

## TABLE OF CONTENT

Introduction .....	
Course Management .....	
History of the Institution .....	
Functions of BSTI .....	
Laws Governing Activities of BSTI .....	
Organs of BSTI .....	

**INTRODUCTION**

BSTI stands for Bangladesh Standards and Testing Institution. It is emerged in 1985 through an ordinance (Ordinance XXXVII) with the merger of Bangladesh Standards Institution and the Central Testing laboratory. Right now BSTI is the only national standards body of Bangladesh playing vital role in developing and promoting standards of qualities and dimensions.

## **COURSE MANAGEMENT**

An orientation course of 10 days duration was arranged for the newly appointed 10 employees so that they can get an overall idea about various functions and procedures of different types of activities of all the wings of BSTI. The newly appointed officers were divided into two groups. The course was started with a briefing session on November 11, 2009 and was ended with an ending session on November 24, 2009. During these 10 days every group spent two days in a wing.

On November 11, 2009 a briefing session was taken in the council meeting room of the Administration room. In the absence of Director general of BSTI, Md. Ajmol Hossain , The opening lecture was presented by A.N.M Asaduzzaman, Assistant Director of Administration Wing followed by a brief idea about BSTI.

## **FOUNDATION OF BSTI**

The establishment of BSTI started with the creation of Central Testing Laboratory (CTL) in Dhaka in 1956. Chambers of commerce and industries played the key responsibility for the establishment. In 1963 Dhaka office of the Standards Institution was established, which later become the headquarter of the Bangladesh Standards Institution in 1971. Bangladesh Standards and Testing Institution came into being in 1985 through an ordinance (Ordinance XXXVII of 1985) with the merger of Bangladesh Standards Institution and the Central Testing Laboratories. Later on, in 1995 Department of Agriculture Grading and Marketing also merged with BSTI. The BSTI is a body corporate and its concerned ministry is the Ministry of Industries.

## **FUNCTIONS OF BSTI**

The functions of the institute are:

- \* To set up Bangladesh Standards of quality and dimensions and prepare and promote the general adoption of standards on national and international basis relating to materials, commodities, structures, practices and operations and, from time to time, to withdraw, revise, alter and amend the same.
- \* To consider and recommend to the Government Bangladesh Standards for the measurement of length, weight mass, volume, and, energy.
- \* To promote standardization, quality control, metrology and simplification in industry and commerce.
- \* To secure compliance with the Bangladesh Standards adopted by the Institution by the producers and users;
- \* To implement Bangladesh Standards through the administration of a national certification mark scheme or inspection of goods or both;
- \* To provide or arrange facilities for examination, testing and inspection of commodities, processes and practices for any investigation, research or promotion of export that may be necessary and to issue test reports;
- \* To certify the quality of commodities, materials, produces, products and other things including food materials, whether for local consumption, export or import
- \* To coordinate the efforts of producers and users for the improvement of materials, products, code of practice, appliances, processes and methods, so as to eliminate the national waste of material and time involved in the production of an unnecessary variety of patterns and sizes of articles for one and the same purpose;
- \* To establish and publish, in such manner as may be prescribed, the Bangladesh Standard Specifications in relation to any article or process or code of practice;
- \* To recognize, adopt or endorse as a Bangladesh Standard, in such manner as may be prescribed, any standard established by any other Institution in Bangladesh or in any foreign country, or by international organizations in relation to any article or process;
- \* To specify a Standard Mark to be called the Bangladesh Standards and Testing Institution Certification Mark which shall be of such design and contain such particulars as may be prescribed to represent a particular Bangladesh Standard;

- \* To grant, renew, reject, suspend or cancel, in such manner as may be prescribed, a license for the use of Standard Mark;
- \* To make such inspection and take such samples of any material or substance as may be necessary to see Whether any article or process in relation to which the Standard Mark has been used or proposed to be used conforms to the Bangladesh Standard or whether the Standard Mark has been improperly used in relation to any, article or process with or without license;
- \* To utilize with the permission of the owners, the services of laboratories other than those maintained by the Institution and approve such laboratories for the purpose of the Institution;
- \* To make arrangements or provide for the facilities, for the testing and calibration of precision instruments, gauges and scientific apparatus and for the issue of certificates in regard thereto so as to make them comply with the required standards;
- \* To undertake execution of any trust or any agency business which it may consider conducive to the attainment of, its objectives;
- \* To cooperate with any person, association, or organization, outside Bangladesh having objectives, similar to those for which the Institution is established; and
- \* To do all such acts and things ancillary, or incidental to any of the aforesaid, functions.

