G&M Compliance Inc.
September 25, 2018

India Certification Overview
BIS Safety/WPC Wireless/TEC Telecom

G&M Compliance, Inc.
Fast Compliance, First to Market

Overview of BIS Certification

- Bureau of India Standards (BIS) is a product certification scheme aims at providing Third Party Guarantee of quality, safety and reliability of products in India market place (mandatory beginning July 2013)

- India originally announced the implementation of 15 specific types of electrical equipment under the CRS (Compulsory Registration Scheme) for BIS certification. There are currently three (3) lists of products under CRS scheme.

- Component parts of finished products, spare parts and replacement parts, may in some cases require BIS certification

- Products applied for BIS certification must conform to Indian (IS) standards and/ or other additional technical requirements

- First step is to determine if your product falls under mandatory BIS category

- Using "Tariff Code" or "HS Code" is the most efficient way to find out if a product falls under mandatory BIS certification

Overview of BIS Certification

- CRS (Compulsory Registration Scheme) was introduced by Department of Electronics and Information Technology (DeitY – now MeitY) along with Bureau of Indian Standards (BIS)

- This program was designed for the manufacturer (Applicant) and unique registration is granted for each manufacturing location (Factory). Registration is granted based on:

  - ✓ Manufacturer = Factory location (Each Location)
  - ✓ Brand Name
  - ✓ Product type

- Registration Validity: Registration is valid for <u>two years</u> and can be renewed if there is no change in the product and the standard (each factory per Registration No.)

- As per the Series guidelines issued by DeitY (now MeitY), a report can cover maximum of ten (10) models in a series under ITE category. Other categories have different requirements.

Overview of BIS Certification

LIST 1

	Products	Applicable standard
1	Laptop/Notebood/Tablet	IS 13252
2	Plasma/LED/LCD TV (Above 32")	IS 616
3	Microwave Oven	IS 302-1 :2008
4	Printers/Plotters	IS 13252
5	Scanners	IS 13252
6	Set top Box	IS 13252
7	Visual Display Units/Video Monitors (Above 32")	IS 13252
8	Electronics Games	IS 616
9	Optical Disk Players	IS 616
10	Wireless Keyboards	IS 13252
11	Telephone answering machines	IS 13252
12	Electronic Music systems	IS 616
13	Mains powered electronic clocks	IS 302-2-26-1994
14	Amplifiers	IS 616
15	Automatic Data Processing Machines	IS 13252

