



LABORATORY TESTING SERVICES

The Trinidad and Tobago Bureau of Standards Laboratory Services Division is a full service analytical testing laboratory, which has been providing microbiology, material, chemical, textile, electrical, and environmental services since 1974.

Our experienced staff of technical professionals and our continuously expanding roster of analytical instrumentation are increasingly called upon by clients to solve problems, answer questions, and respond to a wide spectrum of challenges from their customers, partners, and internal operations.

We can test your products to ensure their safety and quality, and help you reduce downtime of non-conforming products. We can also help you set, meet, maintain and evolve quality, safety, and performance standards for your product lines, operations and supply chains.

For additional information on our Laboratory Services please contact: (868) 662-8827, Ext. 153 or 204
Email: lab.services@ttbs.org.tt or visit us at www.ttbs.org.tt



CERTIFICATION SERVICES

The Certification Division of TTBS provides CONFIDENCE. Confidence that products are safe and perform as expected, that organizations will continually to provide satisfactory products and services while protecting the safety of their workers and the environment and that hotels and

hotel rooms will meet your expectations in a safe and secure manner, just to name a few. This confidence is provided through our certification programmes which we have been offering for more than 20 years.

We currently offer certification services for the following areas Quality Management Systems (to ISO 9001); Environmental Management Systems (to ISO 14001), Occupational Health & Safety Systems (to OHSAS 18001), Products (to National and International Product Standards) and Tourism Accommodations and Services (to National Standards). We will be adding Food Safety Systems to our portfolio soon.

Our portfolio of clients involve diverse industries and include names such as Trinidad Cement Limited (ISO 9001 & ISO 14001), Readymix (West Indies) Limited (ISO 9001), BHP Billiton T&T (ISO 14001 & OHSAS 18001), Ansa McAl Chemicals (Product Certification of Liquid Chlorine Bleach), the Tourism Development Company (TTTIC - under which organizations such as Courtyard by Marriott, Hyatt Regency Trinidad and Capital Plaza are certified).

For more information please call 662 8827 ext 169 and talk to one of our representatives or e-mail certification@ttbs.org.tt.



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Website: www.ttbs.org.tt



Trinidad and Tobago Laboratory Accreditation Service

THE TRINIDAD AND TOBAGO LABORATORY ACCREDITATION SERVICE (TTLABS)

Accreditation is universally recognized to be a strong contributing element to the integrity of any quality infrastructure. It is regarded as the pinnacle of the overall quality infrastructure through its assurance of the technical competence of conformity assessment bodies.

Accreditation provides benefits not only to business organizations, regulators and global trading partners but also to the ordinary man on the street who needs the assurance of the safety, reliability and quality of products and services utilized. TTLABS provides accreditation services for conformity assessment bodies according to the requirements of the International Standards: ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories" and ISO 15189 "Medical laboratories-Particular requirements for quality and competence". Compliance with these standards ensures reliable, quality assessments of products and services.

List of TTLABS accredited laboratories
Analytical Technologies Ltd
Angostura Laboratories Ltd
Environmental Sciences Ltd
Trinidad Cement Ltd

For additional information on our Laboratory Accreditation please contact: 662-8827, Ext 171 or Email: lab.accreditation@ttbs.org.tt or visit us at www.ttbs.org.tt

Our Services

- **Standards Development**
- **Inspection**
Goods covered by National Compulsory Standards:
- Automotive Tyres - Textile Products and Footwear - Appliances and Safety Products - Pre-packaged and Construction Goods
- **Laboratory Testing Services for Quality**
Testing: - Electrical - Fibre / Footwear - Materials - Chemical
- **Metrology for Measurement Quality**
Inspection and verification of measuring devices, pre-packaged goods and calibration of measuring instruments
- **Product/System Certification include:**
Quality and Environmental Management Systems (ISO 9001, ISO 14001), Travel and Tourism Industry – (TTTIC) and Quality and Environmental Management for SME's (Q&EMS-SMEs)
- **Laboratory Accreditation**
- **Standards Information**

Training and Consultancy in Quality Infrastructure through wholly-owned subsidiary, Premier Quality Services Limited (PQSL) in:
ISO 9001 and 14001, Laboratory Practices, Calibration, Health and Safety and affiliated professional programmes.



