of safe, reliable and quality products. The various standards developed by BIS ensure quality in various fields of economic activity that affect the consumer directly or indirectly. BIS standards minimize health hazards to consumers; protect the environment, promote exports and imports substitute; control proliferation of varieties, etc. The standards and certification scheme of BIS have a vast role to play. Apart from benefitting consumers and industry, these standards also support various public policies spanning diverse areas including product safety, consumer protection, food safety, environment protection, building and construction, etc.

BIS also helps the government work towards achieving national priorities that impact citizens and the country. In recent years, BIS has assisted various government initiatives like Swachh Bharat Abhiyan, Digital India, Make in India and Ease of Doing Business through its activities of standardization and certification.

Wider issues like that of technology changes and advancements, climate change, environment and energy conservation, conditions of health and safety and facilitation of trade are also being addressed through its standardization and certification activities. In the area of conformity assessment BIS is working towards making the processes simpler and faster.

Empowering Statutory Framework

The Bureau of Indian Standards Act, 2016, was implemented on 12 October 2017. Some important highlights of the new BIS Act throw light on its wide powers and responsibilities. The Act:

- Positions BIS as the National Standards Body
- Allows multiple conformity assessment schemes in line with global practices
- Enables the Government to authorize any agency apart from BIS to certify and enforce conformity to a standard
- Enables the Government to include products under mandatory certification on grounds of health, safety, environment, national security and prevention of deceptive practices
- Enables the Government to bring Hallmarking of precious metal articles under mandatory certification
- Provides consumer protection measures like recall of

non-conforming standard marked products, compensation to the consumer and more stringent penal provisions

Far Reaching Objectives

BIS works with two major objectives:

- Harmonious development of the activities of standardization, marking and quality certification of goods
- Provide thrust to standardization and quality control for growth and development of industry on one hand

and to meet the needs of consumers on the other

Main Activities

The many activities of BIS can be broadly grouped under the following heads:

1. Standards formulation
2. International activities
3. Product Certification
4. Hallmarking
5. Laboratory services
6. Training services - National Institute of Training for Standardization
7. Consumer Affairs and Publicity

Standards Formulation

A primary activity of BIS is formulating Indian Standards aimed at facilitating the national priorities for various sectors. These sectors grouped under 14 departments are Chemicals, Food and Agriculture, Civil, Electro-technical, Electronics & Information Technology, Mechanical Engineering, Management & Systems, Metallurgical Engineering, Petroleum Coal & Related Products, Medical Equipment and Hospital Planning, Textile, Transport Engineering, Production & General Engineering and Water Resources. There are 14 Division Councils that correspond to each department respectively with each Division Council having a number of Sectional committees working under it. As we can see, the standards cover important segments of the economy and help upgrade the quality of goods and services in each industry segment.

International Activities

International Organization for Standardization (ISO): As a founder member of ISO, BIS is actively involved in development of International Standards by acting as Participating (P) member or Observer (O) member on various Technical Committees, Sub-Committees, Working Groups, etc. ISO is an independent, non-governmental membership organization and the world's largest developer of voluntary International Standards.

International Electro-technical Commission (IEC): BIS represents India in IEC, which is the world's leading organization for the preparation and publication of International Standards for all electrical, electronic and related technologies. IEC was founded in 1906.

Regional and Bilateral Cooperation: Regional and bilateral cooperation are important activities of BIS and it participates in various programs pertaining to standardization, testing, certification, training, etc. In this regard, BIS has signed several MoUs with national standards bodies of various countries. As regards regional cooperation, BIS plays an active role in formulation and implementation of regional standards and on conformity assessment scheme for the SAARC countries under the South Asian Regional Standards Organization (SARSO).

World Trade Organization – Technical Barriers to Trade (WTO-TBT) Matters: BIS is the National Enquiry Point for WTO -TBT.

Product Certification

Product certification is an important activity to ensure compliance to standards. BIS operates a Product Certification Scheme that certifies products that are compliant to Indian Standards. BIS standard mark (popularly known as ISI mark) is a well-known badge of standards for consumers. It indicates that a product conforms to relevant Indian Standard. To obtain the license, a manufacturer must convince BIS that it has all required infrastructure and capability to produce and test the product conforming to the relevant Indian Standards on a continuous basis.

Though the BIS certification scheme is voluntary, there are a number of products that must mandatorily comply with Indian Standards as required by the Central Government under various statutes in public interest.

Foreign Manufactures Certification Scheme (FMCS)

Goods being manufactured in foreign country also must comply with BIS standards to be sold in the country. To ensure compliance, BIS operates a separate scheme for foreign manufacturers under which goods manufactured outside India are certified. Foreign manufacturers can seek certification from BIS for marking their product(s) with BIS Standard Mark after ensuring conformity of the products to relevant Indian Standard(s).

Registration Scheme for Self-Declaration of Conformity

BIS operates a Registration Scheme which is a simplified process of conformity assessment. A manufacturer can declare that his product conforms to the Indian Standard under this scheme.

Ministry of Electronics and Information Technology (MeitY) notified "Electronics and Information Technology Goods (Requirements for Compulsory Registration) Order, 2012" on 3 October 2012 mandating Compulsory Registration from BIS for Electronics and Information Technology (IT) products. BIS had also notified a separate 'Standard Mark' for the Registration Scheme.

Hallmarking

For consumers in India, gold has traditionally been a valuable investment. However, in the absence of a gold standard, consumers had no guarantee of quality on their purchases. Hallmarking of Gold Jewellery that was started by BIS in April 2000, was hence a welcome initiative that provided third party assurance to consumers on the purity of gold jewellery or its fineness. Later in October 2005, BIS launched the scheme for Hallmarking of Silver Jewellery/artefacts. Jewellers can obtain certificate of registration to sell hallmarked jewellery under the hallmarking scheme. There are Assaying & Hallmarking (A&H) centers that are recognized by BIS to assay the purity of the jewellery submitted by the registered jeweller along with declaration of purity. Once the purity is found to conform to relevant Indian Standard including declared fineness, these centers apply Hallmark on such jewellery.

Laboratory

BIS has established eight laboratories in the country that cater to the needs of testing for certification activity. These are Central Laboratory (CL), Sahibabad; Western Regional Office Laboratory (WROL), Mumbai; Northern Regional Office Laboratory (NROL), Mohali; Eastern Regional Office Laboratory (EROL), Kolkata; Southern Regional Office Laboratory (SROL), Chennai; Bangalore Branch Office Laboratory (BNBOL), Bangalore; Patna Branch Office Laboratory (PBOL), Patna; Guwahati Branch Office Laboratory (GBOL), Guwahati. In addition to these, BIS has recognized NABL accredited laboratories and government laboratories to for work related to testing of products for conformity assessment. BIS also has a Gold Referral Assaying Laboratory at Chennai for testing of samples.

National Institute of Training for Standardization (NITS)

For technical and management personnel from industry, consumer organizations, public sector undertakings, government bodies and developing countries desirous of gaining expertise in standards related knowledge, BIS imparts training through its institute. NITS also conducts International Training Programs (ITP) for developing countries under different cooperation schemes of Government of India.

Consumer Affairs and Publicity

Consumer awareness regarding standards is essential to safeguard their interests. To enable this, BIS works to create awareness and promote quality among consumers through various awareness programs. These programs include:

1. **Consumer Awareness Programs** to promote the concept of standardization, certification and quality consciousness among consumers. BIS organizes regular awareness programs through various regional offices and branch offices. Awareness programs are also conducted in association with consumer organizations.

2. **Industry Awareness Programs** to promote the concept of standardization, product certification, management systems certification and other BIS activities among industries.

3. **Educational Utilization of Standards Programs** is meant for students and faculty of schools, colleges, etc. The idea is to inculcate the concepts and benefits of standardization in the youth.

4. **World Standards Day** celebrated on 14 October to pay tribute to the collaborative efforts of thousands of experts worldwide that work on the development of voluntary technical agreements that are published as International or National Standards.

5. **Public Grievances** that is consumer complaints relating to BIS certified products are reviewed and monitored regularly for redressal.

6. **Public Relations,** the publicity activity of BIS, works to create awareness regarding various BIS activities among stakeholders including industry and consumers.

Conclusion

In an age when fake and spurious goods have become easier to manufacture and duping unsuspecting consumers is rampant by unscrupulous manufacturers, BIS through its standards and certificates provides quality assurance to consumers. At the same time, it is working to raise standards in industry and economy through its various efforts. ◗

Source: Secondary research & media reports

National Standardization System

India's standardization system oversees every aspect of the economy to ensure that the highest quality parameters are maintained.

IMAGE: PIXABAY

Indian Standards support every field of economy.

IN INDIA, THE standards process is by and large a government led effort. Bureau of Indian Standards, the national standards body, publishes majority of voluntary products and services related standards. However, there are other specialist bodies that develop and publish standards in their domain areas. The list also includes a few large public-sector organizations that publish standards for their own use. The following are some of the standards bodies in the country and their areas of work.

National Standards Body

The National Standards Body of India, the Bureau of Indian Standards (BIS), was established under an Act of Parliament (The Bureau of Indian Standards Act, 1986, revised as The Bureau of Indian Standards Act, 2016). Only the standards published by BIS are granted the status of Indian Standards. In this regard, BIS follows the Code of Good Practice for the preparation, adoption and application of standards (Article 4 of WTO-TBT Agreement, Annex 3)'. There are 14 Division Councils under BIS engaged in the task and they have in turn established over 650 Technical Committees. Several of these committees act as shadow or mirror committees of their international counterparts at the ISO/IEC.

Regulatory mechanism for standards development

Currently, organizations can develop voluntary standards and promote their activities as there is no regulation or prohibition on this. However, no organization can claim its standards to be Indian Standards.

Regulatory standards

Regulatory bodies notify technical regulations. This is done either through specific technical requirements developed by these bodies themselves through consultative processes or they adopt relevant Indian or other standards. In the case where Indian Standards are being adopted, the regulatory body is invariably involved in development of the related standards with the technical committee responsible for it. Further, stakeholders are also involved in the development of technical regulations or adoption of standards by the regulatory bodies. This is achieved either through structured committees or through wide stakeholder consultation. All technical regulators publish prior notification of the draft regulations in the form of public notifications as well as the WTO TBT/SPS notifications. In specific areas, for example food safety, scientific risk evaluation is also done by relevant committees.

Occupational standards

With India emphasizing skills development as a core competency for vocational occupations with the aim to make the workforce internationally competent, standards to certify quality in this arena are imperative. National Skills Qualifications Framework (NSQF) works in this direction. It is a competency-based framework notified by the Ministry of Skills Development and Entrepreneurship Development for certification of individuals for vocational competencies. The NSQF is being implemented through the National Skills Qualifications Committee (NSQC) that is responsible for approving National Occupational Standards (NOS) and Quality Packs (QPs). Each job activity requires a minimum standard and the National Occupational Standards (NOSs) specify the standard of performance, knowledge and understanding for a particular activity in the workplace. Each NOS defines one key function in a job role. NOSs are developed by notified Sector Skills Council.

