

# WORLD STANDARDS DAY

<http://www.iso.org/iso/world-standards-day2015>

14<sup>th</sup> OCT. 2015

## SOURCES ON STANDARDS AND SPECIFICATIONS

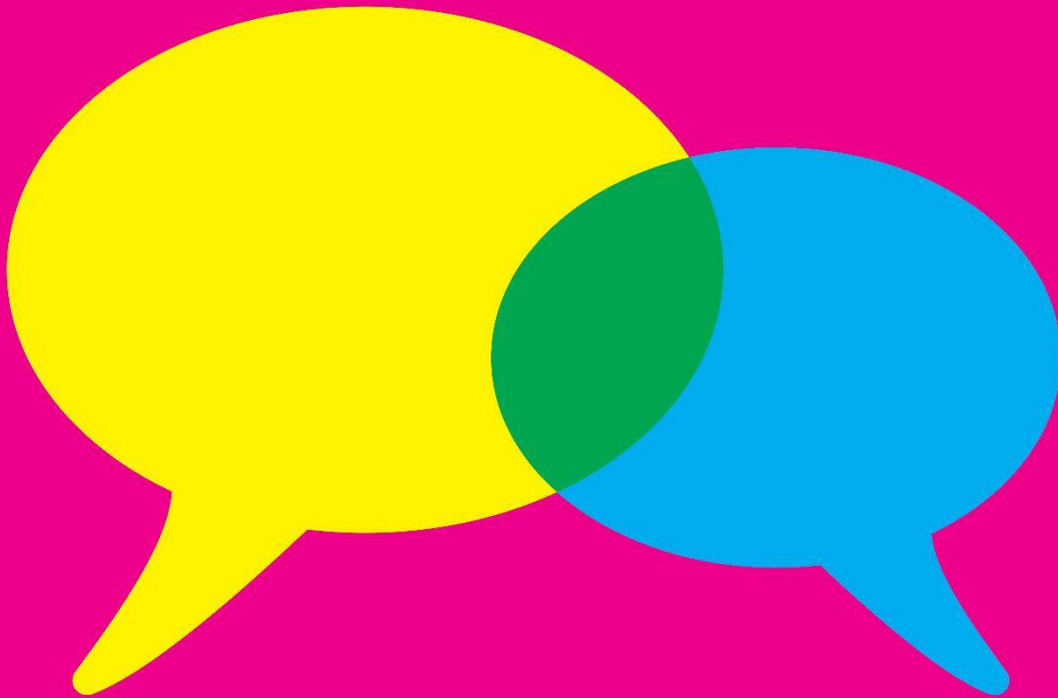
*(A Selected Resources)*

Compiled by  
Library

Indian Institute of Technology Gandhinagar

World**Standards**Day

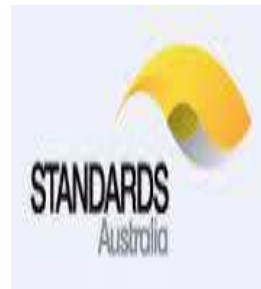
14 October 2015



**Standards**  
The world's **common** language



format A2 (ISO 216)



## WHAT IS STANDARDS?

A standard is a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose. [International Organization for Standardization \(ISO\)](#).

Standards and specifications provide guidance and instruction on how goods and services are to be designed, constructed, manufactured, handled, conducted or tested.

## STANDARDS ARE BROUGHT AT DIFFERENT LEVELS:

- **International standards:** Developed by ISO and IEC (and others) and are used directly or adopted by other standardizing bodies.
- **Regional standards:** Prepared for use in a specific geopolitical region, the best known is the European Union (EU) where EN standards are used. Joint Australian/New Zealand standards can also be considered regional standards since they apply equally in both countries.
- **National standards:** Prepared, adopted or approved by a national standards body or other body accredited to produce national standards. For example, Indian Standards, British Standards, Australian Standards

## TYPES OF STANDARDS

Different types of standards that exist include: (Kari A. Kozak, 2014)