METROLOGY SERVICES

Metrology is defined as the science of measurement. In reality it is much more meaningful and important to modern life than that definition would suggest. In the past the main reflection of metrology activity in society

was weights and measures and the inspection of measurement devices used in day to day trade.

Metrology is important to every area that has measurement of a value or quantity as part of its make up. For example the major industries in Trinidad and Tobago are the production of oil and natural gas. The volume of both these fluids produced and exported must be measured for taxation and royalty purposes. The measurement of gas quantities also requires the determination of pressures and both oil and gas require the measurement of temperature. The accuracy of all of these will determine the efficiency with which our revenues will be accrued.

The Division provides services in Scientific, Industrial and Legal Metrology. The Division comprises the Standards Laboratory, the Calibration Laboratory and the Legal Metrology Inspectorate. The Standards Laboratory is responsible for storing and maintaining the national measurement standards. The Calibration Laboratory conducts commercial calibrations for industry. The Legal Metrology Inspectorate is responsible for the implementation of the provisions of the Metrology Act in the areas of commerce, trade, safety and taxation.

For additional information on our Metrology Services please contact: (868) 662-8827, Ext. 156, 164 or 214
Email: metrology@ttbs.org.tt or visit us at www.ttbs.org.tt



TRINIDAD AND TOBAGO BUREAU OF STANDARDS



Dr. Puran Bridgemohan
Chairman, TTBS

Chairman's Message

"Advancing quality towards National Development"

The Trinidad and Tobago Bureau of Standards (TTBS) a statutory agency under the Ministry of Trade, Industry, Investment and Communication (MTIIC) was established in July of 1974 as the government agency to promote the development and application of standards as well as conformity

assessment processes.

Throughout the years TTBS has sought to consistently serve the needs of the nation in accordance with its mandate. At this the 40th Anniversary of TTBS the organization is reaffirming its commitment to safeguard public health and safety, promote



Theodore Reddock
Executive Director (Ag.)

Executive Director's Message

National Quality

The world is a dynamic place and over the last 40 years the Trinidad and Tobago Bureau of Standards has been adapting to the changes in the local and global environment.

Negative list and import substitution

In the 1970s the country's focus was on import substitution and therefore local manufacturers were protected and the focus of national quality was ensuring goods and services were not overly shoddy for the local consumers. Some imports were restricted and tariffs and duties were levied to make others less competitive to locally produced goods. TTBS was established in 1974 and started the activity of writing standards, performing inspections of goods and developing quality control systems in local organisations.

Trinidad and Tobago Bureau of Standards celebrates its 40th Anniversary

the socio-economic and industrial efficiency and competitiveness and contribute to the protection of the environment through provision and continual improvement of its services.

This year we continue the discourse commenced in 2013 on the role of the national quality infrastructure (NQI) which supports all three facets of economic development, social development and environmental protection using the core disciplines of Standards Development, Metrology (Measurement), Accreditation and Conformity Assessment. Implementing an NQI will increase quality awareness in all the major sectors of the society and economy, thus establishing a platform for national manufacturers to improve quality for safety and performance, leading to greater productivity and competitiveness.

TTBS is also intent on the implementation of the Metrology Act and the establishment of modern measurement practices in the important commercial, industrial and social activities and processes the require quantification and support for the national quality effort.