International affiliations

National standards must be at par with international standards in order for products and services to be globally competent. BIS is the India member on ISO and has set up National Mirror Committees to shadow the work of ISO CASCO and COPOLCO. The IEC National Committee of India which has its Secretariat at the Bureau of Indian Standards, is the Indian member on the International Electrotechnical Commission (IEC). Department of Telecommunications under the Ministry of Communications is the nodal agency for coordinating with ITU from India. The National Codex Contact Point (NCCP) for India,"Codex India" is located at Food Safety and Standards Authority of India (Ministry of Health and Family Welfare). It coordinates and promotes Codex activities in India in association with the National Codex Committee and facilitates India's input to the work of Codex through an established consultation process. Food Safety and Standards Authority of India has constituted The National Codex Committee for keeping liaison with the CAC. BIS is also member of the Pacific Area Standards Congress (PASC) and South Asian Regional Standards Organization (SARSO).

Recognition of Standards Developing organizations

The Bureau of Indian Standards Act, 2016 provides for accreditation of Standards Developing organizations (SDOs). However, the Rules for the accreditation have not yet been notified. Although the Quality Council of India (QCI) has published avoluntary Scheme for Accreditation of SDOS, no accreditation has been granted till date.

Overseas Standards Bodies in India

Several overseas standards organizations have also established India offices.Theseprovide assistance to the Indian industry in adoption of their standards to enable them to meet international trade obligations. Some notable bodies include:

- Seconded European Standardization Expert in India (SESEI) set up by the European Standardization Organizations CEN, CENELEC and ETSI

- American Society of Mechanical Engineers (ASME)
- International Association of Plumbing and Mechanical Officials (IAPMO)
- IEEE
- IEEE American Society of Heating, Refrigerating and Air-Conditioning Engineers

Indian Voluntary Standards Development Organizations

The following are the important voluntary standards development bodies in the country.

Bureau of Indian Standards (BIS): It publishes standards for all subjects excluding drugs & pharmaceuticals, environmental (ambient & emission) norms, and grading of agricultural products. Has more than 15000 standards.

Agricultural and Processed Food Products Export Development Authority (APEDA): It develops standards for organic production and Systems (under the National Program for Organic Production (NPOP).

Automotive Research Association of India (ARAI): This body publishes automotive industry standards and till now has published 132 standards. Three safety standards have also been published and some standards have been adopted under CMVR.

Bureau of Energy Efficiency (BEE): BEE is responsible for developing energy performance standards for appliances and energy conservation building code.

Central Drugs Standard Control Organization (CDSCO): This body lays down the standards for drugs and health care devices/technologies and approves new drugs under the Drugs and Cosmetics Act.

Central Pollution Control Board (CPCB): A body that is responsible for laying down standards for the quality of air, water quality criteria from different sources, emission norms for vehicles, emission norms and sound levels for diesel engines and generator sets. Manuals, codes and guidelines relating to treatment and disposal of sewage and trade effluents as well as stack gas cleaning devices, stacks and ducts are developed and implemented by CPCB.

Directorate of Marketing and Inspection (DMI) – AGMARK: This body develops grading standards covering 164 commodities in categories such as pulses, cereals, essential oils, makhana, vegetable oils, fruits & vegetables roasted Bengal gram, and vermicelli, macaroni and spaghetti.

Export Inspection Council of India (EIC): EIC does not formulate any standard. Its responsibility is to recognize the technical regulations or national standards of the importing countries/international standards and establish that such specifications are not below the minimum standard specification prescribed in the order/notification issued by Government of India for the product.

Food Safety and Standards Authority of India (FSSAI): The responsibility of FSSAI entails laying down standards for food items and regulating their manufacture, storage, distribution, sale and import. FSSAI has a family of general standards that apply to all foods and a suite of over 300 product standards. The standards are constantly being revised/amended to answer to the changing needs.

Marine Products Export Development Authority (MPEDA): This body is dedicated to the marine products sector. It is responsible for inspection of marine products, raw materials, and for fixing standards and specifications, regulating and taking all necessary steps to ensure the quality of seafood marketed overseas.

Indian Roads Congress (IRC): The body has more than 100 standards to ensure quality of surface transport. These include:

- Standards relating to roads, viz., survey, investigation, equipment, design, construction, environment, maintenance, geometrics, safety, road signage and technology.
- Standards, Specification and Codes of Practice on Bridges and also Guidelines for their inspection, maintenance, testing and rating.
- Standards Plans and Specifications of Ministry of Road Transport & Highways

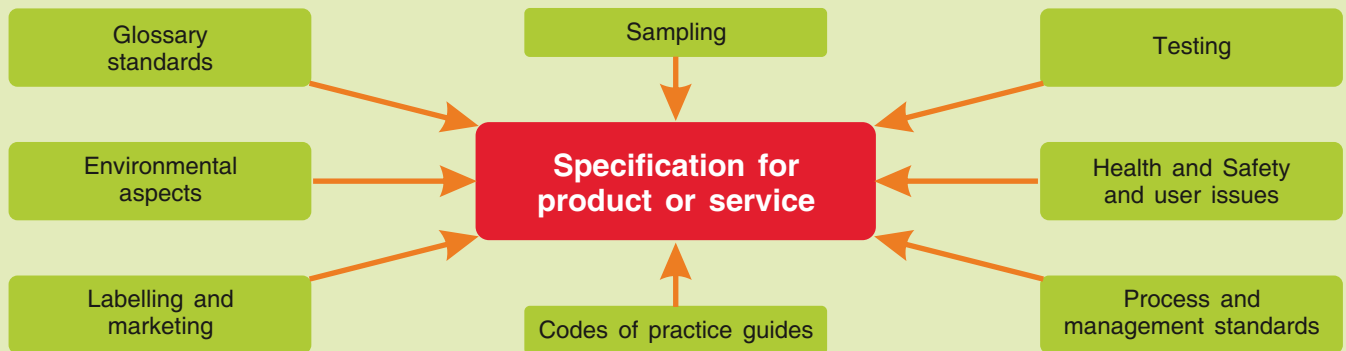**Ministry of Environment, Forest and Climate Change (MoEFCC):** It provides effluent and emission standards for different industry/service sectors in the schedule of various rules framed by it under the Environment Protection Act.

Ministry of Road Transport and Highways (MoRTH): Evolves standard specifications for roads and bridges in the country.

A SUITE OF STANDARDS

Glossary standards → Specification for product or service

Environmental aspects → Specification for product or service

Labelling and marketing → Specification for product or service

Sampling → Specification for product or service

Codes of practice guides → Specification for product or service

Testing → Specification for product or service

Health and Safety and user issues → Specification for product or service

Process and management standards → Specification for product or service

National Medicinal Plants Board: It develops voluntary standards for medicinal plants based on good agricultural/collection practices.

Oil Industry Safety Directorate (OISD): It has published 112 standards in Oil and Gas sector in relation to product design, safety standards, codes of practices, guidance standards.

Petroleum and Explosives Safety Organization (PESO): This organization is engaged in activities related to safety in manufacture, possession, use, sale, import, export and handling of explosives, petroleum, flammable and non-flammable compressed gases and other hazardous substances through comprehensive administration of the rules framed under the Explosives Act, 1984 and Petroleum Act 1934.

Petroleum and Natural Gas Regulatory Body (PNGRB): Lays down the technical standards and specifications including safety standards in activities related to petroleum, petroleum products and natural gas.

Quality Council of India (QCI): Has published NABH – Standards for Hospital Accreditation and NABET – Standard for School Accreditation.

Standardization Testing and Quality Certification (STQC): E-Gov Standards on the following subjects:

1. Network and Information Security
2. Metadata and Data Standards for Application Domains
3. Quality and Documentation
4. Localization and Language Technology Standards
5. Technical Standards and E-Governance Architecture
6. Legal enablement of ICT systems

Tea Board: Publishes standards for black, green, Kangra and instant tea defined in Tea (Distribution and Export) Control Order, 2005.

Telecommunication Engineering Centre (TEC): It formulates standards with regard to telecom network equipment, services and interoperability, the associated conformity tests and fundamental technical plans.

Dedicated Standards Bodies

These include the following bodies:

Directorate of Standardization (DoS): Standards for Defence purchases and codification of defence inventories.

Inter Plant Standardization in Steel Industry (IPSS): Over 350 standards on Consumable Stores & Equipment, Design Parameters, and Management for SAIL Steel plants published.

Railways Design & Standards Organization (RDSO): Responsible for development of standards for materials and products specially needed by Indian Railways.

End Note

India has developed a vast repertoire of voluntary and dedicated standards bodies covering almost every aspect of economic activity. These bodies through various activities are ensuring that quality of Indian products and services are at par with international standards.

Source: Secondary research and media reports

INTERVIEW

> **Standards are becoming increasingly** important in helping cities develop more **intelligent and sustainable infrastructures,** making them better places to live.

Shri N. K. Kansara

**Deputy Director General (Policy, Research & Training),
Bureau Of Indian Standards – in conversation with The Aware Consumer
magazine on how standards help in protecting the planet
based on the theme of World Standard's Day 2020**

Q **The theme of World Standards Day 2020 is protecting the planet with standards. How do standards help in this goal?**

Mankind is living, enjoying and surviving on the planet due to its vast resources and conducive ecological system. However, the various activities which are being undertaken on the planet have brought the survival of the planet itself at stake. The knowledge, understanding and technologies which humans have developed for utilizing the available resources has also led us to predict, quite reasonably, extent to which the resources would last. Scientific studies have predicted that if the use and misuse of resources continue at the current pace and manner, then the life on earth would become more and more difficult with devastating impacts. Hence, there is need for protecting the planet to enable it to continue to sustain animal and plant life.

Standards are the building blocks for all activities that describe the quantifiable, agreeable and enforceable parameters for any product, services or systems. There has been tremendous growth in the standardization activity from informal and a few areas to almost every activity in which mankind is engaged in. The standards themselves have grown in content and applicability and therefore are best suited to provide solutions for existing or perceived problems while facilitating trade within the national boundaries and across the world. Therefore, it is quite appropriate to look forwards standards as means for protecting the planet. Standards are categorized as those describing requirements in relation to quality of the product and services, methods of tests for assessing the quality, glossary of terms and guidelines & codes of practices for carrying out certain activities. Standards also help and facilitate in sharing of expertise among countries. A large no. of standards have been formulated at national and international levels on a variety of subjects which are directly or indirectly to related issue that could help the planet maintain and regain, even if partially, its potential to sustain itself and the lives dependent on it.

Q **How is India aligned with this goal?**

India has kept pace with the international developments and Bureau of Indian Standards, the national standard body of India has formulated a no. of standards related to the subject. There are many standards which cover aspects of energy savings, water and air quality whose implementation helps reduce the environmental impact of industrial production and processes, facilitates the reuse of limited resources and improves energy efficiency, reducing greenhouse gas emissions etc. Concepts of 'reduce, reuse, recycle' activities promoted to minimize the usage of pollution creating products/processes. The aim is to formulate product standards which act as catalysts to promote manufacturing of such products which would replace the harmful and environmentally hazardous products.