## **LAWS GOVERNING ACTIVITIES OF BSTI**

1. The Bangladesh Standards and Testing Institution Ordinance 37 Of 1985.
2. The Standards of Weights and Measures Ordinance XII of 1982.
3. The Bangladesh Standards and Testing Institution (Amendment) Ordinance XI of 1988.
4. The Standards of Weights and Measures (Amendment) Act 2001.
5. The Bangladesh Standards and Testing Institution (Amendment) Act, 2003.

## **REGULATIONS**

1. The Bangladesh Standards and Testing Institution Employee Service Rules, 1989.
2. The Bangladesh Standards and Testing Institution Rules 1989.
3. The Standards of Weights and Measures Rules 1982.

4. The Bangladesh Standards and Testing Institution Employee (Pension & Gratuity Rules 2002).

## **ORGANS OF THE BANGLADESH STANDARDS AND TESTING INSTITUTION**

The organs of BSTI as:

- 1.** The BSTI Council
- 2.** The sectional Committees
- 3.** The Director General and the staff.

Following are the organizations, duties and responsibilities of these organs:

### **1. BSTI COUNCIL**

- (a) The general direction and administration of the affairs and functions of the Institution is vested in a Council, which may exercise all powers and perform all functions, which may exercised or performed by the Institution.
- (b) BSTI Council, the highest decision making organ of the Institution, consists of the following members:
  - (i) The Minister in charge of Ministry of Industries, ex officio, shall also be the chairman of the council.
  - (ii) The state minister, ministry of industries, ex-officio, who shall also be the Vice-Chairman of the council.
  - (iii) The Secretary, Ministry of Industries, ex officio, shall also be the vice chairman of the council.
  - (iv) The Director General, ex officio, act as the secretary of the council.
  - (v) 29 Representative from different Ministries, Business chambers, different scientific organizations, Universities and relevant institutions.

The Council shall in discharging its duties, be guided by such instructions as may be given to it by the Government from time to time.

## **2. THE COMMITTEES**

- (a) The council appoints such committees as it thinks fit to assist it in the discharge of its functions.
- (b) Each committee is headed by a Chairman and consists of such members as determined by the Council.
- (c) The Chairman and members of a committee holds office for such period as determined by the Council.

## **3. THE DIRECTOR GENERAL AND THE STAFF**

BSTI is headed by a Director General who is the principal executive officer of the Institution and is responsible for the proper administration of the Institution. The Director General is appointed by the Government on such terms and conditions as it may determine.

BSTI performs its responsibilities through 6(six) wings. Each wing is headed by a Director. The wings are as follows:

### **(1) CERTIFICATION MARKS WING**

We visited this wing on 11 November, 2009 and 12 November, 2009. Mr. Lutfor Rahman Khan (Director), Mr. Golam Baki (Deputy Director) briefed us on various activities of the wing.

Bangladesh Standards and Testing Institution (BSTI) operates the certification marks scheme, under which the manufacturers /importers are licensed to use the standard mark on goods produced / imported by them in conformity to the relevant Bangladesh Standard (BDS). This scheme is governed by the Bangladesh Standards and Testing Institution Ordinance 1985 and the regulations made there under. The scheme covers Industrial products and agricultural produce and excludes drugs and pharmaceuticals (covered under drug Administration). To provide quick service to the applicants and licensees, BSTI operates through 5 regional branch offices, other than head office to take care of certification marks function.

Functions and Responsibilities of this wing include:

- (i) Promotion of quality control
- (ii) Ensuring compliance of products with the Bangladesh Standards
- (iii) Implementation of Bangladesh Standards through the administration of National Certification Marks Scheme or inspection of goods or both.

- (iv) Certify quality of commodities, materials, produces and other things including food items for local consumption, export or import.

The standards approved and passed by the Institution are called Bangladesh Standards (BDS). At present Government brought 153 items under compulsory Certification Marks Scheme among which 64 items in Food and Agricultural Products, 50 items in Chemical Products, 25 items in Electrical and Electronics Product and 14 items in Engineering Products.

Also some 35 imported products are brought under Mandatory Certificate before Customs clearance.

The BSTI Marks cannot be used under any circumstances by others without approval in advance from BSTI. We have also learnt various laws, penalties/punishments of violating these laws and how to case a file.