Quality is a critical component of all modern processes. In the past the role of the TTBS has been focused on the output of industry and parts of the service sector. For the future it is important for TTBS to ensure that the Quality Infrastructure; the application of

standards with the appropriate systems of Conformity Assessment; Inspection, Testing and Certification performed by accredited bodies becomes a reality for all sectors. Cooperation, collaboration and alignment with other state, national bodies and international entities to improve the ability of the country to compete and participate globally while providing for its citizenry and environment locally will continue to be the guiding philosophy of the TTBS

It is my esteemed honor to acknowledge the work of the past Boards, management, and committed staff members who piloted the TTBS over the last 40 years through its early development and who have provided a solid foundation for the exciting and challenging road ahead.

I feel privileged to head an organization as diverse as we are and can also be proud of its accomplishments. It must be acknowledged that it is the talent, strength and resilience of our people that has created the foundation on which we continue to excel. I am extremely confident that the TTBS will continue to be propelled by the energy and innovation of our people. TTBS continues to play an integral role as it endeavours to create positive national impact uniting standards with conformity assessment and promoting quality consciousness to help achieve a stable economy.

requirements of our own society; ever increasing in knowledge and sophistication requires a new response.

The new style of Trade agreements employ non-tariff barriers for control and managing them requires the ability to handle the technical issues on which these trade matters are predicated. Technical Barriers to trade are usually associated with Inspection, Testing or Certification, all of which are quality certifying mechanisms. International recognition of local capabilities in these areas primarily through Accreditation is needed to adequately support our exporters and reassure our consumers.

A national system for Quality

The Metrology Act is also essential as the measurement platform for quality. Once the Act is proclaimed the National Metrology Institute can provide internationally traceable measurement support for all the national quality processes.

All in all the future points to an integrated national system where all processes have the quality already built in. TTBS is dedicated to this vision in this our 40th year of existence and beyond.



THE HISTORY of The Bureau

First Director
Dr. Michael Lines

The Trinidad and Tobago Bureau of Standards was established to develop, promote and enforce standards in order to improve the quality and performance of goods produced or used in Trinidad and Tobago. After forty years, it has made some significant strides towards fulfilling its mandate.

ESTABLISHMENT

In March 1973, the Ministry of Industry and Commerce appointed the first Standards Council to oversee the setting up of the Bureau and its operations under the leadership of University of the West Indies Lecturer, Mr. George Sammy, the first Chairman of this Council, who served until 1976.

Established by the Standards Act No. 38 of 1972, the Bureau started operations on July 8, 1974 with a staff of twelve persons. Its first office was located in Salvatori Building, Port of Spain, where it occupied rooms 206 and 208 and later in 1975 it moved to room 318.



1974 STAFF

Directors who served

Dr. Michael Lines (1976-1988)
He was the Bureau's first Director and worked from 1974 until his retirement in 1988. He was British-born and became a naturalized citizen of Trinidad and Tobago in 1964.

Gene Hutchinson (1988-1998)
Parbatee Narine-Chang (1998-1999)
Lawford Duprey (1999-2004)
Prem Nandal (2004-2007)
Deryck Omar (2007-2013)

First declared Standards

TTBS declared its first set of Standards in November 1976:

TTS 21 40 300 Part I
Methods for the Quantitative Analysis of fibre mixture-binary mixtures containing polyester;

TTS 21 40 000
Glossary of Terms relating to the conditioning and testing of textiles;

TTS 21 10 500 Part 3 - Requirements for Labelling - Labelling of garments

TTS 21 10 500 Part 2
Requirements for Labelling - Labelling of Pre-packaged goods;

TTS 21 10 500 Part 1
Requirements for Labelling - General Principles

By the end of 1976, the Bureau had produced 463 local standards.