Q **What are the standards that exist in India covering these areas? How many of them are mandatory standards governed by one of our laws and how may are voluntary standards adopted by the industry?**

- Standards promoting energy efficiency include Induction Motors, LED Lamps, Ceiling Fans, Distribution Transformers, Electric Geysers.

- Standards for Solar Photovoltaics wind energy applications. Guidelines standard on ELVDC Distribution System facilitates off-grid solar PV application. The standard has potential to provide Electricity Access to millions of households who do not have connectivity to the national grid and facilitates the achievement one of the Sustainable Development Goals of the UN.

- Codes of Practices on reduction, recycling, reuse and treatment of Solid wastes as well as Guidelines and codes of practice for Solid waste disposal and Plastics Waste Management have been formulated focusing of preventing pollution.

- Standards facilitate utilization of non-forest products such as plantation timbers of secondary species grown under social/agro-foresters and bamboo having low gestation period.

- Standards have been formulated on waste utilization in production of materials, like products based on fly ash, slag, phosphor-gypsum, agriculture residues, wood wastes, etc.

- National Building Code of India 2016 covers extensive provisions for sustainability in built environment and building covering external development, envelop optimization, green building materials, sustainable construction practices, integrated water and waste management, and building services operations and building performance tracking.

- Standards on bio-fertilizers are environmental friendly and also help is restricting the use of chemical fertilizers, thereby improving the soil health.

- Standards on Bio-fuels, synthetic fuels/alternate fuels are used in Industrial Automotive, marine an aviation sectors are mandatory as per various regulations issued by relevant Ministries from time to time.

Concepts of 'reduce, reuse, recycle' activities promoted to minimize the usage of pollution creating products/ processes.

- Standards on Life Cycle Assessment Principles, Framework & Requirements and Guidelines for green manufacturing practices.

Implementation and compliance of standards is basically 'voluntary' in nature. Only on identified products, based on health, safety and other concerns, the Govt. makes it mandatory to manufacture and sell such products only under licence from BIS for the relevant Conformity Assessment Schemes.

Q What are some of the mandatory standards that are in the interest of the consumers and create a value proposition for the consumers?

Product groups which are under mandatory BIS certification are

- Cement (15 different types)
- Household Electrical Goods & Batteries
- Milk Powders, Infant Milk Substitutes, Feeding Bottles, Packaged Drinking Water
- Tyres & Tubes for Automotive Vehicles
- Cylinder, Valves & Regulators
- Clinical thermometers and Diagnostic Medical X-Ray Equipment
- Steel & Iron products
- Domestic Electric Food Mixer and Gas Stoves
- Electrical Cables & Conductors

In addition to the products under mandatory ISI Marking Scheme, there are many Electronics and IT Goods are covered under 'Compulsory Registration Scheme' for the safety requirements. These include Laptop/Notebook/Tablets, Electronic Games (Video), Plasma/ LCD/LED Televisions of screen size 32″ & above, Microwave Ovens, Printers & Scanners, Set Top Box, Power Adaptors for IT Equipments, Self-Ballasted LED Lamps for General Lighting Services, Mobiles Phones, Power Banks for use in portable applications, CCTV Cameras/CCTV Recorders etc.

Q What are some of the most recent standards set in India in the interest of the Indian consumers and that they have been made aware of?

Standards formulation is an ongoing process. The standards are dynamic in nature and are periodically reviewed and revised to reflect the technological advancements, consumers needs & expectations etc. Some of the examples are:

- Bio-Protective Coverall, ICU Ventilators for use in COVID-19
- Electric Vehicle Conductive Charging System - General Requirements
- Polyvastra Bedsheets & Pillow Cover, Khadi
- Multipurpose dry batteries
- Flyash cement bricks
- Structural safety of tall concrete buildings
- Code of practice for electrical wiring installations
- AC static direct connected watthour smart meter class 1 and 2

Q Indians continue to invest in gold with uncertainty hovering over the economy. While hallmarking has been made mandatory, it recently got an extension

by the government. How will hallmarking impact the gold market and the consumers? What are the hallmark standards for gold jewellery?

Since ancient time Gold is considered as a store house of value, be it in jewellery form or raw form. Technically, the gold is alloyed with some other metals to form for making it suitable to give it the shapes & design of jewellery. This need for alloying of gold and huge difference of cost of alloying metals vis-à-vis has led to undesirable practice of making jewellery with less caratage of gold than declared. Then are other 'essentials' like solder used to give the jewellery article the desired shape. The common consumer though well aware of such malpractices had no option but to accept what is declared by the jeweller. It was in this background that Govt. of India took cognizance of the need for protecting consumers and Bureau of Indian Standards started the Hallmarking Scheme in the year 2000. Essential feature of the Scheme are:

- Hallmarking is done not by the jeweller but the Assaying & Hallmarking Centre recognized by BIS.

- It provides surety of purity i.e., the gold caratage would be as declared and hence value for money. Even the solder used for making the jewellery article has to be of the same caratage as main article.

- Standard provides for only three grade namely, 22, 18 & 14 carat for articles to be hallmarked.

- No negative tolerance is allowed on the gold content of gold jewelley for hallmarking

- Hallmark' on any article comprises of BIS Logo, Caratage (Fineness) of Gold and Identification Marks of the Assaying & Hallmarking Centre and that of the Jeweller.

- Consumer can get the hallmarked jewellery tested at any recognized Assaying & Hallmarking Centre to verify the declared/claimed purity.

- Compensation through the registered jeweller if purity is less than declared.

Govt. has announced that from near future, the jewellery articles of more than 2 g has to be mandatorily hallmarked. This will go a long way in protecting the consumers' interest. Simultaneously, the jewellery business would also benefit as there would be increased confidence in the trade and leading to increased business as consumers would be able to buy & sell the articles from anywhere and the need to go back to the same jeweller for getting the best resale value would be minimized. It is expected that the no. of jewellers getting registered with BIS would increase

> **"Govt. has announced that from near future, the jewellery articles of more than 2 g has to be mandatorily hallmarked. This will go a long way in protecting the consumers' interest."**

manifold when the hallmarking scheme is implemented mandatorily.

Q There are reports that even the hallmark logo can be fake as other standards' logos. How can a consumer detect such frauds? Are there any guidelines?

For the benefits of consumers, it is essential for the registered jeweller to display prominently in the sales outlet the certificate of registration issued by the Bureau for sale of hallmarked articles. Further the bill or invoice of sale of hallmarked precious metal articles shall indicate separately the description of each article, net weight of precious metal, purity in carat and fineness, and hallmarking charges. The 4 components of the hallmark are marked through laser machines and are in very small font size. Therefore, the jewellers are required to keep one magnifying glass for the consumers to check the hallmark.

Consumers should note that only such articles which have all the four components of the hallmark can be termed as the 'hallmarked jewellery'. Only the caratage (fineness), marked as say '22K 916', does not make the article 'hallmarked'. No. of instances have come to the notice of BIS when the hallmarking was done unauthorizedly or without following the prescribed procedure. BIS takes appropriate actions against such firm who are found indulging in case activities.

Consumers should note that jeweller selling the Hallmarked jewellery needs to display the registration no. in the showroom. Details of city-wise registered jewellers are given on BIS website www.bis.gov.in. All the four components of the hallmark should be checked on the article. In case the Hallmark is not clearly visible, the consumer can ask for a magnifying glass which the jeweller is required to keep. Insist on bill for jewellery purchased and ensure that purity given on the bill is the same as marked on the jewellery. Consumer can also get their hallmarked jewellery tested at any Assaying & Hallmarking Centre, at nominal cost, to verify the declared caratage/fineness. Complaint can also be lodged with BIS in case of shortage in purity in Hallmarked jewelley for redressal through the registered jeweller, as per the laid down norms. Consumer can also use the BIS Care Mobile App to verify the jeweller details and also lodge complaints.

Q Does BIS undertake any campaigns to educate consumers on standards? Please elaborate.

BIS conducts awareness programmes and campaigns to guide the consumers about the quality and reliability of standard marked products. This is done through the its

> " Just imagine, if the ATM/Debit/ Credit Cards of different companies were of different sizes or if the sign language by ground staff handling aeroplanes were different in different countries. These are but a few examples where standards are operating and making the life easy. "

offices at Headquarters in Delhi and network of Regional & Branch Offices spread throughout the country. BIs also conducts special programmes on Educational Utilization of Standards to create awareness about the various types of standards in different fields among the college students who are also informed about the benefits of quality consciousness.

BIS undertakes standards promotion activities with all the stakeholders. Efforts are being made to convey the benefits of quality and also the cost of poor quality or non-implementation of standards which the nation has to bear.

Q **Standards seem to have a wide-ranging impact on the quality of human life - from building smart cities (WSD 2017 theme) to protecting the planet. Please explain.**

Standards are everywhere, whether we see and experience or not. These are not limited to the products or services which may be conforming to the specified respective standard and be identified with certification marks but also those without such marks. Products with ISI Mark could be seen as Packaged Drinking Water, Cement, LED Lights, Helmets, Pressure Cookers, LPG Cylinders & Gas Stoves etc. However, just imagine, if the ATM/Debit/ Credit Cards of different companies were of different sizes or if the sign language by ground staff handling aeroplanes were different in different countries. These are but a few examples where standards are operating and making the life easy.

Implementation of standards definitively has positive impact on human life not only of the users of the goods & services but also their producers. Standards related to quality help manufacturers upgrading to the desired levels and to the consumer they assure fitness for purpose. In many of the standards safety features for the products are in-built. Many standards prescribe the performance requirements only and providing scope for improvements and innovations in designs. It is this context that the World Standards Day is celebrated recognizing the contributions made by the experts in

formulating the standards. The themes chosen are based on the importance of a group of standards in a particular field. As the standards have been formulated in almost all areas of human activites, there would be no dearth of theme to be chosen year after year.

Q **How do international standards propel positive change in the world?**

International standards represent the view of the world's leading experts in industry sectors ranging from energy utilities and energy efficiency to transportation, management systems, climate change, healthcare, safety and Information & Communication Technology (ICT). The experts represent the member countries on the Technical Committees. In present day world, when the businesses are done across national boundaries, the international standards provide a level playing field and facilitate economic activities to be undertaken. International standards bodies such as ISO, IEC and ITU provide cohesion to a myriad of national and regional standards; thereby harmonizing global best practices, eliminating technical barriers to trade, and fostering shared socio-economic advance. These benefits are ultimately all passed on to the consumer in the form of greater choice, increased quality and lower prices. Based on the international standards, member countries also make national standards either by adopting or adapting such standards meeting local needs.