- Category, type, dimension, structure, equipment, quality, grade, component, performance, durability, or safety
- Methods of manufacturing, methods of designing, methods of drawing, methods of using, or methods of operation of safety condition of production
- Methods of testing, analyzing, appraising, verifying, or measuring
- Terms, abbreviations, symbols, marks, preferred numbers, or units
- Design, methods of execution, or safety conditions

## WHO CREATES STANDARDS?

- Standards are created by a wide variety of organizations
- Professional societies, organization, such as the IEEE, ASME, ASTM
- Industrial or manufacturing associations
- Governmental agencies or bodies e.g. Bureau of Indian Standards (BIS)
- Companies
- International bodies e.g. International Standard Organization (ISO), International Electrotechnical Association (IEC)
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## STANDARDS DEVELOPMENT LIFECYCLE



Source: Standards Development Lifecycle ( <https://standards.ieee.org/develop/>)

### ONLINE DATABASES (FREE)

- [NFPA Open Access Codes and Standards](#)  
National Fire Protection Association (NFPA) is provides codes and standards for online review to the public for free of cost.
- [OASIS Open Standards](#)  
OASIS open standards provides the worldwide standards for security, Cloud computing, Internet of Things, the Smart Grid, content technologies, emergency management, eGovernment, and many other areas.
- [Public Safety Standards of the Republic of India](#)  
Public.resource.org is open standards & codes on public safety, world trade and world peace on a noncommercial basis.

### STANDARD DATABASE (PAID)

- [AASHTO Standards](#)  
AASHTO Standards are provides the specifications, test protocols and guidelines which are used in highway design and construction process.

- [ACI Standards](#)

ACI Standards are provides the widest input and highest overall quality assurance for a document. ACI standardization process is approved by the American National Standards Institute (ANSI).

- [ASCE Standards](#)

ASCE Standards provide technical guidelines for promoting safety, reliability, productivity, and efficiency in civil engineering.

- [ASME Standards](#)

ASME standards provides access to over 600 codes and standards in a breadth of topics, fasteners, plumbing fixture, elevators, pipelines, and power plant system and components.

- [ASTM Standards](#)

ASTM standards is covers 13,000+ standards are related to test methods, specifications, accepted practice and terminology for materials, products, systems and services.

- [AWS Standards](#)

American Welding Society (AWS) standards are provides access to over 350 standards related to welding practices and procedures for construction and aerospace covering structural steel.

- [ICC Standards](#)

International Code Council (ICC) is publishes codes and standards, which are promoting safety and fire prevention in commercial government and residential structures.

- [IEC Standards](#)

International Electrotechnical Commission develops international standards for all electrical, electronic and related technologies. IEC cooperates closely with the ISO and ITU in additional IEEE and other authorities.

- [IEEE Standards](#)

IEEE provides access to over 1300 global quality standards on power, energy, information technology, telecommunication transportation and nanotechnology.

- [Indian Standards \(BIS\)](#)

BIS is the National Standards body of India, Library subscribes standards from Civil Engineering Division (CED).

- [ISO standards](#)

An ISO international standard has over 19,500 international standards related aspects of technology and business. ISO standards ensure that product and services are safe, reliable and of good quality.

- [SAE Standards](#)

SAE International provides access to over 10000 SAE standards related to safety, quality and effectiveness of products and services across the mobility in engineering industry.

## **COMMERCIAL PROVIDERS (UNION STANDARDS)**

- [Document Center](#)

Document Center is provides the national and international standards from the AAMI, ANSI, ASTM, ASME, BSI, DIN, IEC, IEEE, ISO, JEDEC, SAE, and TAPPI others standards authority bodies.

- [IHS Standards](#)

IHS Standards is provides the most comprehensive source of technical industry standards and government and military standards. Its covers standards form 120 countries and 460 technical societies around the world.

- [Techstreet](#)

Techstreet is standard database provided by the Thomson Reuters. It's provides access to over 500,000 codes, standards and technical documents from nearly 350 world leading authorities.

## **SEARCH STANDARDS**

- [BIS Standard Search Portal](#)

BIS Standard portal is search portal of BIS standards. It provides access to over 1, 8000 Indian Standards (IS) and Priced Publications (PP).