Overview of BIS Certification

LIST 2

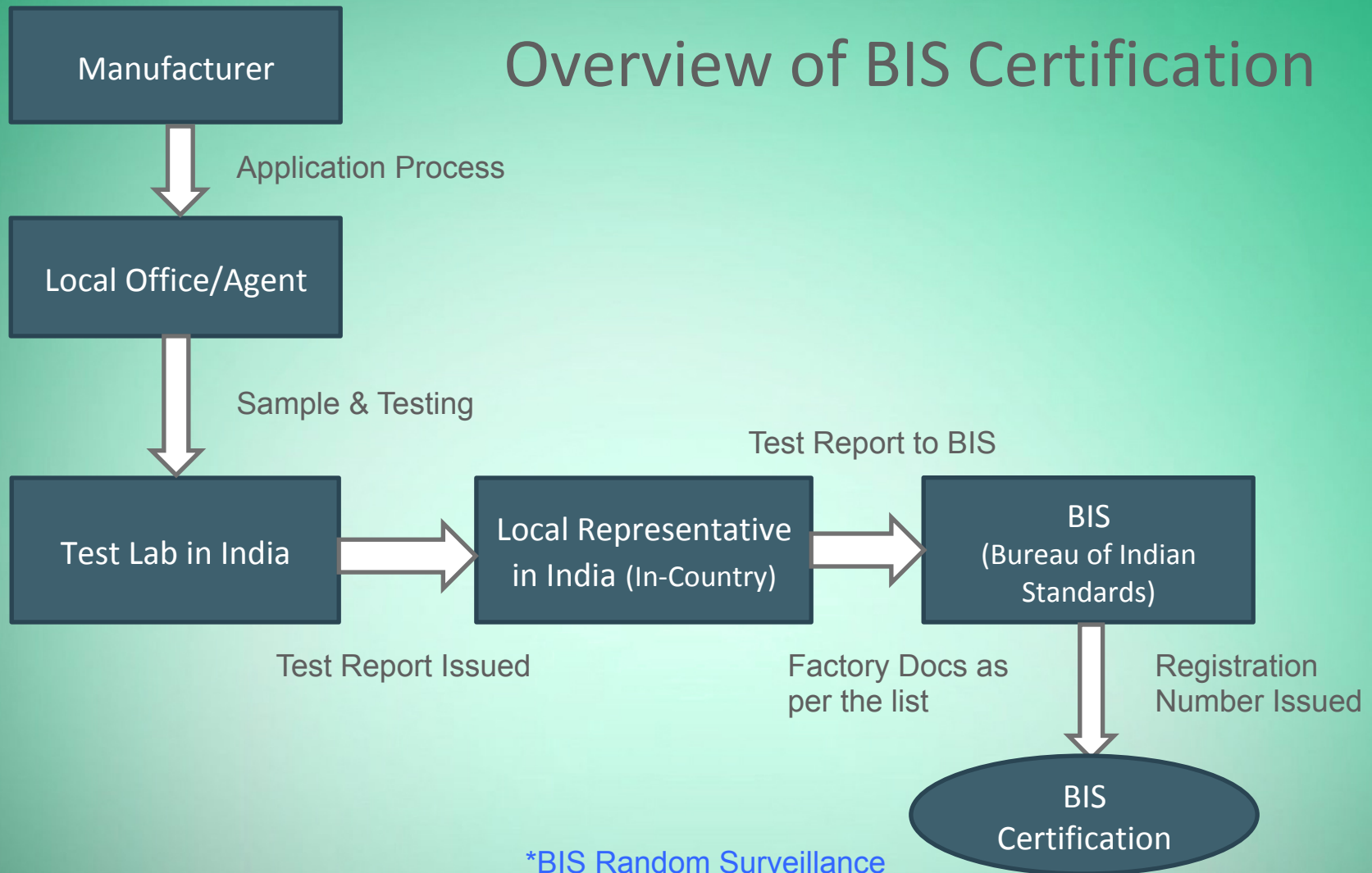|	Products	Applicable Standards
1	Power Adapter for IT	IS 13252
2	Power Adapter for AV	IS 616
3	Self Ballasted LED Lamps	IS 16102-1:2012
4	LED Control Gears	IS 15885 (part 2/Sec 13): 2013
5	Mobile Phones	IS 13252
6	POS (Point of sales)	IS 13252
7	Cash Registers	IS 13252
8	Copying Machine	IS 13252
9	Smart Card Readers	IS 13252
10	Mail Processing Machine	IS 13252
11	Passport Readers	IS 13252
12	Power Banks	IS 13252
13	UPS/Inverter (Max 5KVA)	IS 16242 (Part 1)
14	Fixed LED Lumminaires	IS 10322 (Part 5/Sec 1):2012
15	Sealed Secondary Cell/ Battery for portable devices	IS 16046 : 2015
16	Power adapters for IT (Internal PSU)	IS 13252

Overview of BIS Certification

LIST 3

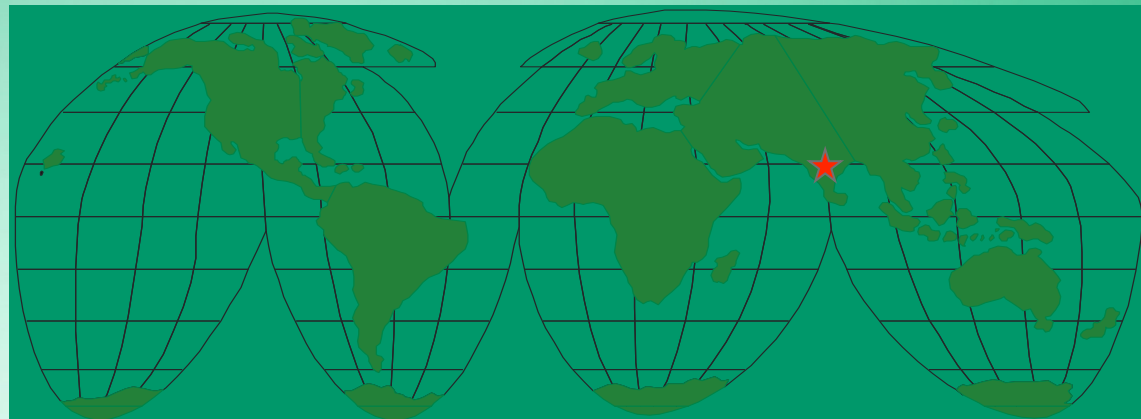|	Products	Applicable Standards
1	Recessed Luminaries	IS 10322-5-2
2	Luminaires for Road and street Lighting	IS 10322-5-3
3	Portable General Purpose Luminaires	IS 10322-5-4
4	Flood Lights	IS 10322-5-5
5	Hand Lamps	IS 10322-5-6
6	Lighting Chains	IS 10322-5-7
7	Luminaires for emergency lighting	IS 10322-5-8
8	UPS/Inverters of rating </= 10KVA	IS 16242-1
9	Plasma/LCD/LED Televisions of screen size upto 32"	IS 616
10	Visual Display Units, Video Monitors of screen size upto 32"	IS 13252 -1
11	CCTV Cameras/Equipment for CCTV Cameras	IS 13252 -1
12	Adaptors for Household and similar appliances	IS 302 -1
13	USB Driven barcode readers, Barcode scanners, Iris scanners, Optical fingerprints scanners	IS 13252 -1
14	Adapters for Medical electrical equipments Part 1 General requirements for safety 1, collateral standard - safety requirements for medical electrical equipments	IS 13450 (Part 1/Sec 1) : 2006, IEC 60601-1-1(2000)
15	Adapters for electrical equipments for measurements, control and laboratory use- Part 1 : General Requirements	IEC 61010
16	Smart Watches	IS 13252 -1