Standards are also applied as tools to help reduce climate change by improving energy efficiency and decreasing waste and greenhouse gas emissions. Standards share best practices in renewable energy generation, provide cutting-edge requirements and processes for waste disposal and recycling, and tools to enhance efficiency and environmental sustainability across all industry sectors. Given the strong correlation between economic growth and urbanization, standards are becoming increasingly important in helping cities develop more intelligent and sustainable infrastructures, making them better places to live. ◗

Pyush Misra
Director,
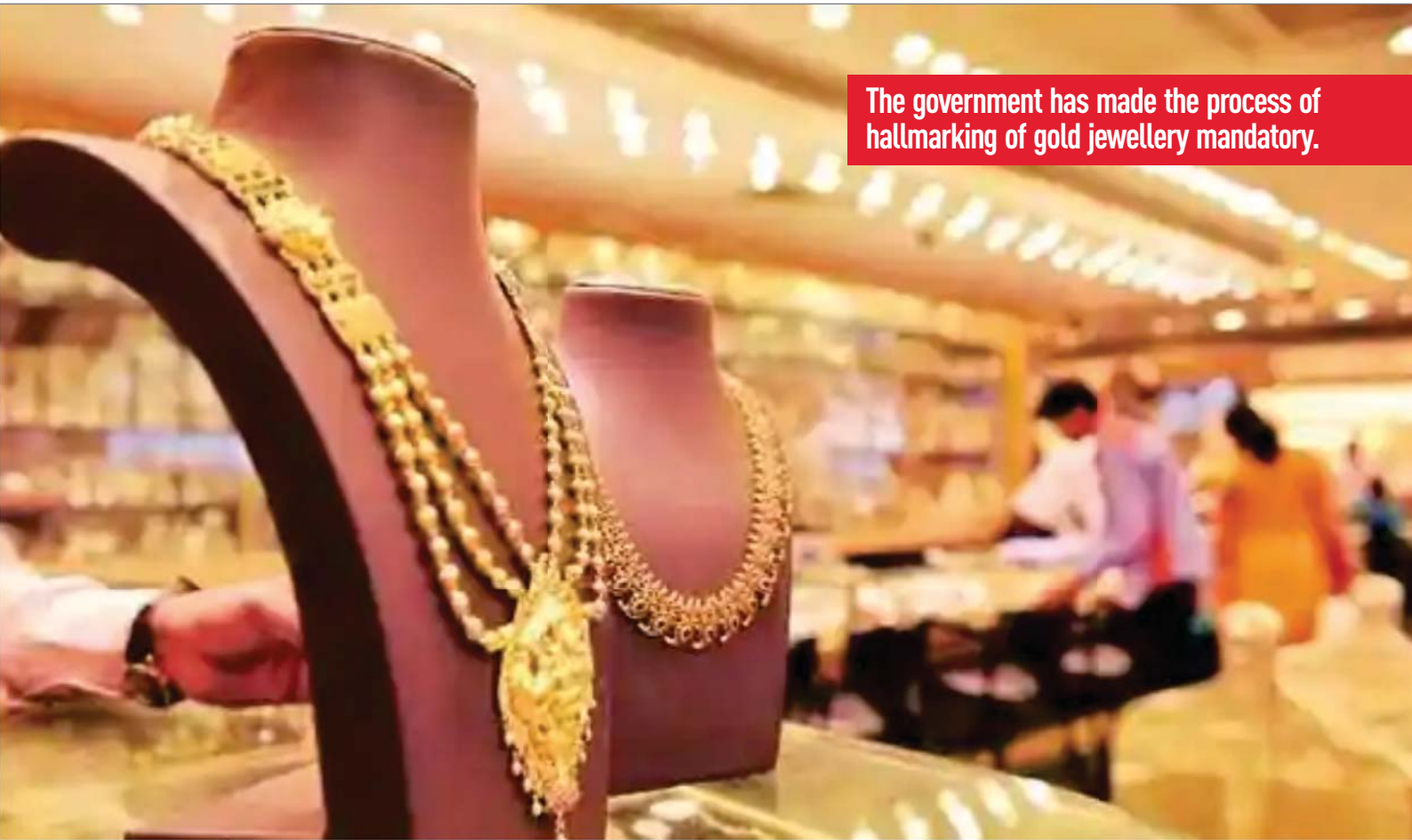Consumer Online Foundation

HALLMARK
A Mark Of Purity

India's decision to make hallmarking of gold jewelry mandatory is a much-needed step for consumer protection.

Hallmarking, an assurance of quality, protects consumers from frauds.

IMAGE: PIXABAY

The government has made the process of hallmarking of gold jewellery mandatory.

FOR CONSUMERS IN India, Hallmarking came as an assurance of quality in a hitherto unorganized gold market. Most consumers, especially in India's small towns, suburbs and villages are dependent on small jewelers for their gold ornaments. Gold holds massive importance in the lives of Indians not only an investment but its traditional position in weddings and other important occasions. Gold is regarded as auspicious and whether it be weddingsor festivals like Diwali and Akshaya Tritiya, gold jewellery is in high demand. However, in the absence mandatory quality standards, consumers have had no way to gauge the purity of this precious metal they invest their life's savings in. Hence, hallmarking as an official guarantee of purity or fineness of precious metal articles, is a step in the right direction for consumer protection.

What is Hallmarking

Hallmarking is defined as the accurate determination and official recording of the proportionate content of precious metal in precious metal articles. Hallmarks are used in many countries as an official guarantee of purity or fineness of precious metal articles. The main objective of hallmarking scheme is to protect the consumers from adulteration and to force manufacturers to ensure the requisite legal standards of fineness are maintained. Gold and silver have been brought under the purview of hallmarking in India.

The organization responsible for certifying the purity of gold and silver in India is Bureau of Indian Standards.

Hallmarking to Become Mandatory from June 1, 2021

A hallmarked gold jewellery will bear the BIS logo. This indicates that the purity of the ornament has been verified in one of BIS licensed laboratories. Only BIS is approved by the government for hallmarking gold articles.

Till now, BIS hallmarking scheme was voluntary and not all jewellers offered hallmarked BIS jewellery. However, it has now become mandatory for all jewellers to hallmark gold jewellery. A notification issued by the Ministry of Consumer Affairs, Food and Public Distribution on January 14 stated that jewellers and retailers have one year to register themselves with the Bureau of Indian Standards (BIS) and clear their old stock.

As stated by the Union Consumer Affairs Minister, Ram Vilas Paswan, the purpose of making hallmarking mandatory for gold ornaments and artifacts is to protect consumers from getting swindled while buying gold ornaments. Hallmarking would ensure that consumers get

the purity they have paid for and this quality is marked on the ornaments. This way, they are also better informed about the purity of gold. The hallmarking scheme has now set three categories for gold – 14, 18 and 22 karat removing corruption.

The initial deadline of January 15, 2021 for hallmarking was recently extended to June 1, 2021, in view of the Covid-19 pandemic.

To expedite the process of hallmarking, the government launched online registration for registration and renewal of license of gold assaying and hallmarking centers. The online system is expected to facilitate setting up of new centers or renewal of existing licenses by bringing in ease of doing business for both the jewellers and entrepreneurs. The online system was recently launched by the Consumer Affairs Minister. Currently, there are 921 hallmarking centrers located in 234 districts.

With hallmarking becoming mandatory, it is expected that the number of jewellers opting for registration would go up to 5 lakh from the present level of about 31,000.

The registration and renewal process of recognition involves audit of the centers, submission of audit reports and grant of recognition or renewal. This entire process has been automated. As a result, applicants will be able to track their application on real-time basis and monitor the progress. Since the audit will also be online it is expected to promote quick disposal of complaints regarding malpractices in hallmarking. The module to automate the workflow of the assaying and hallmarking centers is expected to be running by December 20. The BIS is working on the module.

To ensure that the rural consumers are net left out of the protective coverage, the government is focusing on setting up at least one hallmarking center in each district across the country. As of now the awareness regarding hallmark is near absent in villages and only top pockets of consumers even in urban centers are aware of it.

However, it is unlikely that jewellers across the country will achieve 100% gold hallmarking by June 2021, says the India Bullion and Jewellers Association (IBJA).

Currently, of the nearly 300,000 jewellers in the country, just 30,000 are BIS certified and are selling hallmark gold. The jewellers body is seeking an extension of the deadline till January 2022. They also feel that in the light of the notification of the Consumer Protection Act, there is a need to relook at the entire Hallmarking Act.

The jewellers expect to replace 70-80 per cent of stocks with hallmark items by September but would need at least one year to replace all our stocks, they say.

What does Hallmarking Indicate?

Firstly, BIS logo will tell a consumer that the gold you are buying is certified for its purity.

Then comes purity in karat and fineness. There are two ways to assess the purity of gold – karat (denoted as KT) and fineness number. In karat, 24KT is considered the purest form of gold though it is too soft to be designed into any jewellery. Hence, jewellers add metals such as silver and zinc to gold to make jewellery.

Effective from January 1, 2017, hallmarking of gold is done only for three levels of purity, i.e., karats. These are as follows:

22K916	Corresponding to 22 Karat
18K750	Corresponding to 18 Karat
14K585	Corresponding to 14 Karat

The fineness number and BIS hallmark on a piece of jewellery indicate its fineness level/purity which is embossed on it as part of the hallmark.

The third important component of hallmarking is assaying and hallmarking center's mark/number. What it means is that the center that has assessed to check the purity of a piece of jewelry is also required to put their logo on it. Only licensed laboratories of BIS can check the purity of gold and a consumer can check if the hallmarking center is licensed by BIS or not on BIS website. The recognition of an assaying and hallmarking centre is done against IS 15820:2009.

The fourth important check of purity is the jeweller's identification mark. BIS certified jewellery stores or manufacturers put their identification mark on the ornaments being sold by them. Consumers can crosscheck a jewellers bona fide on the BIS website.

Gold jewellery hallmarked till 31 December2016 bears an additional component – a code letter representing the year of hallmarking of jewellery decided by BIS. For example, Letter 'A' was used for year 2000 and 'J' for year 2008

Conclusion

To make Indian gold jewellery internationally recognized, the BIS Hallmarking Scheme has been aligned with International criteria on hallmarking. In 1982, the annual consumption of gold was estimated at 65 tons. It is now estimated to be more than 800 tons. Domestic demand accounts for about 80% which goes into jewellery fabrication (mainly 22 karat purity). About 15% is investor demand and barely 5% goes into industrial use. A FICCI study estimates that the gold processing industry has around 15000 players, with around 80 units having revenues over US $ 5 million. There are around 4,50,000 goldsmiths in the country, over 100,000 gold jewellers, along with about 6000 diamonds-processing players and 8000 diamond jewellers. Given the size of the market and the demand for gold, hallmarking is indeed the need of the hour. Hallmarking will make consumers more confident of investing in gold purchases as it will not only ensure purity but also help them get better resale value. ❱

Source: Secondary research & media reports

INTERNATIONAL STANDARDS: KEEPING THE WORLD ONE

The scope of international standardization is vast and covers almost every aspect of human life.