- [eStandards Store](#)

eStandards Store is provides the standards search facilities for ANSI, ISO, IEC, ASTM and other standards by the keyword or document numbers.

- [ETSI Standards Search](#)

Search the European Telecommunications Standards Institute standards, specifications and reports using by document numbers, keywords, or part of a title etc...

- [National Resource for Global Standards \(NSSN\)](#)

It is global standards search engine that provides access to over 300,000 standard records from the global standard bodies.

- [Search European Standards](#)

CEN community provides the search portal of access the standards in European Committee for Standardization.

## INDIAN STANDARD BODIES

- [Automotive Industry Standards \(AIS\)](#)

ARAI has been providing various services to the Indian Automotive Industry in the areas of design & development.

- [Bureau of Indian Standards \(BIS\)](#)

BIS is the national standards body of India working under the Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India. It provides standards closely connected with quality goods, safe, reliable and other technology related.

- [International Association of Plumbing and Mechanical Officials \(IAPMO\)](#)

IAPMO industry standards have traditionally focused primarily on plumbing. It has developed standards for solar heating systems and components, mechanical products.

- [Telecommunications Standards Development Society, India \(ISDSI\)](#)

Telecommunications Standards Development Society, India (ISDSI) is aims to developing the promoting standards and specific requirements, which are contributing the international standards in field of telecommunication.

## NATIONAL STANDARDS BODIES

- [ANSI, Unites States](#)

American National Standards Institute (ANSI) is the national standard body of United States. It's promotes the use of U. S. standards in global level.

- [British Standards Institution \(BSI\), United Kingdom](#)

British Standards Institution (BSI) is the national standards organization of the UK, objective of this is to publish and promoting the standards in both domestically and internationally.

- [Danish Standards, Denmark](#)

Danish Standards is the officially approved national standardization organization in Denmark. Its offers standardization services in the range from development to marketing the standards in international level.

- [German Institute for Standardization \(DIN\), Germany](#)

German Institute for Standardization is the German National organization for standards. It's develops quality assurance, environmental protection, safety and communication in industry, technology, science, and government, as well as the public domain.



- [Instituto Português da Qualidade \(IPQ\), Portugal](#)

IPQ is the national standard organization of Portugal. It's a representative body of Portuguese's in the quality field at international level.

- [Japanese Industrial Standards \(JISC\), Japan](#)

Japanese Industrial Standards is national standard body of Japan. It's consists the many national committees and plays central role in standardization activities in Japan.

- [Netherlands Standardization Institute \(NSI\), Netherland](#)

NEN is a national standards organization of the Netherland. NEN is operates as the central point in the Netherlands for information on standards and standards developments.

- [SPRING SG, Singapore](#)

SPRING is the national body for standards and accreditation. It manages the national standardization programme and helps companies and industry to meet international standards and conformity requirements in Singapore.

- [Standardization Administration of the People's Republic of China \(SAC\), China](#)

Standardization Administration of the People's Republic of China (SAC) is national standard organization of China. It's collaborated with the ISO, IEC and other international and regional standards organizations.

- [Standards Australia \(SA\), Australia](#)

Standards Australia (SA) is the standard organization of Australia. Standards Australia develops internationally aligned standards (AS) and participates in standards-related activities.

- [Standards Council of Canada \(SCC\), Canada](#)

SCC is the federal standard organization in Canada. It's promotes efficient and effective voluntary standardization in Canada. It's facilitating the development and use of national and international standards services.

- [Standards New Zealand \(SNZ\), New Zealand](#)

Standards New Zealand is the national standards body. Its aim is contribute to the development and implementation of standards solution in New Zealand.

## **INTERNATIONAL STANDARDS ORGANIZATIONS**

- [European Telecommunications Standards Institute \(ETSI\)](#)

European Telecommunications Standards Institute (ETSI) is the standard organization of telecommunication industry in Europe Countries. It has officially responsible for the standardization of Information and Communication Technologies (ICT) within Europe. ETSI has over 750 members from the 64 countries.

- [International Electrotechnical Commission \(IEC\)](#)

International Electrotechnical Commission (IEC) is the international standards body for the electrical, electronic and related technologies. IEC provides a platform to companies, industries and governments for meeting, discussing and developing the international standards.

