# PRODUCT MANUAL FOR NON-FERROUS METAL BUTT HINGES ACCORDING TO IS 205: 1992

***This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.***

| | | | |
|---|---|---|---|
| 1. | **Product** | : | Non- Ferrous Metal Butt Hinges |
| | **Title** | : | IS 205: 1992 |
| | **No. of Amendments** | : | 2 |
| | | | |
| 2. | **Sampling Guidelines:** | | |
| a) | **Raw material** | : | As per clause 4.1, Table 1 of IS 205: 1992 |
| b) | **Grouping guidelines** | : | Please refer ANNEX - A |
| c) | **Sample Size** | : | For Mechanical test – 6 Nos<br>For chemical test – 5 pcs of 5 cm x 5 cm or 50 gm drillings (Approx.) |
| | | | |
| 3. | **List of Test Equipment** | : | Please refer ANNEX – B |
| | | | |
| 4. | **Scheme of Inspection and Testing** | : | Please refer ANNEX – C |
| | | | |
| 5. | **Possible tests in a day:** | | |
| | (i) Dimension and Tolerance (Clause 5)<br>(ii) Manufacture (Clause 6)<br>(iii) Workmanship and finish (Clause 7) | | |
| 6. | **Scope of the Licence:** | | |
| | "Licence is granted to use Standard Mark as per IS 205: 1992 with the following scope: | | |

| | | |
|---|---|---|
| | Name of the product | Non- Ferrous Metal Butt Hinges |
| | Type | |
| | Designation | |

# ANNEX A

## Grouping Guidelines

1. Stainless Steel Butt Hinges covered in IS 205: 1992 are classified based on the following:

**(a) Type**

i) Extruded aluminium alloy butt hinges
ii) Extruded brass butt hinges
iii) Cast brass butt hinges
iv) Sheet brass butt hinges

(b) **Size of Hinges**

i) Extruded aluminium alloy butt hinges - As per Table 2 of IS 205: 1992.
ii) Extruded brass butt hinges - As per Table 3 of IS 205: 1992.
iii) Cast brass butt hinges - As per Table 4 of IS 205: 1992.
iv) Sheet brass butt hinges - As per Table 5 of IS 205: 1992.

2. Considering the above, following grouping guidelines is developed for GoL/CSoL:

- One sample from each type of Hinges with minimum and maximum size (i.e. length) shall be tested to cover all the sizes of Hinges in that size range for that particular type.

3. The Firm shall declare the varieties they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.

4. During the operation of the Licence, BO shall ensure that all the varieties covered in the Licence are tested in rotation, to the extent possible.

# ANNEX B

## List of Test Equipment

***Major test equipment required to test as per the Indian Standard***

| Sl. No. | Tests used in with Clause Reference | Test Equipment |
|---|---|---|
| 1 | Dimensions and tolerances (Clause 5) | - Vernier Callipers<br>- Micrometer<br>- Dial thickness Gauge |
| 2 | Manufacture (Clause 6) | - Screws of appropriate number<br>- Vernier Callipers<br>- Try Square |
| 3 | Anodizing thickness (Clause (Clause 7.2) | - Stripping method to be used as per IS 1868<br>- Single Pan Balance<br>- Glass Beaker<br>- Phosphoric Acid<br>- Chromic acid (AR quality)<br>- Distilled Water<br>- Stop watch<br>Or Microsection method,<br>Or Eddy current method (Clause 9.2 of IS 1868: 1996) |

***The above list is indicative only and may not be treated as exhaustive.***

# ANNEX C

## Scheme of Inspection and Testing

**1. LABORATORY** - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

**1.1** The manufacturer shall prepare a calibration plan for the test equipments.

**2. TEST RECORDS** – The manufacturer shall maintain test records for the tests carried out to establish conformity.

**3. LABELLING AND MARKING** – As per the requirement of IS 205: 1992

**4. CONTROL UNIT –** All hinges of same type and size manufactured from same lot of raw materials under identical conditions, in two hours shall constitute a control unit.

**5. LEVELS OF CONTROL -** The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

**5.1** All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

**6. REJECTIONS –** Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

# TABLE 1

| (1) | | | | (2) | (3) | | |
|---|---|---|---|---|---|---|---|
| Test Details | | | | Test equipment requirement R: required (or) S: Sub-contracting permitted | Levels of Control | | |
| Cl. | Requirement | Test Method | | | No. of Sample | Frequency | Remarks |
| | | Clause | Reference | | | | |
| 4 | Material | 4.1, Table 1 | IS 205<br>IS 733<br>IS 319<br>IS 292<br>IS 410<br>IS 739<br>IS 7608<br>IS 280<br>IS 4413<br>IS 6258 | S | One | Each cast | For products which are under mandatory certification of BIS, the materials shall be ISI marked and received with manufacturers test certificate. For other materials, further testing is not required, if consignment received with test certificate or ISI marked.<br><br>@@ |
| 5 | Dimensions and Tolerances | 5.1, 5.2 Table 2 to Table 6 | IS 205 | R | 5 | Each control unit | At the starting of production, 10 samples shall be tested and normal frequency shall be followed if all the samples are conforming.<br><br>In case of failure, machine shall be reset and 10 samples shall be tested again and normal frequency shall be followed if all the samples are confirming.<br><br>Production during one hour before resetting of machine shall not be marked. |
| 6 | Manufacture | 6.1 to 6.3 Table 2 to Table 6 | IS 205 | R | 5 | Each control unit | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7 | Workmanship and Finish | 7.1, 7.2 | IS 205<br>IS 1868 | R | Each | - | However, in case of aluminium hinges, quality of anodized finish shall be tested at frequency of one sample per batch anodized at a time |

@@ For inhouse cast product, sample for physical and chemical test shall be carried out as per frequency given below:

- Frequency of testing shall be one sample for each melt of 1000 kg or part thereof for first three melts. After that one sample shall be tested from every tenth melt, if manufactured from tested ingots/billets else one sample from every fifth melt shall be tested. On failure of any sample, every melt shall be tested till three consecutive samples pass.

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.