INTERNATIONAL STANDARDS HAVE a huge role to play in a globalized world economy. They bring technological, economic and societal benefits to the world at large. Imagine a world where different standards prevail in different countries. How would cross border trade happen when an importing country wishes for certain standards, but the exporting country offers products of different standards? More importantly, in today's world standards do not just concern the quality of products and services. They also help to make our society more sustainable and livable. From ensuring the quality of drinking water to vehicular emission limits, standards have an important function to play in the quality of human life

and in the attainment of SDGs. By harmonizing technical and other specifications of products and services, standards work to make industry more efficient and break down barriers to international trade. Most importantly, when manufacturers and government ensure conformity to International Standards, consumers are reassured that the products they have bought anywhere in the world, are safe, efficient and good for the environment.

What is an International Standard?

An International Standard is a document, which has been established by consensus of all

participating nations, experts and stakeholders. It tells us how we can achieve a desired outcome by using an agreed and consistent approach.

Governments and International Standards

It is the duty of every government in the world to establish such policies and protocols that help promote growth, enable a healthy economy and safeguard the interests of its citizens. In the pursuit of this goal, governments undertake many responsibilities including defending national business interests and stimulating export. It is the government's responsibility to pass and enforce legislation and

International Standards make our world cohesive.

IMAGE: PIXABAY

regulations that promote better use of energy and resources, protect people from unsafe products and the risks domestic, industrial, environmental and health hazards. No country is insulated from another and what happens in one can have major impact on another – as the recent Covid-19 pandemic has demonstrated. That is why there needs to be international standards that apply to all and ensure safety for all. In order to tackle global issues related to safety, energy supply and sustainable planet, governments across the world are increasingly participating in international or regional organizations – as a member or observer - to evolve international standards.

For governments, International Standards that are the result of international expertise and experience, are a vital resource for developing appropriate public policy. Governments across the globe are using International Standards to support their domestic public policy. They develop domestic standards referencing to international regulations which throw up a number of benefits. These include:

Access to expert opinion: Experts drawn from across the world are involved in the development of International Standards. When national governments integrate or adopt International Standards into their domestic regulations, they tap

into a pool of the best international expert knowledge and know-how, all this without needing to individually seek their services.

Opening up world trade: As many governments adopt International Standards and integrating them into national regulations, it helps ensure that their requirements for imports and exports are harmonized with those countries that have adopted International Standards as well. This promotes trade across the globe by facilitating the movement of goods, services and technologies between different countries.

Promoting cooperation: International Standards bring together competing countries and many different players

on to common platforms and promote the pursuit of common goals. International Standards promote fair competition and provide a level playing field. They allow governments to build national infrastructures in time and stay relevant.

Focused infrastructure development: Regulators can work on policies but not infrastructure as they are not engineers. International Standards help governments overcome this shortcoming by bringing together organizations that can help tap innovative potential of the industry and help it move on the right track. This kind of global cooperation helps avoid island solutions that have the potential to hinder growth of the market.

Merging technologies: Regulators need to keep pace with the rapid pace of technological advancement. For this, governments must ensure adequate investment, the right technologies and products and fair pricing for all consumers. More and more technologies are merging, and it is important that infrastructure systems are able to communicate across borders. International Standards ensure built-in interoperability. through the technical frameworks, metrics and specifications. Regulators can refer to these legislations and draft their national policies aligned to them to ensure technologies remain relevant across borders. In keeping with the technological transformations, standards too are evolving and being revised, and legislation is automatically updated.

World Standards Cooperation – International Standards & Trade Agreements

For countries to trade smoothly, trade agreements set down rules that cover trade in goods and services between countries or among various parties. There are rules governing every aspect of international trade and while some of these concern tariffs or quotas in place between the

negotiating players, others might be related to the quality, safety or other aspects of the products or services being traded. The World Trade Organization (WTO) is responsible for the rules governing trade among its 162 member states. Goods, services and intellectual property all come under WTO agreements. Countries are free to negotiate trade agreements as also various parties, but these are subject to certain conditions to ensure they remain consistent with the WTO agreements.

The Technical Barriers to Trade (TBT) agreement is a key WTO agreement. The purpose of this agreement is to ensure that technical regulations, standards and conformity assessment procedures, used by a government to describe the

characteristics of products being traded, do not create unnecessary technical barriers to trade. IEC, ISO and ITU have national member bodies from all over the world and fulfill the WTO TBT definition of International Standards development organizations. Their membership is open to the relevant bodies of at least all Members of the WTO TBT. Standards developed by IEC, ISO and ITU are in consonance with the decision of the WTO's TBT committee on principles for the development of International Standards.

IEC, ISO and ITU International Standards function as a tool to support trade agreements and ensure that parties involved in trade agreements do not neglect their TBT obligations. These International

WTO CONTRIBUTION TO THE 2020 HIGH LEVEL POLITICAL FORUM

Standards organizations provide confidence that requirements for products and testing have global relevance and are accepted worldwide. Within the TBT agreement, WTO members are strongly encouraged to base their non-tariff measures on International Standards in order to facilitate trade.

With more and more countries adopting or using International Standards, it has brought policy and regulatory compatibility that also extends to even those countries that are not party to a bilateral or multilateral agreement. Such an approach to international trade is imperative as otherwise, new technical barriers to trade would be artificially created through the use of additional, unique or partiallyaccepted Standards and provisions.

IEC (International Electrotechnical Commission), ISO (International Organization for Standardization) and ITU (International Telecommunication Union), are leading international organizations that develop International Standards.All these bodies work harmoniously under the banner of the World Standards Cooperation with the goal to strengthen and advance a voluntary consensus-based International Standards system and related conformity assessment activities. The principles of openness, transparency, impartiality and consensus, effectiveness and relevance, coherence, and the development dimension, agreed by the WTO's TBT committee, are ingrained in the standards developed by these three organizations. Policymakers around the world repose confidence in IEC, ISO or ITU International Standards as they can be certain that they are fulfilling their WTO obligations, and not creating any unnecessary obstacles to international trade.

International Standards in world trade domain also promote regulatory harmonization and help avoid the waste of resources that would otherwise result from the need for additional testing or other duplicating procedures with each country's regulators developing their own solutions.

International Standards in Business

International Standards play an important role in in keeping businesses rolling. They act as strategic tools to make business operations as efficient as possible. They also function to stimulate productivity and help companies access new markets. Some of the other benefits are:

> **The World Trade Organization (WTO) is responsible for the rules governing trade among its 162 member states. Goods, services and intellectual property all come under WTO agreements.**

Cost savings: By optimizing operations International Standards help improve the bottom line of a company.

Enhanced customer satisfaction: By ensuring global quality of products,International Standards help enhance customer satisfaction and increase sales.

New markets and increased market share: A major contribution of International Standards is towards preventing trade barriers and opening up global markets. These standards also have a role to play in increasing productivity and providing a competitive edge.

Export and trade: International Standards play a positive role in trade, particularly regarding exports by bringing in accepted international quality parameters and removing trade barriers. A key function is promoting intra-industry trade and thereby improving international competitiveness.

Technology transfer: International Standards promote innovation much like patents. But more importantly, International Standards enable efficient dissemination of new technical knowledge which is a decisive factor and a precondition for economic growth. As global standards, they promote technology transfer from technology leaders to developing nations and thus lead to more equitable growth.

Conclusion

Consumers are an asset and it is the duty of every government to protect its citizens. This protection is not in the narrow sense of physical safety but encompasses all aspects of a citizen's life. Consumers must be guaranteed the right to buy safe and reliable goods, to live and work in safe buildings, and protection from all kinds of hazards, whether it be associated with products, equipment, systems, technology or environment.

Countries can ensure this by adopting International Standards; recognizing certificates issued by International Conformity Assessment Systems; and incorporating International Standards. International Standards are powerful instruments that protect poorer countries from dumping of substandard, low-quality products on their local markets, sale of defective products that can be not just hazardous but fatal too, and save the economy substantial amounts of money by preventing them from endangering the lives of millions. International Standards ensure quality that is important to protect populations by preventing accidents.

International standardization covers billions of electrical devices and electronics proliferating across the world in our homes, offices, health facilities, industry or energy generation. They also cover food safety, transportation and products of daily use like sports gear or toys. The scope of International Standards is vast as they also monitor the air we breathe, the water we drink and soil quality, gas emission and radiation, as well as environmental aspects of products. In short, International Standards help protect the environment, promote sustainability and the health of citizens. ◗

Source: Secondary research and media reports

Celebrating Collaborative Commitment To The World

World Standards Day themes demonstrate the commitment to key issues that impact citizens and the dedication to enabling a better world.

IMAGE: PIXABAY

OCTOBER 14 IS a special day around the world when members of IEC, ISO and ITU celebrate World Standards Day. While the celebrations are a tribute to the collaborative global efforts involving thousands of experts from across the countries who have been consistently working to develop voluntary technical agreements published as International Standards to bring about a better governed world, the annual themes also demonstrate the commitment to key challenges that impact citizens.Every year, World Standards Day theme resonates with a global pressing concern that requires collaborative and concerted effort.

World Standards Day 2020 – Protecting the Planet with Standards

This year's theme, Protecting the Planet with Standards, echoes global concerns around the environment. We humans have for the past century systematically been stripping our planet of its resources. We failed to realize that earth is a finite resource and if we do not give it the respect and caring that it deserves, one day we may end up regretting our rapaciousness and greed. Modern civilization built on large scale industrial activities has added to earth's natural greenhouse gases that are negatively impacting our climate. Our mounting piles of garbage are choking and poisoning earth's natural resources, its oceans, rivers and groundwater. The widespread destruction of forests and paring down of mountains have destroyed the balance in nature. Each of the thoughtless action of civilized living, technological advancements, inventions and innovations, from air-conditioners to cars, are expanding our carbon footprints and propelling us towards an environmental disaster. Our population is growing rapidly, and the pace of urbanization has accelerating leading to more widespread destruction of the environment.

To save the planet, we need to make concerted efforts backed by strong political will, concrete action and the right tools. International standards are one such tool that can play a huge role in saving the earth. The international standards prepared by IEC, ISO and ITU are the result of wide consultations and based on tried and true solutions to technical challenges. They ensure that the expertise and expert know-how are shared widely across the world with developed and developing countries alike. International standards cover all aspects of energy savings, water and air quality and lay down standardized protocols and methods of measurement. As more and more governments adopt and implement these standards, their broad use is designed to help the world reduce the environmental impact of industrial production and processes. These standards facilitate and promote the reuse of limited resources and propel measures that enable more efficient use of energy.

Let us look at the World Standards Day themes of the past decade to see how they have worked to promote a better world.

World Standards Day 2019 – Video Standards Create a Global Stage

2019 was dedicated to a technology that has changed the way that we interact. Video as a modern medium of expression has revolutionized entertainment, the way we connect with friends and family, enriching our lived experiences through enhancing our communications. Not only this, technological advancements have impacted every field of life, from health to education. The innovation of past decades has driven video technology by leaps and bounds making it more accessible and allowing people worldwide to share the vignettes of their life in vivid, moving pictures. These advances in both the sophistication and accessibility of video would not have been possible without International Standards.