First Employees

The Bureau on its establishment had a complement of five technical officers:
Dr. Michael Lines, Director
Mr. Gene Hutchinson, Standards Officer II
Mr. Arnold Harmanan, Standards Officer II
Mr. Bertrand Harmanan, Standards Officer I
Mr. Simeon Sandiford, Standards Officer I

The technical officers were supported by seven administrative staff members:
Mrs. Yvonne Bobb-Jackson, Corporate Secretary
Ms. Glenna Mc Kensie, Secretary to Director
Ms. Annette Rampersad, Clerk I
Ms. Cynthia Greenaway, Secretary
Ms. Merlyn Jones, Accounting Assistant
Ms. Esther Telesford, Secretary
Ms. Devi Ramnarine, Secretary

These formed the nucleus of the library's Standards collection.

FIRST STANDARD SOLD

In 1977, the Bureau sold its first National Standard - Labelling of Garments - to Mr. Geoffrey Rostant, Manager Caribbean Beachwear Ltd, Francis Street, Curepe.

RELOCATION

The Bureau outgrew its accommodation at Salvatori as its services expanded. So, in 1983, it moved to the Trincity Industrial Estate, Macoya, Tunapuna, its present location. At this location, the Bureau expanded its scope of services to include laboratory testing in areas such as chemical, agricultural, electrical and fibre products,

In those early days, the Bureau provided services in standards writing, training in quality control and consumer education.

NEWSLETTER

To promote public awareness, the Bureau published its first newsletter, in September 1973. The newsletter was designed to educate the public on matters related to standards and standards development. It was, later called "The Standard".

LIBRARY

To promote enhanced public awareness of standards and standards development, the Bureau opened its Reference Library to the public in 1975. The library was located at Room 309, Salvatori Building.

Two years later, in May 1977, the Bureau received its first full set of standards from the British Standards Institution (BSI) and later a set of Australian Standards.

NEW INSPECTIONS DIVISION

To ensure conformity to standards, the Bureau established a new Division in 1993 to provide greater consumer protection. This Division is responsible for inspecting imported goods and conducting surveillance visits at retail outlets.

NEW STANDARDS ACT

As, the Bureau's role expanded over time to meet the changing needs of the society, the old Act was no longer relevant. So, in July 1997, a new Standards Act No. 18 of 1997 was enacted replacing the previous Act to enable the Bureau to fulfill its expanded mandate.

NEW TRAINING SUBSIDIARY

To help encourage greater use of standards in the business community, the Bureau formed its own subsidiary company- Premier Quality Services Limited (PQSL) in 1999. PQSL provides training in quality systems- ISO 9001/14001, calibrations and laboratory practice. Its facilities, auditorium, training rooms and dining rooms are also available for rental.

METROLOGY ACT 2004

In 2004, the Government delegated responsibility to the Bureau to implement of the Metrology Act No.18 2004, thereby expanding the scope of its mandate.

ISO 9001 CERTIFICATION

Gaining ISO9001:2000 certification in 2005 was a landmark achievement which helped to improve the Bureau's overall efficiency and effectiveness in fulfilling its mandate.

Indeed, the Bureau has good reasons to be happy as it commemorates its 40th Anniversary on July 8, 2014.

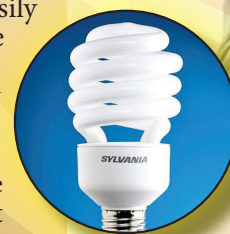
TTBS' CURRENT BOARD OF DIRECTORS

Dr. Puran Bridgemohan (Chairman),
Ms. Allanna Rivas (Vice Chairman),
Mr. Valmiki Balbirsingh
Mr. Avinash Seegobin, **Mr. Dexter Hayden Daniel**,
Mr. Kuarlal Rampersad,
Ms. Trudy Lewis
Mr. Hadya Bassarath, **Ms. Attala Maharaj**,
Ms. Sareeta Artee Bridgelal,
Ms. Diane Bishop, **Mr. Farz Khan**

Helping To Advance Quality In Everyday Life

We all take for granted that any flash drive will fit into any USB port on any computer or that we generally can withdraw cash from different ABMs using the same debit card.