- [International Organization for Standardization \(ISO\)](#)

International Organization for Standardization (ISO) is the international standard organizations. It has 130 countries members around the world. It's promoting and developing the standards and related activities in worldwide level.

- [International Telecommunications Union \(ITU\)](#)

International Telecommunication Union (ITU) is an international organization of telecommunication. ITU responsible is to production of the high-quality, technical, telecommunication standards and related documents. ITU has 191 Member States and more than 700 Sector Members and Associates around the world.

## **PROFESSIONAL STANDARDS BODIES**

- [Aluminum Association \(AA\)](#)

Aluminum Association is developing and maintaining the industrial technical standards for aluminum production.

- [American Association of State and Highway Transportation Officials \(AASHTO\)](#)

AASHTO is provides leading source and technical information on design, construction and maintenance of highways and other transportation facilities.

- [American Concrete Institute \(ACI\)](#)

American Concrete Institute (ACI) is a professional standard developing organizations. The ACI standardization process is approved by the American National Standards Institute (ANSI).

- [American Institute of Steel Construction \(AISC\)](#)

American Institute of Steel Construction (AISC) is professional association of structural steel design community. It's supporting and improving the ability of the structural steel industries.

- [American Society for Testing & Materials \(ASTM\)](#)

American Society for Testing & Materials (ASTM) is an international standards organization. It's developed and publishes technical standards for a wide range of materials, products, systems and services.

- [American Society of Civil Engineers \(ASCE\)](#)

American Society of Civil Engineers (ASCE) is professional body represent members of the civil engineering professional in world. It represents more than 146,000 members of the civil engineering professions around 174 countries.

- [American Society of Mechanical Engineers \(ASME\)](#)

American Society of Mechanical Engineers (ASME) is a professional association of mechanical engineers in the world. It represents the more than 140,000 members from 151 countries. ASME enables collaboration, knowledge sharing, career enrichment and skills development across all members.

- [ASHRAE](#)

American Society of Heating, Refrigerating and Air conditioning Engineers is the global professional body. It has more than 50,000 members form the worldwide. ASHRAE is focus on building systems, energy efficiency, indoor -air quality, refrigeration and sustainability.

- [Institute of Electrical & Electronics Engineers \(IEEE\)](#)

Institute of Electrical & Electronics Engineers (IEEE) is world largest professional association dedicated to the Electrical Engineers. It has more than 400,000 members from the worldwide.

- [National Fire Protection Association \(NFPA\)](#)

National Fire Protection Association (NFPA) is the trade association in United States. It has 65,000 members around the world. It's world leading advocate of fire prevention and an authoritative source on public safety.

- [Society of Automotive Engineers \(SAE\)](#)

SAE International [Society of Automotive Engineers] is a global association of Automotive Engineers and related industries. SAE international has the more than 138,000 members around the world. It publishes more than 2,000 technical standards for passenger cars and other road going vehicles.

- [Telecommunications Industries Association](#)

Telecommunications Industry Association (TIA) is the leading trade association representing the global information and communications technology (ICT) industries.

- [Tubular Exchanger Manufacturers Association \(TEMA\)](#)

Tubular Exchanger Manufacturers Association (TEMA) is trade association of leading manufacturers of shell and tube heat exchangers.

#### **FURTHER READING ABOUT STANDARDS**

- *About standards.* (n.d.). BSI Education. Retrieved from <http://www.bsieducation.org/Education/about/default.shtml>
- *Finding engineering standards.* (n.d.). The University of Texas at Austin. Retrieved from <http://www.lib.utexas.edu/engin/usstds.html>
- *Standards, specifications, test methods, & building codes: selected resources.* (2015). University at Buffalo. Retrieved from <http://libweb1.lib.buffalo.edu/guide/guide.asp?id=139>
- *Through history with standards.* (n.d.). ANSI- Consumer Affairs. Retrieved from [http://www.ansi.org/consumer\\_affairs/history\\_standards.aspx?menuid=5](http://www.ansi.org/consumer_affairs/history_standards.aspx?menuid=5)