World Standards Day 2018 – Standards and the Fourth Industrial Revolution

Standards ensured a successful first industrial revolution more than 250 years ago and have become even more critical to the success of economic activity. The Fourth Industrial Revolution is vastly different from the first and is witnessing the emergence of technologies that are blurring the traditional boundaries between the physical, digital and biological worlds. As lines blur between people and technologies, every human activity is slated to be impacted deeply. Much like the steam power that transformed manufacturing and commerce as also the way our ancestors lived, advanced

technologies like artificial intelligence and data sciences are changing our world. While in the 18th century, standards played a critical role in monitoring the industrial revolution, International Standards are set to play a key role in the transition of the current world into a new era and are responsible for the speed of change. Standards ensure compatibility and interoperability, enabling seamless adoption of technologies across the world.

World Standards Day 2017 – Standards Make Cities Smarter

Various government are engaged in building better living spaces for their citizens – Smart Cities – that are highly complex. While all cities need fresh water, cleaner energy, transport and safety and security to ensure a decent quality of life for their inhabitants, no city has identical problems and to tackle these challenges government must come up with innovative mix of solutions. However, there is one common denominator that greatly simplifies the task of building smart cities – International Standards.

International standards help in the development of advanced technological solutions that can be adapted to the needs of a particular city. They provide expert knowledge and best practices and enable quality and performance of products and services. By driving compatibility between technologies, International Standards help best solutions reach all stakeholders.

World Standards Day 2016 – Standards Build Trust

Trust is essential to creating a world where excellence thrives. The quality of social interaction improves when there is common respect among participants for fundamental sets of norms, concepts or meanings. International Standards by codifying these norms forge trust and ensure that all have access to it. These standards connect us and helpcreate reliable modes of communication, codes of practice and trusted frameworks for cooperation. When there is common interpretation of codes and norms, it leads to mutually beneficial trade and commerce. A product or service that conforms to an international standard, projects that it is of trustworthy quality trusted, safety or compatibility. Thus, standards are the common language in which the diversity of the interconnected world communicates.

World Standards Day 2015 – Standards – The World's Common Language

Without International Standards, it would be a hard world to live in – our credit cards would be useless as it would not fit into every ATM machine, communication would be stressful as we wouldn't be able to call people across the globe or even access the internet. Without codes we would have no way to tell where a call came from or how to reach a destination. Without country and currency codes, standards for communication between people, machines, parts and products, the world would go haywire. There would be no graphical symbols like the ones on our washing machine or microwave that surpass language barriers and act as common language artifacts. Without standards, a MacBook would not be able to send out printing instructions to an Epson printer, that is technology would not be interoperable in the absence of common language to communicate. Thanks to International Standards we have a common set of rules and parameters enabling products to work with each other and for us to live like global citizens.

World Standards Day 2014 – Standards Level the Playing Field
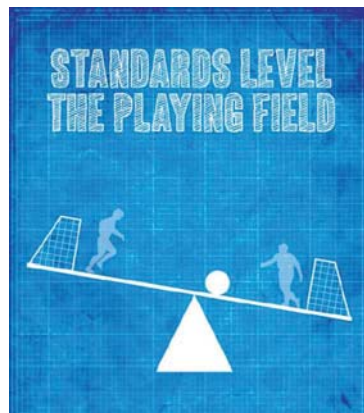
We now live in a global village of inter-dependent economies joined by networks of supply chains. Hence, a product made in India may have parts made anywhere in the world. A car of a top US manufacturer has parts made in various countries. Thus, a product that you buy, may have transited through many countries where parts were added to give it the final shape. In such an interconnected economy, using International Standards levels the playing field for even small and medium enterprises. Standards make it easier for small businesses to get their products certified and sold anywhere in the world. International standards facilitate the participation of small players into the global value chains and also enable technology transfer that benefit them.

World Standards Day 2013 – International Standards Ensure Positive Change

Even as the world grapples with macro-economic challenges, there is an urgent need for every nation to balance their internal compulsions with climate change. International Standards that have been developed through consensus by the world's leading experts representing various industry sectors for public good, provide governments and society with a solid platform to enable positive change. We live in a complex environment and it is through International Standards that the world can bring about positive change. Standards provide common specifications that make global markets accessible to all, create enabling business environments and spur economic growth. By adopting common standards, countries pledge to mitigating climate change by adapting their economic activities to reduce impact on the environment.

When developing countries adopt the best practices under International Standards, they avoid reinventing the wheel and accelerate economic development. Standards bring positive change in every aspect of life – from making products, services and environments better to making the world more accessible to persons with disabilities.

World Standards Day 2012 – Less Waste, Better Results – Standards Increase Efficiency

Organizations need to increasing efficiency to be able to combat global challenges like sustainability and financial uncertainty. This calls for working with less resources and preventing wastage. Efficiency means the ability to achieve business objectives with minimal waste, expense, or effort. Efficiency is crucial to maximizing profits and meeting organizational goals. Efficiency is also critical to remain competitive. International Standards function as powerful mediums that help organizations maximize their efficiency. These internationally harmonized best practices enable organizations to minimize waste and maximize profits while retaining their sustainability goals. The state-of-the-art knowhow contained in International Standards helps

countries make the best use of their human and material resources, by ensuring that their industrial and business processes are efficient and can make them globally competitive.

World Standards Day 2011 – International Standards – Creating Confidence Globally

As International Standards for products and services underpin quality, ecology, safety, reliability, interoperability, efficiency and effectiveness, they not only give manufacturers the confidence to reach out to global markets but also make their products attractive to consumers. By providing interoperability, International Standards create economies of scale. For consumers this translates into equal service anywhere in the world. International Standards hence are beneficial to every stakeholder, be it consumers, manufacturers or service providers alike. The deployment of new products and services in developing countries makes world-class products accessible to consumers and encourages economic development.

World Standards Day 2010 – Standards Make the World Accessible for All
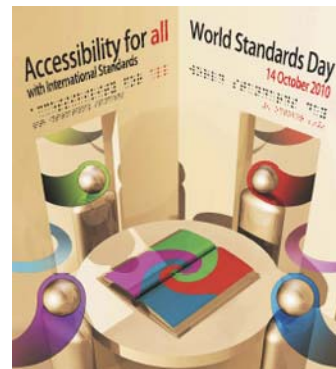
World is not an equal place for all. A vast majority of the disabled people and the elderly are denied equal access to social, political and economic life. Access to information and communication is a great leveler as also accessibility to public places – be it an elevator, a building, mode of transport or a device. International Standards by providing guidelines to manufacturers and service providers ensure that products are designed in such a manner that they are accessible for all. For example, a wheelchair ramp, a device that the deaf can use, elevator button panels with braille, doors with sensor, etc.

Conclusion

International Standards play an enabling role in making the world a better place for consumers by impacting every aspect of economic activity. The themes of the past 10 years reveal the how International Standards are focused on issues of global impact. ◗

Source: Secondary research & media reports

KEEPING STANDARDS HIGH

ISO Management System Standards help organizations in the world achieve the highest standards of management with commitment to the greater good.

Efficient management systems help an organization manage all its disparate parts in the best possible manner.

IMAGE: PIXABAY

IN SIMPLE WORDS, a management system defines the way an organization manages the various parts of its business coherently in pursuit of its objectives. Any business has various objectives and includes quality of its products and services, operational efficiency, environmental performance, health and safety of its employees among others. How companies achieve their goals depends upon their size and type which impact the complexity of their management systems. The level of complexity is hence context specific. The higher the complexity the more will be the need for extensive documentation and controls for an organization in order to fulfill its legal obligations and meet its business objectives.
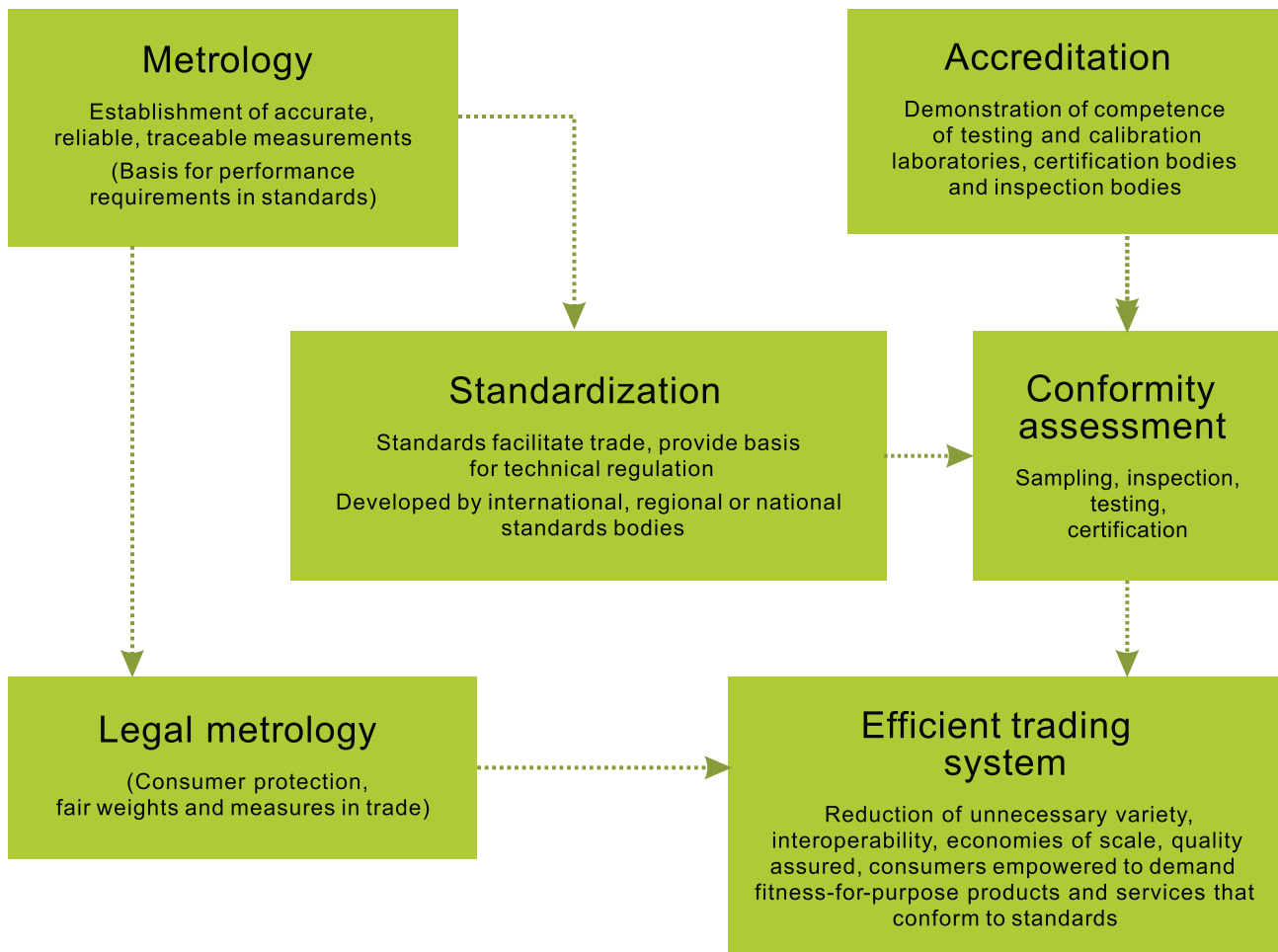
How the ISO Model Helps

