India Certification Overview

BIS Safety and WPC Wireless

G&M Compliance Inc.
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 two years 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

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<td>Plasma/LED/LCD TV (Above 32&quot;)</td>
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<td>3</td>
<td>Microwave Oven</td>
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<td>Printers/Plotters</td>
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<td>6</td>
<td>Set top Box</td>
<td>IS 13252</td>
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<td>7</td>
<td>Visual Display Units/Video Monitors (Above 32&quot;)</td>
<td>IS 13252</td>
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<td>Electronics Games</td>
<td>IS 616</td>
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<td>Optical Disk Players</td>
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<td>Wireless Keyboards</td>
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# Overview of BIS Certification

## LIST 2

<table>
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<th>Products</th>
<th>Applicable Standards</th>
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<td>1</td>
<td>Power Adapter for IT</td>
<td>IS 13252</td>
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<tr>
<td>2</td>
<td>Power Adapter for AV</td>
<td>IS 616</td>
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<tr>
<td>3</td>
<td>Self Ballasted LED Lamps</td>
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<td>LED Control Gears</td>
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<td>7</td>
<td>Cash Registers</td>
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<tr>
<td>9</td>
<td>Smart Card Readers</td>
<td>IS 13252</td>
</tr>
<tr>
<td>10</td>
<td>Mail Processing Machine</td>
<td>IS 13252</td>
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<tr>
<td>11</td>
<td>Passport Readers</td>
<td>IS 13252</td>
</tr>
<tr>
<td>12</td>
<td>Power Banks</td>
<td>IS 13252</td>
</tr>
<tr>
<td>13</td>
<td>UPS/Inverter (Max 5KVA)</td>
<td>IS 16242 (Part 1)</td>
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<td>14</td>
<td>Fixed LED Lumminaires</td>
<td>IS 10322 (Part 5/Sec 1):2012</td>
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<td>15</td>
<td>Sealed Secondary Cell/ Battery for portable devices</td>
<td>IS 16046: 2015</td>
</tr>
<tr>
<td>16</td>
<td>Power adapters for IT (Internal PSU)</td>
<td>IS 13252</td>
</tr>
</tbody>
</table>
# Overview of BIS Certification

## LIST 3

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

Manufacturer

AIR - CRS Portal Administration

Application Process

Test Lab in India

Sample & Testing

Local Representative in India (In-Country)

Test Report to BIS

Test Report Issued

BIS (Bureau of Indian Standards)

Factory Docs as per the list

Registration Number Issued

STPI Deposit for BIS Surveillance

*BIS Random Surveillance

BIS Certification
Case Study - BIS Certification

- Target Country:
  - India – BIS Mark

- Basic Computer 1U Chassis with internal power supply “Pizza Box” – Note: Power cord & supply must be BIS Approved
Case Study - BIS Certification

- 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.

- 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).
Case Study - BIS Certification

3 Basic Steps for BIS Certification

I. DOCUMENTATION

II. SUBMITTING SAMPLES & TESTING

III. BIS MARK and LABELING

Note: Random BIS Surveillance may be required
Case Study - BIS Certification

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)
- 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 & cord must be BIS approved)
- Applicant and manufacturing facility’s business license
- Name plate or label
- Factory’s organization chart
Case Study - BIS Certification

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 Cable (input) – for India the power cord used (shipped with the product). The company will need to obtain the BIS certificate from the power supply manufacturer.
## Case Study - BIS Certification

<table>
<thead>
<tr>
<th>Document</th>
<th>Necessary Information</th>
</tr>
</thead>
</table>
| 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  
5. Physical Sample is must. |
| 3. Critical Components | Related Test reports and certificates are required. Refer to CCL Spreadsheet. |
| 4. Power supply cord set | 1. BIS approved.  
2. Physical sample is must. |
| 5. Business license of the factory |  |
| 7. PCB Layout |  |
| 8. Schematic/Circuit Diagrams |  |
Case Study - BIS Certification

Submitting Samples & Testing

- Once BIS issues a formal Application number to the Applicant (via CRS Portal), 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 2017, 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) (Consider using Carnet method)
Case Study - BIS Certification