Overview of BIS Certification

Manufacturer

↓ Application Process

Local Office/Agent

↓ Sample & Testing

Test Lab in India → **Local Representative in India (In-Country)** → **BIS (Bureau of Indian Standards)**

Test Report Issued

Test Report to BIS

Factory Docs as per the list

Registration Number Issued

↓

BIS Certification

*BIS Random Surveillance

Sample Case Study

- Target Country:

  - India – BIS Mark

- Basic Computer 1U Chassis with internal power supply "Pizza Box" – Note: Power cord & supply should be BIS Approved

Case Sample – BIS Submittal Process

- All documents MUST match Application, labels & associated documents (Company name, product description, model number(s). If any item does not match, the document will be required to be revised. Application forms must also be stamped

- CB report is not required but can be used as a tool (if available)

- Currently, no EMC requirements under BIS CRS Scheme, only Safety to IS 13252 – Safety of Information Technology Equipment (Harmonized to IEC 60950-1 +A2)

- Additional sample of PCB board and plastic material for component flammability testing

- Schematic of battery protection circuitry (especially on motherboard)

- Currently, no factory inspection is required (may change soon)

3 Basic Steps for BIS Certification

I.   DOCUMENTATION

II.   SUBMITTING SAMPLES & TESTING

III.   BIS MARK and LABELING

Note: Random BIS Surveillance may be required

BIS Documentation

- BIS Application and Factory Questionnaire forms must be completed correctly
- Production flow chart for the product
- Quality manual (title of contents pages, if the document is too big)
- List of documented procedures associated with the product (title of contents pages, if the document is too big)
- Quick Start Guide (must reference exact product name and model numbers to the Application). User manual/Quick Start Guide can be in <u>English</u>!
- Copy of CB report for the overall product(s) (if available – for reference CCL)
- Copy of CB reports for the power supply, power cords, fuses, etc. (Power supply – if considered to be non integrated & power cord must be BIS approved)
- Applicant and manufacturing facility's business license
- Name plate or label
- Factory's organization chart

BIS Documentation

- For the Quick Start guide, basic items that are needed are: Products name, model number, product content, basic installation, and operating instructions, equipment rating (voltage/current), company information, any warning and cautionary statements

- The quick start guide can be a summary of the manual which generally is one to a two-page document. It should contain basic instruction, rating, and any safety warning information (English o.k.)

- If a series of equipment is being certified, a formal letter describing the differences needs to be provided

- Power Supply/Cord – for India the power cord (shipped with the product) must be BIS certified. Recently, non-BIS approved open-frame power supply (not user removable/ not hot-swappable) can be tested together as a system for servers/computers

	Document	Necessary Information
1	Document Information	1. Full name of the Manufacturer 2. Details of the main Model and series models. 3. Ratings. 4. Brand Name. 5. CCL (Critical Component List)
2	Label	1. Model Name 2. Rating 3. Brand Name 4. Country of Manufacturer. 5. Physical Sample is must.
3	Critical Components	Related Test reports and certificates are required. Please refer to CCL Spreadsheet.
4	Power supply cord set	1. BIS approved. 2. Physical sample is must.
5	Business license of the factory	
6	User Manual	
7	PCB Layout	
8	Schematic/Circuit Diagrams	

Submitting Samples & Testing

- Once BIS issues a formal Application number to the Applicant, samples can now be sent to India for evaluation and testing (Independent Lab in India)

- Pay special attention to Customs Clearance issues

- There are numerous labs in India that have been designated by BIS to perform evaluation and safety testing (as of 2018, there are many more – becoming competitive)

- Generally, 2 samples are required to be sent to India but 1 sample is o.k.