ISO management system standards (MSS) is the result of expert collaboration and helps organizations improve their performance. MSS have been developed in consensus by international experts who possess high expertise in global management, leadership strategies, and efficient and effective processes and practices. MSS standards are flexible in the sense that they can be implemented by any organization, irrespective of size. MSS specifies repeatable steps that organizations implement to achieve their goals and helps them create a culture of reflexive engagement. This promotes a continuous cycle of self-evaluation, correction and improvement of operations and processes in the organization as employee awareness is heightened and management leadership and commitment too, increase.
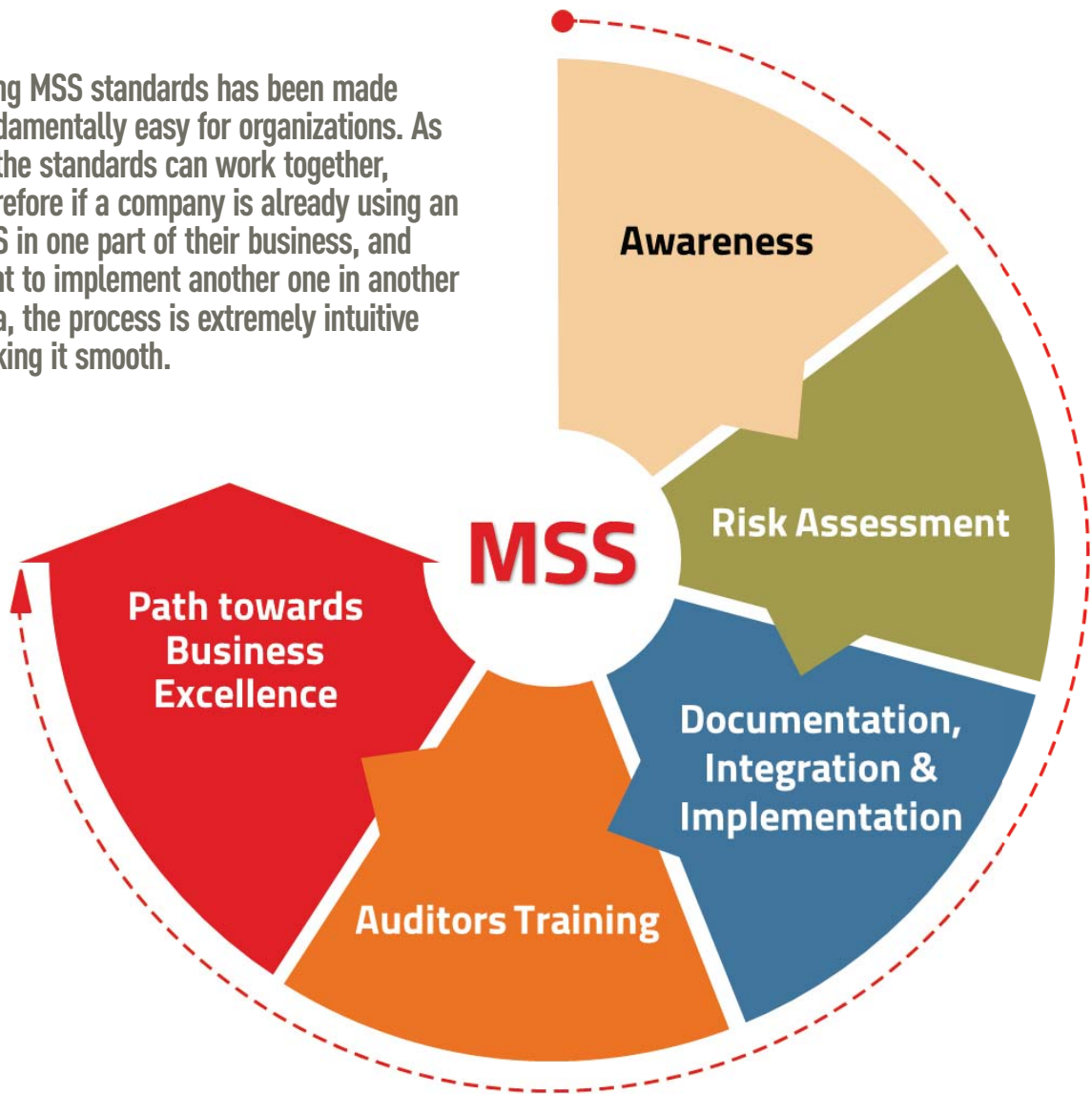
When the management system thus improves and becomes effective it leads to:

- Better utilization of resources and improved financial performance
- More efficient risk management leading to better people and environment protection

How metrology, standardization and conformity assessment are interlinked

Metrology

Establishment of accurate, reliable, traceable measurements

(Basis for performance requirements in standards)

Accreditation

Demonstration of competence of testing and calibration laboratories, certification bodies and inspection bodies

Standardization

Standards facilitate trade, provide basis for technical regulation

Developed by international, regional or national standards bodies

Conformity assessment

Sampling, inspection, testing, certification

Legal metrology

(Consumer protection, fair weights and measures in trade)

Efficient trading system

Reduction of unnecessary variety, interoperability, economies of scale, quality assured, consumers empowered to demand fitness-for-purpose products and services that conform to standards

Using MSS standards has been made fundamentally easy for organizations. As all the standards can work together, therefore if a company is already using an MSS in one part of their business, and want to implement another one in another area, the process is extremely intuitive making it smooth.

Awareness

Risk Assessment

MSS

Path towards Business Excellence

Documentation, Integration & Implementation

Auditors Training

- Enhanced capabilities to deliver consistent services and products
- Increased value to customers and stakeholders

What are MSS Related Standards

There are four different types of ISO documents that support organizational management. These are as follows:

Management Systems Standards (MSS)

MSS are ISO standards that lay down the requirements or provide the guidance to organizations regarding management of policies and processes to help them achieve specific objectives. MSS have wide applicability as they can be implemented across economic sectors, organizations of different types and sizes and also across geographical, cultural and social environments.

There are more than 80 MSS. Among the most widely used ISO MSS are standards such as ISO 9001, ISO 14001 and ISO 50001, which apply to quality management, environmental management and energy management respectively. Using MSS standards has been made fundamentally easy for organizations. As all the standards can work together, therefore if a company is already using an MSS in one part of their business, and want to implement another one in another area, the process is extremely intuitive making it smooth. This ease of use comes from High-Level Structure (HLS) concept under which management standards are structured in the same way, regardless of the domain of application. This makes users of one MSS feel immediately at ease with another MSS even though using it for the first time.

MSS are not just laid out in the same way, there are also parts of a standard where identical text can be used. This feature improves coherence and recognition,

simplifying use of various MSS. Defined in what is called Annex SL, what it means is that MSS not only have the same structure, they can also contain many of the same terms and definitions. This feature enables organization to operate a single or integrated management system that can meet the requirements of two or more MSS being used simultaneously.

Thus, Annex SL promotes interoperability and user friendliness of standards and makes it possible for MSS to be implemented around the world.

Audits

Audits are a crucial part of the management system approach allowing organizations to assess if their achievements meet their objectives and conform to the standard. ISO 19011:2018 provides specific guidance on internal and external management system audits to organizations.

Changes on Anvil in 2021

ISO is committed to keeping the standards relevant and current. Annex SL has been in use since 2012 and hence in pursuit of this goal of currency in the real world, MSS users were surveyed in 2018 on how the Annex could be evolved. Since the standards are widely in use, any change is bound to impact its vast user base. Keeping this in mind, all those involved in the exercise agreed that all changes need to be given thorough consideration. Since the changes will affect millions of people who work on a daily basis with MSS, it is being ensured that the changes made bring clear, widespread advantages. The revision of MSS like all other ISO standards is a team effort done in consensus. The new version of MSS will be completed in 2020 and will come into effect in 2021.

Notably, the revised Annex SL will not make the existing MSS obsolete or require a revision in them. The revised Annex SL will only be used in new standards as well as those that are scheduled for periodic revision of their content.

Management Standards

ISO management standards provide support to organizations in the implementation of specific aspects of an organization's management system.

ISO 26000:2010 provides guidance on social responsibility to all types of organizations, irrespective of their size or location. The guidance includes:

- concepts, terms and definitions related to social responsibility;
- the background, trends and characteristics of social responsibility;
- principles and practices relating to social responsibility;
- the core subjects and issues of social responsibility;

- integrating, implementing and promoting socially responsible behavior throughout the organization and, through its policies and practices, within its sphere of influence;
- identifying and engaging with stakeholders; and
- communicating commitments, performance and other information related to social responsibility.·

This standard is aimed at enabling organizations contribute to sustainable development by taking on a more committed approach that goes beyond the tick box mentality for fulfilling legal compliance requirements. It helps organizations recognize that that compliance with law is not only a fundamental duty but also an essential part of their social responsibility. The guidelines promote common understanding regarding social responsibility and help companies by complementing their other instruments and initiatives for social responsibility. The standards are not meant as a replacement for other efforts of organizations in the area of social responsibility.

In the era of enhanced risks to organizations, ISO 31000:2018 is a critical standard providing guidelines to organizations on managing risk faced by them. The application of these guidelines is customizable and can be tailored to suit the requirements of any organization and its context. A common approach to managing any type of risk, this standard is not industry or sector specific. Importantly, ISO 31000:2018 can be used throughout the life of an organization. It can also be applied to any activity, including decision-making at all level.

Conclusion

ISO provides comprehensive standards for management of organizations that improve their efficiency and enable them to achieve their objectives while remaining committed to their professional and social responsibilities. Applicable across industries, types of companies and countries, ISO MSS help improve productivity and efficiency while strengthening commitment to global social and environmental goals. ◗

Source: Secondary research & media reports

Indian Standards Keep Quality Check On Medical Equipment To Toys

It is not just medical devices that need standardization, but toys too.

IMAGE: PIXABAY

Medical equipment must conform to set standards to ensure safety and efficacy.

QUALITY OF SERVICE is integral to quality of healthcare systems. Across the globe, governments through various initiatives strive to maintain quality of service. Technological advancements have led to a proliferation of medical devices not only in the healthcare sector but also for consumer use. Medical devices range from simple needles to high-tech implants. Medical devices can be invasive diagnostic devices that help treat a disease, or those that can be implanted inside the body. The procedures involved in the usage of medical devices can be complex and hence standards are essential. It is imperative that the safely and effectivity of medical devices are ensured through stringent quality control.

In India, the responsibility of formulating standards for quality control of medical devices falls under the purview of the Bureau of Indian Standards (BIS), which formulates these measures through its special technical committees. The technical committee develops the standards in a collaborative manner involving all relevant stakeholders in the field. This collaborative approach to standards ensures there is consensus and balance of interest among stakeholders. Stakeholders in any industry include, consumers, technologists and regulators. The technical committee takes into account all viewpoints through its exhaustive consultation process.