Submitting Samples & Testing

- Importer of Record (IOR) should be the assigned test lab in India. Only BIS exemptions are given to a test laboratories (if not use Carnet)
- 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
- Consider Carnet for importing test samples (save tax and custom duty)!
- New CRS Portal – cannot start BIS testing until registration has been submitted on the CRS portal
- Movement of shipment from one state to another within India needs to be restricted as this involves documentation (way bill) which labs are not able to provide as they are not registered with sales tax authorities
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 color scheme for the IS Mark has to be as per the attached.
- The IS Mark cannot be used on un-registered product.
- The BIS website (www.bis.gov.is) needs to be labeled on the product or packaging (recently implemented on Sept. 2019).
Introduction To Smart Registration

Launched by BIS on April 3rd, 2019

- Portal accessible on Mobile application
- Test request have to be generated from BIS portal
- Hard copy document requirement from Factory/Brand is removed
- Hard copy documents requirement from AIR is minimized
- Renewal/CCL processes will be automated
Case Study - BIS Certification

Need Of Smart Registration

- Automated process flow
- A step ahead in digital India; reduce paper waste
- Help in load assessment for labs and BIS
- Improves the timeline
- Reduce the chances of typographical errors which results in query
Case Study - BIS Certification

Impacts Of Smart Registration

Address verification is compulsory to initiate the process

Testing cannot be initiated without TRF and QR code on the sample

Advance booking of samples is not possible. Projects will be executed on first come first serve basis

Any modification in Ratings, Model numbers, Series models and Brand name is not possible once testing is started

Lack of document may force the lab to cancel the project since they have to meet the timeline
Case Study - BIS Certification

Surveillance

- MeitY with the help of STPI will process the surveillance of the products registered with BIS as and when required
- Samples will be purchased at random from market for this activity
- If the samples are not available in market and, STPI will visit the AIR to collect the samples
- Testing will be conducted in any random lab selected by STPI
- The fee for conducting the surveillance including the fee for purchase of samples must be deposited to MeitY well in advance
- If the sample gets failed in process, the registration will be liable for cancellation
Case Study - BIS Certification

Purpose of creating STPI portal (New BIS Surveillance Registration Process):

- Help to keep real time track of surveillance activities.
- Help to view the status of surveillance, deposit paid, due amount and the amount to be replenished after surveillance.
- Help to register new BIS registration numbers and to pay the surveillance charges online via portal.

Timeline: Nov. 30th, 2019 is the current deadline to register all your existing R-number against which amount has been paid. **Timeline may be extended in case of any variant.**

Procedure/ Instructions: In order to view the process/instructions, please visit the following link - [https://crsbis.stpi.in/InstructionForRegistration.php](https://crsbis.stpi.in/InstructionForRegistration.php)

Key points:

- STPI portal will get more updates for new registration numbers against which payment has not been done yet.
- Manufacturer/ AIR/ Brand Owner will register the new number and pay the surveillance amount online before Nov. 30th, 2019.
- Portal will be updated to upload the proof of document in case there is any update on AIR/ manufacturing details.
Case Study - BIS Certification

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.
Wireless WPC Certification

- 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)
Wireless WPC Certification

- All wireless products working in delicensed frequency band requires ETA certification from Wireless Planning and Coordination wing.
- ETA stands for Equipment Type approval and is granted to all wireless product on per model basis by WPC ensuring that all the technical parameters are aligned as per the regulation.
- ETA through “self declaration” is now applicable for all the categories of wireless products operating in delicensed frequency bands.
- Certain restricted category of products e.g. Drones, Radars, etc. will be issued ETA through old general procedure.
Wireless WPC Certification

- Hardcopy submission was mandatory
- Submission to regional WPC office
- Timeline 1 month
- Less dependency on AIR

Online submission is required
- Submission to WPC centralized office
- Timeline 3-4 days
- Legal obligations applicable on AIR

ETA Old Process

ETA New Process

ETA Old Process

ETA New Process
Wireless WPC Certification

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 \( (\text{WPC accepts test data from accredited lab outside of India}) \)
3. WPC Certificate and ETC Certification No.
4. WPC Certificate – No Expiration Date (as long as no hardware change)
Wireless WPC Certification

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
Wireless WPC Certification

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
Wireless WPC Certification

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
Questions & Answers

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