## **(2) CHEMICAL WING**

We visited this wing on 15 November, 2009 and 16 November, 2009. Mr. Md. Nasiruddin (Deputy Director), Mr. GS Poddar (Assistant Director), Ms. Farhana (Examiner chemical testing wing) briefed us about various activities of this wing.

BSTI Chemical Laboratories consist of two divisions as:

- i. Chemical Division
- ii. Food and Bacteriological Division

The chemical and food and bacteriological laboratories in Dhaka are well equipped with many modern instruments by which maximum possible accurate results can be derived and thus ensure the standards and quality of any product.

This wing possesses the following laboratories:

- \* Oil and fat product testing laboratory
- \* Cereal and Bakery products laboratory
- \* Processed food and fruit drink laboratory
- \* Metal testing laboratory
- \* Microbiological laboratory
- \* Organic Chemical laboratory
- \* Petroleum and Petroleum products laboratory
- \* Building Material laboratory

Some modern instruments have been introduced such as

- \* UV-Visible Spectrophotometer
- \* Atomic Absorption Spectrophotometer (AAS)



- \* Gas-Chromatograph (GC)
- \* Lovibond Tinto-meter
- \* Electronic Balance
- \* Flame Photometer
- \* Carbon & Sulphur Determination Apparatus
- \* Modern Microscope
- \* Penetrometer Etc.

The main function of Chemical Testing Wing are to perform the task of chemical testing and analysis of different types of samples received from the sources mentioned under the heading “Physical Testing Wing”.

### **(3) PHYSICAL TESTING WING**

We visited this wing on 17 November, 2009 and 18 November, 2009. Mr. Md. Shajahan Hosain (Deputy Director), Mr. GS Poddar (Assistant Director), Ms. Bilkis Begum (Assistant Director Electrical), Mr. Md. Abdur Rashid (Assistant Director Electrical), Mr. Md. Golam Ajom (Assistant Director Electrical), Mr. Md. Sahadat Hossain (Senior Examiner Electrical) briefed us about various activities of this wing.

This wing is divided into the following three divisions:

- i. Electrical, Electronics and Engineering
- ii. Civil, Physical and Mechanical Engineering
- iii. Textile Engineering

We visited the following laboratories

- \* Meter Testing Laboratory (Meter testing procedure was shown)
- \* Light Testing Laboratory (Tube light, compact fluorescent lamp CFL and bulbs testing procedures were shown)
- \* Mechanical Engineering Laboratory (Functions of Universal Testing Machine UTM were shown with experiment determining metals tensile strength, Yield point, breaking point etc.)
- \* Cement Testing Laboratory (Functions of Mixture Machine, Mold, Tampering Machine, Oven. Compression Machine were shown and briefed).
- \* Ceiling Fan Testing Laboratory (Testing of Ceiling fans, pedestal fans were shown).
- \* Textile Engineering Laboratory

- Yarn Strength Tester
- Twist Tester
- Air permeability tester
- Conditioning chamber
- Xenotest 150S+ (Color fastness to light)
- Rotawash (Color fastness to wash)
- Tensiled (to determine tensile strength of fabric and yarn)
- Trash Analyzer (To determine trash content in a raw fabric or yarn)
- Tear Strength Tester (to determine tear strength of a fabric)
- Crockmeter (To determine rubbing fastness of colored fabric)
- Oven
- Projection Microscope (To examine fiber fracture and structure) etc.

The Function of Physical Testing Wing is to perform the task of physical and engineering testing/analysis of different types of sample received from the following sources:

- i. Samples received from government, semi-government and autonomous bodies
- ii. Finished products of industries
- iii. Raw materials used in industries
- iv. Imported and exported goods
- v. Samples seized by police department
- vi. Samples of compulsory items under Certification Marks Scheme.
- vii. Samples received from courts in connection with arbitration of cases on disputes of quality.

#### **(4) STANDARD WING**

We visited this wing on 19 November, 2009 and 22 November, 2009. Mr. Dr.Syed Humayun Kabir (Director), Mr. Md. Sazzadul Bari (Deputy Director) briefed us about various activities of this wing.

This wing is divided into the following six divisions:

- i. Agriculture and food division
- ii. Chemical division
- iii. Engineering division
- iv. Electrical and Electronics division
- v. Jute and textile division
- vi. Publication Section

Standard wing is responsible for the adoption/formulation/revision/amendment/reaffirm of standards for different kinds of products, commodities, structures, practices and operation.