- Preparing test samples as well as having all of the proper information when shipping products to India for testing may be a bit confusing

- Generally, a Custom Agent is required to pick up test sample and deliver to testing laboratory (using a qualified Customs Clearance agent is very important)

Submitting Samples & Testing

- Importer of Record (IOR) should be the assigned test lab in India. Only BIS exemptions are given to a test laboratories. Pay attention to declared value (if over $2K)

- Maximum 5 samples are allowed in single shipment (except battery and lighting)

- Should provide copies of documentations to IOR/Agent for verification, including the shipping invoice, full description of contents along with declared value

- IOR/Agent should be informed before shipment and be able to track the package

- Re- export : Gross Revenue waiver (GRW) is a letter wherein the banker mentions that importer will not get any inward remittance against export

BIS Mark & Labeling

- From July 1, 2016, it is mandatory to use the IS Mark on the product label

- The photographic reduction and enlargement of the IS Mark is permitted

- The IS Mark should be clearly visible, legible, indelible and non-removable on the label

- The font size should be not be less than Arial font size 6

- If the product is small then the IS Mark can be displayed on the packaging of the product

- The IS Mark cannot be used on un-registered product

IS ----------

R - XXXXXXX

IS 13252 (Part 1)/
IEC 60950-1

R-XXXXXXX
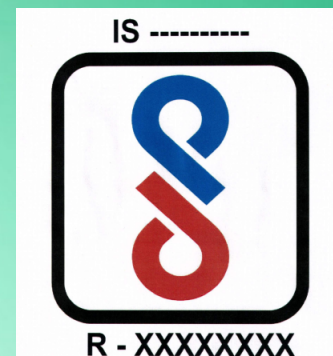
Random BIS Surveillance

- Once a year, Meity (formerly Deity) randomly chooses a BIS certified product to meet random sample safety testing as a way to satisfy BIS surveillance requirement. Meity also randomly assigns a local test lab to carry out this surveillance activity

- Meity then contacts the factory/local representative with the test lab information and it is up to the factory/local representative to carry out this order with the assigned test lab (extremely inefficient and confusing)

- The factory/local representative typically has 15 business days to comply with this order after the notice is issued by Meity (normally not enough time)

- The assigned test lab will take care of the storage of samples as per Meity's directive

- It is up the the factory/local representative to comply with this order, coordinate with the test labs, provide a test sample as well as payment of test & report fees

- The lab will carry out the testing and provide a report to Meity in order to complete this BIS surveillance order

Overview of WPC Wireless

- WPC stands for Wireless Planning & Coordination of India
- WPC is a National Radio Regulatory Authority
- WPC was created in 1952. Similar to FCC in the U.S.
- WPC is responsible for Frequency Spectrum Management in India
- WPC exercises the statutory functions of the Central Government and issues licenses to establish, maintain and operate wireless stations in India
- WPC certification is required for all wireless devices in India
- Factory inspection is not required

- WPC is divided into three (3) major sections:
  - ✓ Licensing and Regulation (LR)
  - ✓ New Technology Group (NTR)
  - ✓ Standing Advisory Committee on Radio Frequency Allocation (SACFA)

Overview of WPC Wireless

In India, radio frequencies for wireless communications were arbitrarily defined between 3 KHz to 3000 GHz. So, if devices operate outside of these frequencies, WPC does not regulate them.

1. Application for WPC Type/Series/Modular Approval
2. Evaluation and Test **(WPC accepts test data from accredited lab outside of India)**
3. WPC Certificate and ETA Number
4. WPC Certificate – No Expiration Date (as long as no hardware change)

Overview of WPC Wireless

Application for WPC Type/Series/Modular Approval

      a. Applicant name/address/contact information

      b. Equipment name/ model/ trade mark

      c. Modulation mode

      d. Main functions

      e. Frequency range

      f. Occupied bandwidth

      g. Transmitting power

Overview of WPC Wireless

WPC Type Approval & Testing

    a. 3-5 samples are required for each model

    b. Measurement of peak radiated power or EIRP

    c. Measurement of peak power spectral density

    d. Measurement of 6dB and 20dB bandwidth

    e. Measurement of frequency range & details of channels

    f. Measurement showing behavior of edge channels

    g. Measurement of spurious/harmonic emissions (conducted/radiated) in different frequency bands

    h. Review of peak excursion & measurement uncertainty

    i. Details of antenna systems used during test

    j. Review circuit diagram

    k. Test plan

    l. User manual

    m. Review label layout

Overview of WPC Wireless

Issue WPC Certificate w/ETA Certification No.