We also expect that a compact fluorescent lamp (CFL) will normally screw right in to any lamp base or that a male plug will fit easily into the wall outlet. If in attempting any one of these simple, everyday activities we meet the slightest mismatch, we will immediately recognize that "something is wrong".



In today's world, we expect fast, efficient communications, we demand compatibility between electronic appliances, and we want our work tools, our

is built on standards and quality; this is true whether we are looking at the mighty USA, Japan or other emerging Asian countries. Trinidad and Tobago is no different and can benefit significantly from a greater attention to standards and quality. In manufacturing, better quality translates into greater market penetration and competitiveness. For consumers, standards protect us from health and safety risks due to unsafe, substandard and cheap imports.

In Trinidad and Tobago, we have approximately 400 national standards, most of which were adapted from widely accepted international or foreign standards.

National standards in some key areas, include:

- Construction e.g. building blocks, cement, steel bars, purlins, roof sheeting, PVC pipes;
- Electrical e.g. cables, CFLs, circuit breakers, electrical appliances,
- Petroleum e.g. gasoline, diesel, LPG, CNG,
- Motor Vehicles e.g. vehicle emission, engine oil, tyres,
- Environment e.g. environmental management, GHG quantification, effluent,
- Health and Safety e.g. safety boots, eye and face protection, helmets, risk assessment, work at height, contractor safety management,
- Tourism - hotels, bed and breakfast, motor vehicle rental, recreational diving, tour guides,
- Agriculture e.g. fertilizer packaging, pesticides labelling
- Consumer Products e.g. safety matches, toilet tissue, garbage bags, chlorine bleach, dishwashing detergents, plastic chairs, plastic water tanks, textiles.

In developing national standards, the Trinidad and Tobago Bureau of Standards (TTBS) has been partnering with industry, regulatory agencies, consumers and other stakeholders to identify the need for standards in key areas.

More recently, we have been involved in developing national standards for:

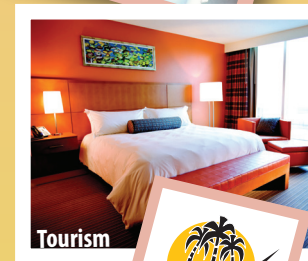
- Solar water heaters and photovoltaic systems
- Refrigerant containers (labelling)
- Commercial diving operations
- Effluent water quality relating to commercial/industrial operations
- Enhanced accessibility to buildings for the disabled
- Funeral homes services
- Pest control operators



Label requirements



Health and Safety



Tourism



Construction

In addition to the development of standards, TTBS is also engaged in enforcement activities. Over the last forty years, TTBS has been charged with ensuring the safety and quality of a wide array of goods reaching local consumers.

TTBS enforcement arm, the Implementation Division, plays a critical role in this task and continues to evolve to meet these demands.

With the launch of TTBizLink and the computerisation of major import processes, the Division has developed the Automated Information Management System (AIMS) to facilitate the transition from paper-based to electronic processing of documents - saving its clients time and money.

TTBS enforcement arm is responsible for day-to-day assessment and inspection of imported and domestically manufactured goods, to ensure that these conform to national compulsory standards inclusive of labelling and safety standards.

Apart from these routine inspections, the Division also engages in a number of other activities to bolster the TTBS's presence in the trade and industry sectors and to increase consumer confidence in the safety and quality of goods. These activities include continuous surveillance of high-risk electronics, seasonal and holiday decorative products, electric fans, liquid chlorine bleach, and clothing offered at trade fairs.

As TTBS turns forty years, we look forward to making greater strides in the development and enforcement of the right standards to propel our country further along the road to greater competitiveness and sustainability.

We can only do so, however, as we successfully engage all our partners in this never-ending pursuit of excellence in all areas of the economy. Thank you for joining with us and we look forward to working together to advance quality for the benefit of the entire nation.



TRINIDAD AND TOBAGO
BUREAU OF STANDARDS

Advancing
Quality