Standard can be defined as a document approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for products and their related processes or production methods, with which compliance is not mandatory. It may also cover terminology, symbols and packaging, marking or labeling requirements as they apply to a product, process or production method. When a standard is declared mandatory it becomes a technical regulation.

Levels of standard are as below:

- \* International Standards (Standard that is adopted by an international standardizing/standards organization made available to the public)
- \* Regional Standards (Standard that is adopted by a regional standardizing/standards organization and made available to the public)
- \* National Standards (Standard that is adopted by a national standards body and made available to the public).

Types of standards are as follows:

- \* Basic standard : Contains general provisions of one particular field
- \* Terminology standard: Definitions, notes, illustrations, examples.
- \* Testing standard: Concerned with test method
- \* Product standard: Specifies requirements to be fulfilled by a product to establish its fitness for purpose.
- \* Process standard: Specifies requirements to be fulfilled by a product to establish its fitness for purpose.
- \* Service standard: Specifies requirements to be fulfilled by a product to establish its fitness for purpose.

So far standard wing has formulated more than 2200 National Standards Products and Services. In preparing National Standards, Standard Wing is assisted by six divisional committees and seventy three Technical Committees consisting of eminent scientist, engineers, professors and experts in relevant field.

## **(5) METROLOGY WING**

We visited this wing on 19 November, 2009 and 22 November, 2009. Mr. Dr.Syed Humayun Kabir (Director), Mr. Md. Sazzadul Bari (Deputy Director) briefed us about various activities of this wing.

The legal enforcement of accurate weights and measures in industrial and commercial practice to ensure national and international fair trading and consumer protection was enforced by promulgating “The Standards of Weights and Measures (Amendment) Act, 2001” by the Government.

For Weight, Length and Volumetric measures the laboratory contains

- \* Reference Standard

- \* Secondary Standard
- \* Working Standard
- \* Commercial Standard

Working Standard is of the following two types

- i. Indoor Type
- ii. Outdoor type

We are acquainted with the following equipment, their uses and their calibration method:

- \* Reference Standard weights
- \* Secondary Standard Meter Bar
- \* Secondary Standard Liter Measures
- \* Precision control thermometer
- \* Secondary Standard balance
- \* Slide Calipers
- \* Micrometer
- \* Pressure Gauge
- \* Stop Watch
- \* Anemometer
- \* Temperature meter/Indicator
- \* Block Gauge

Metrology Wing is responsible for

- i. Implementation of metric system/SI of weights and measures throughout the country.
- ii. Maintenance of Standards of weights and measures with international traceability
- iii. For verification and Calibration of weights and measures and measuring instruments used in industries and commercial transactions.

## **(5) ADMINISTRATION WING**

This Wing provides the logistic and support services for the technical wings. These include general services and logistic, accounting, financial management, legal personnel, store and purchases, transport and other matters related to establishment including planning and development.

## **REGIONAL OFFICES**

The Institute has 6 Regional Offices at the Divisional Headquarters excluding the head office such as:

- i. Dhaka Divisional Metrology Inspectorate
- ii. BSTI Regional Office, Khulna
- iii. BSTI Regional Office, Barisal
- iv. BSTI Regional Office, Chittagong
- v. BSTI Regional Office, Rajshahi
- vi. BSTI Regional Office, Sylhet

## **OTHER ACTIVITIES OF BSTI:**

### **ONE STOP SERVICE**

The objective of one stop service is to cater quick service to the people within the stipulated time according to citizen charter through extending BSTI's activities to the concerned producers, importers and distributors of various products/items that needs to undergo testing for issuing CM license. As such BSTI has started One Stop Service as part of fulfilling its commitment for rendering

better service to the people. It also facilitates the services of calibration of instrument/apparatus.

The following services/information are provided from the one stop service:

- \* Procedures & time length for testing of samples.
- \* Fees for sample testing
- \* Assurance of receiving sample testing report within the
- \* Specified time.
- \* Procedures for obtaining CM license & time length
- \* Marking fees for CM license
- \* Receiving application relating to weights & measures.
- \* Procedures for calibrating an instrument/apparatus &
- \* Time length
- \* Fees for calibration
- \* Dissemination of information/documentation
- \* Distribution test/calibration reports.
- \* To provide special service to SMEs and female entrepreneur.
- \* To bring transparency through the media cell.