BIS, the country's national standards body is under the administrative control of Ministry of Consumer Affairs, Food and Public Distribution, Government of India. Established in 1947 as Indian Standards Institution, it is now known as BIS. The core objective of BIS is harmonious development of standardization activity in India that is Indian Standards (IS).

There are various technical committees working under Medical Equipment and Hospital Planning Department (MHD) of BIS responsible for the development of National Standards. National Standards are developed to regulate various fields including surgical equipment, implants and accessories, aids for the disabled, veterinary surgical equipment, electromedical and forensic sciences equipment, medical laboratory instruments, health informatics, etc.

For example, the X-ray equipment is integral to diagnosis and is ubiquitous in hospitals and medical centers, Theremust be performance specifications that ensure the highest level of accuracy, safety and quality of medical equipment. While IS 7620 (Part-I) specifies the general and safety requirements for all types of diagnostic X-ray equipment, Part-II of specifies performance requirements of diagnostic medical X-ray equipment. Similarly, IS 3235 are the standards that specify the design, performance and corresponding test

From September 1, toys manufactured in India or those imported for children below 14 years will have to comply with the BIS standards.

methods for reusable syringes of 100 ml capacity. There are also standards governing surgical rubber gloves, that is, IS 4148. These standards specify the manufacturing process requirements, physical properties, and method of testing of gloves. Pacemakers, an advanced medical device, need to conform to specific standards too. Standards for external pacemakers provide information that help select and apply them. For example, IS13450 (part-2): Sec-31 has been formulated to monitor basic safety and essential performance of external pacemakers powered by an internal electrical power source.

The Covid-19 pandemic has made face masks, gloves and PPEs integral to patient care and also as a safety measure against the virus. Several types of branded and non-branded items are available in the market, making it difficult for the consumer to choose the right kind. Indian Standards help the consumer in narrowing down their choice of face masks, respirators, oximeters and other equipment by letting them know by the logo that certifies their quality. For instance, IS 9473 prescribes requirements and tests for filtering half masks intended to provide partial cover, IS 14166 prescribes requirements for full face masks for respiratory protection.

As these examples show, standardization has a central role to play in the clinical experience of consumers and hence is critical in the medical devices sector.

Standards strengthen the regulatory processes by ensuring safety, quality and performance of medical equipment. When implemented by industries, regulators and stakeholders across the world, standards provide requisite information on medical technologies and also remove technical barriers to trade. Standards play an important role in improving efficiency of production and facilitating international trade.

In India, healthcare is one of the fastest growing industries as improving standards of living have meant increased life expectancy. The growing geriatric population as also the rising incidence of non-communicable diseases have increased the complexities and demand on the healthcare system. Access to affordable and efficient healthcare system is critical. BIS through its standardization ensures quality of the healthcare system.

BIS standards for toys

As majority of toys fail BIS standards tests, the government makes BIS standards mandatory for both Indian and imported toys.

You can't compromise on quality when it comes to children.

IMAGE: PIXABAY

Toys are a big market and the bane of many parents. Not only do they cost a pretty penny, but the worst is that even the high price tags are no guarantee of their durability or safety. An added nuisance has been the proliferation of substandard toys from China. The government's decision to bring standardization in the toy industry is hence a welcome move. From September 1, toys manufactured in India or those imported for children below 14 years will have to comply with the BIS standards.

The government decision is being seen as a big blow to Chinese toymakers as the share of China made toys in the basket of imported toys is nearly 75%. As per reports, India imported toys worth nearly Rs 4,000 crore in 2019-20.

Announcing this decision, Consumer Affairs Minister Ram Vilas Paswan had said that all imported toys will have to comply with the BIS standards and import of any non-standard toy and its sale in the country would not be allowed.

To enable this, BIS officials will be deployed at seven major ports including Mumbai, Deendayal Upadhyay (Kandla), Paradip, Kolkata and Kochi to carry out sample checks on imported toys.

The ministry had in February issued the quality control order (QCO) mandating that no toy, including those manufactured in India, can be sold without having BIS certification from September. Per reports there are no license holders for manufacturing toys till now. However, reports said nine applications have been received for obtaining licenses. The industry has also demanded the timeline be deferred as it may affect small domestic manufacturers.

The Quality Council of India (QCI) had found nearly 67% of imported toys had failed the testing survey. This prompted the government to notify seven Indian Standards. The QCI testing was conducted on 121 varieties of toys available in Delhi and NCR markets. These tests were carried out at NABL-accredited laboratories as per the Indian standards. As 30% of plastic toys failed to meet the safety standards, 80% failed on mechanical and physical safety properties, and nearly 75% electric toys failed in the test, standardization became urgent.

The order requires manufacturers or importers to comply with safety standards related to mechanical and physical properties of toys. But in toys like drones, there are specific standards that such toys must comply with. All seven norms won't apply to all toys being manufactured or sold. ◗

Source: Secondary research & media reports

Move To Curb Cheap Chinese Imports Is Welcome

IMAGE: PIXABAY

Good riddance to substandard toys.

THE MOVE TO curtail cheap and substandard imports from China is a much needed one. As per reports, the government will be raising basic customs duties on dozens of products to curtail cheap and substandard imports. The government will follow this up with non-tariff measures such as standard specifications for hundreds of items. While the move is not overtly China-specific, it is being said that the decisions would impact imports from China the most.

As per reports 1,173 items ranging from auto parts, compressors for AC and refrigerators to select steel and aluminum products and electrical machinery are on the list under consideration. Largely imported from China, these items can easily be substituted with local products.

The Imports of these items from China were worth $11.98 billion in FY19. In fact, the imports of only 47 of these products/sub-products from China were worth over $50 million each in FY19, totaling $5.82 billion. The decision to curb imports is part of Prime Minister Narendra Modi's push for Aatmanirbhar Bharat. However, the move will impact China the most as it is the biggest supplier of cheap and low-grade products to the country.

As a consumer, I support this decision of the government.It will not only promote local industry but also ensure that Indian consumers get superior quality products.

– *Rajiv Narayan*
Noida

To keep the planet flourishing, 30% of Earth needs protection by 2030

Standards For Planet Protection Cannot Be Left To An Industry Driven By Profit Motive

HUMAN GREED AND unthoughtful actions have brought our planet to the brink of disaster. We have disturbed the equilibrium of nature and it is retaliating by unleashing its fury on us. Climactic disasters like flood, hurricanes, extreme heat and cold conditions have become the norm. Our water bodies have dried up or are contaminated by industry effulgent and city's refuge to such an extent that despite spending crores on their restoration, there has been little tangible outcome. We will not change our habits unless governments bring in stringent measures to curb this ceaseless exploitation of nature. International and Indian standards should be stringently applied on the industry, towns and individuals to prevent us from stripping our planet bare.

– Anita Singh
Delhi

Stringent Standards Required For Water And Energy Efficiency

AS A CONSUMER I have little awareness regarding what standards or if there are standards that govern water and energy efficiency in the country. However, reading that for morethan 25 years, Congress has directed the US government agencies to set energy and water efficiency standards for many new products, set me thinking how standards can help not only conserve resources but also save consumers some hard-earned money. Efficiency standards for common household items like light bulbs, portable air conditioners, low-flow toilets, showerheads and much else result in huge resource saving. While in the US, the Energy Policy Act of 1992 set the maximum flow rate for showers at 2.5 gallons per minute, reports say President Trump is proposing to increase the rate as he finds it inadequate to wash his "beautiful hair". While this may be amusing, water wastage is not. High time we also brought in most stringent standards to plug wastage. As they say every drop counts!

– Manav Jain
Delhi

India Moots
Global Standards For
People's Movement

THE RECENT PROPOSAL by India at the G20 foreign ministers meeting suggesting the development of a global standard for the movement of people across national borders comes in the backdrop of the COVID-19 crisis that has restricted the movement of people. India has suggested that there be common standards on COVID testing, test results, quarantine, etc., as global travel is resuming with the pandemic crisis tapering in some regions. The proposal was made by India's External Affairs MinisterS Jaishankar. He suggested that "voluntary G20 Principles on Coordinated Cross-Border Movement of People" be developed with three main elements — standards on testing procedures and universal acceptability of test results, quarantine procedures and movement and transit protocols.

This is a wonderful suggestion as it is important to open up global halted globally with countries fearing the spread of COVID pandemic. Notably, India has taken several steps during the pandemic to facilitate repatriation of its people stranded in different countries. Known as the Vande Bharat Mission, under this plan 'travel bubbles' were created for travel of foreign citizens stranded in India as well as Indian citizens abroad. Under the mission, India successfully brought back 13 lakh stranded Indians abroad. Further as part of the repatriation program, India also announced the formation of travel air bubbles with those countries that have high Indian diaspora.

The Government of India has also exhorted governments around the world to see to it that the interests of foreign students are protected, and stranded seafarers travel back to their countries.

A much-needed suggestion by the Indian government that if adopted would ease traveling during these unprecedented times.

– Farha Ahmed
Noida

Make Critical Standards Mandatory

There is no doubt that the minerals produced through mining have been providing the basics for human civilization. However, the legacy of the 20th century has been the production of billions of tonnes of mine waste and mill tailings.

IN CERTAIN AREAS that have critical impact on our environment, standards must be made mandatory. Left to voluntary adoption, these standards are no more than paper tigers. For example, new global industry standards for dealing with mine waste cannot be enforced as they are voluntary. Critics say that they also fail to meet set measurable standards and will be ineffectual in protecting communities, workers or the environment from disasters. The global industry standard of tailings management is aimed at improving management of mine waste. The standards have ambition of zero harm to people and the environment. However, since the standard is voluntary, in the absence of implementation or enforcement mechanisms or penalties for failure of companies to meet the standard, it will fail in its intended purpose of stopping mine waste disasters.

– Ragini Mathur
Faridabad

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NABH AYUSH ENTRY LEVEL CERTIFICATION PROGRAM
TAKING QUALITY TO OUR ROOTS

NABH
is a constituent board of Quality Council of India (QCI).
It is playing a pivotal role at the National level in propagation, adoption and adherence to healthcare quality standards in AYUSH healthcare delivery systems.

With an objective to bring more light to AYUSH related treatments, the Government of India in 2014, formed the Ministry of AYUSH and consequently brought in the National Accreditation Board for Hospitals & Healthcare Providers (NABH) to start implementing quality healthcare standards for hospitals providing AYUSH treatments as well.

In the recent years, there has been a paradigm shift from allopathy system to traditional healthcare. To support this trend, health insurers have started offering AYUSH treatment covers as part of their health insurance policies. NABH Ayush Entry Level Certification Standards provide an objective system of empanelment by insurance and other third parties. These standards also address the need for quality control and quality monitoring in AYUSH healthcare as required by the Pradhan Mantri Jan Arogya Yojana (PM-JAY) under the Ayushman Bharat Scheme.

NABH AYUSH Entry Level Certification standards are easily downloadable from NABH website.

www.nabh.co   nabh@nabh.co

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