A.   After completing tests & report

B.   Review of business license
(local representative is required)

C.   Company business scope

D.   Application and test fees are received
by WPC

Note: WPC certificate shall be granted only to an Indian company and not in the name of a foreign manufacturer - Indian Local Representative

Government of India
Ministry of Communications & IT
Dept. of Telecom., Wireless Planning and Coordination Wing
Regional Licensing Office, IMS Campus Ghitorni, New Delhi-110030
File No.J-22022/240/2016-RLO(NR)/200212   Date : 25/11/2016

ETA Certificate No: NR-ETA/5047-RLO(NR)

Equipment Type Approval is hereby granted for under mentioned equipment for operation with following parameters/conditions:
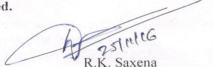
I. Details of Applicant and parameters of Equipment:

1. Name of the Applicant	BLI Appliances Private Limited	
2. Equipment	OTT Set Top Box	
3. Model No.	ROS 5000	
4. Manufactured by	TCL Technoly Electronics (Huizhou) Co., Ltd.,China	
5. Frequency Range (MHz)	2412-2472 MHz	
6. Max. Output Power	17.7 dBm	
7. Modulation	DSSS(CCK, QPSK, BPSK) OFDM	
8. Remarks	Maximum EIRP should not exceed 4W(36dBm).	

II. Conditions:

1. This is a clearance from technical angle only. The use of the equipment is regulated as per the provision mentioned in the Gazette Notification No. G.S.R. 45(E) dated 28.01.2005 as amended from time to time.
2. This approval will not be valid in case of any change in the above parameters and not conforming to the notification No. given in Para 1.
3. Use of such equipment has been exempted from licensing requirement vide Gazette Notification given in Para 1, on Non-Interference, Non-Protection and Sharing (Non-Executive) basis.
4. Use of this equipment with any change in the above parameters and not conforming to the above Notifications will require a specific wireless license from his Ministry.
5. Use of such equipment is also subject to the applicability/fulfillment of the specific service license as required from the Central Government.

6. This is not an IMPORT LICENSE. For the import of these equipments, a separate "IMPORT LICENSE" is required from respective RLO of WPC wing as per procedures.

Note: - (i) The above ETA is specific for the RF band/Model/Equipment mentioned above only. (ii) Record of all the equipments imported needs to be maintained and submitted to this Ministry as and when required.

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Joint Wireless Advisor
Department of Telecommunication
Regional Licensing Office (N.R.)
New Delhi-110 030

Overview of TEC Telecom

- TEC is the Telecommunication Engineering Center under the Department of Telecommunications in India

- TEC certification has been a voluntary process since 1991, and as per TEC announcement No. 10-1/2017-IT/TEC/ER is slated to become mandatory in 2019 (Date has been changed several times – Slated April 1st, 2019)

- The mandatory lists of products have not been officially published yet but will include <u>servers</u>, LAN switches, routers, remote access servers, network security systems, etc. (will introduce in four phases, just like BIS)Wireless products (even considered telecom such as cell phones) falls under WPC, not TEC (very confusing)

- Products under TEC are required to meet electromagnetic compatibility (EMC/EMI), and safety testing is under consideration

Overview of TEC Telecom

- TEC certification process requires testing of samples to be performed in India and a report generated from an authorized TEC lab (accredited by TEC)

- The report generated by the authorized lab (no lab has been authorized as of today) must be submitted to TEC for review and approval. This task must be handled by the company's Authorized Indian Representative (AIR), just like BIS certification

- Upon acceptance, TEC will issue a certificate and an ID number associated with the factory producing the product. We expect that there may be a mandatory TEC certification mark as well (but has not been announced). The ID number issued by TEC must be marked on the product

- An important distinction to be made between TEC approval process and other international approval processes is that TEC only allows up to 10 models per certificate. Applicants should be mindful about this limitation when preparing for TEC certification.

Overview of TEC Telecom

- TEC certificate is expected to have a five (5) year expiration date

- The TEC certificate and ID numbers are issued to the factory that builds the product instead of the applicant or brand owner applying for approval. An Authorized Indian Representative (AIR) must be established in India for TEC registration (not yet confirmed by TEC)

- If the applicant or factory has a representative office in India, this office must take the responsibility of AIR. If there is no existing representation India, another legal entity within India can be nominated as the AIR (not yet confirmed by TEC)

Questions & Answers

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