### **WTO -TBT ACTIVITIES IN BSTI**

BSTI is the National Enquiry Point in Bangladesh for the World Trade Organization (WTO)- Technical Barriers to Trade (TBT) Agreement since 2002.

There is an internal committee on WTO affairs in BSTI and it participates in the notification activities to WTO through Ministry of Commerce and Ministry of Industry.

## **BANGLADESH ACCREDITATION BOARD**

Accreditation is a system of supervision of conformity assessment. Accreditations reduce risk for government, business and customers by ensuring through regular surveillance that certification / registration bodies are both independent and competent. Accredited certificate may be relied upon anywhere in the world.

It is very much essential to accredited our testing laboratories so that the testing results/ data of our testing laboratories is accepted everywhere.

To realize the importance of Accreditation Body `` Bangladesh Accreditation Act, 2006 has been enacted on 16 July 2006 and notified through the Government Gazette. Under this act an Accreditation board is formed comprising 14 member including chairman. Among them there are 6 Secretary of different ministries as a member of Bangladesh Accreditation Board.

## **MANAGEMENT SYSTEM CERTIFICATION (MSC) CELL**

BSTI has taken a programme to operate Management System Certification Scheme against ISO 9001, ISO 14000 AND ISO 22000 under UNIDO SMTQ project 5(five) documents regarding Management System Certification Scheme have already been prepared by an International Certification Expert. These are :

- \* Management System Certification Manual
- \* Management System Certification Guideline Manual
- \* Management System Certification Procedure Manual
- \* Management System Certification Form/Format
- \* Guideline for Applicant for MSC

This scheme will be run by a Cell of BSTI.

A six member Management System Certification Cell headed by one Deputy Director has already been constituted provisionally. This cell will perform the preliminary work.

A Draft Bangladesh Standards and Testing Institution (Management System Certification) Regulation has already been prepared which is under scrutiny by a high powered committee headed by Additional Secretary, MOI. Final approval of Management System Certification will be given by an independent committee to be constituted as per regulation.

## **PRODUCT LABELING POLICY**

There is a Product Labeling Policy, 2006 in Bangladesh. At present manufacturer's/Importers label their product at their own choice. To realize the importance of national product labeling standards, BSTI took initiative to formulate this Product Labeling Policy. Manufacturer's name, full address and Country of origin has been incorporated in the product labeling for all products. In addition, Ingredients, Composition, Batch no., Code no., Expiry date/Use best before on and other information which are necessary has been incorporated in Chemical, Agriculture and Food products. The weights and measures will be expressed in System International Units.

## **INTERNATIONAL ACTIVITIES**

The bilateral and international relations of the Bangladesh standards & testing institution with other countries and various foreign agencies are conducted maturing the BSTI's policies of relation with all organizations abroad.

The Bangladesh standards institution is a full member of the international standardization organization (**ISO**) as such, is the only agency, authorized to represent Bangladesh in international standardization work. The participation to the international work is made either through physical presence in for a where the international standards are prepared in technical committee meetings or by examining and evaluation whether the proposed standard conforms to Bangladesh conditions reporting the finding to the concerned entity.

The institution likewise maintains an active participation with the **SAARC** standing committee on standards, metrology, testing and quality. Chamber of commerce and industries disseminates information on the seminars and symposia organized by these organizations and **BSTI** ensures, whenever possible, the dispatch or delegations to these events.

The **BSTI** maintains relations with **BIPM, OIML, APMP, WTO, ITC, codex A.C. of FAO** and other international and regional organization.

Quality control and information experts have been brought to the institution, using opportunities offered by the **UNDP, BSTI** experts attend meeting, seminars and workshops arranged and sponsored by **WTO, ITC, SIDA** of Sweden, **ISO, PRODEC** of Finland, **INBAR, APMP, CSC, PORIM** etc.

## **REGIONAL STANDARDIZATION, METROLOGY, TESTING AND QUALITY ACTIVITIES**

**BSTI** is actively participating in the Standing Group for Standardization, Metrology, Testing and Quality Activities established by the south Asian Association for Regional Cooperation (**SAARC**). This Standing group is working on harmonization of Standards, Mutual Recognition Agreements and capacity building in the field of metrology.

## **ENDING SESSION**

In the ending session of the Orientation Course, the newly appointed officers were given important and necessary guidance by our senior officials