PRODUCT MANUAL FOR
FLOOR SPRINGS (HYDRAULICALLY REGULATED)
FOR HEAVY DOORS
ACCORDING TO IS 6315: 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** : IS 6315: 1992
   
   **Title** : Floor Springs (Hydraulically Regulated) for Heavy Doors
   
   **No. of Amendments** : 1

2. **Sampling Guidelines:**
   
   a) **Raw material** : As per clause 5 and Table 1 of IS 6315: 1992
   
   b) **Grouping guidelines** : Please refer ANNEX – A
   
   c) **Sample Size** : Floor springs – 1 set for all tests

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:**

   Licence is operated on factory testing basis and hence all tests shall be carried out in factory

6. **Scope of the Licence:**

   “Licence is granted to use Standard Mark as per IS 6315: 1992 with the following scope:

<table>
<thead>
<tr>
<th>Name of the product</th>
<th>Floor Springs (Hydraulically Regulated) for Heavy Doors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td></td>
</tr>
<tr>
<td>Overall dimensions of floor spring assembly</td>
<td></td>
</tr>
</tbody>
</table>
ANNEX A

Grouping Guidelines

1. IS 6315: 1992 covers Floor Springs (Hydraulically Regulated) for Heavy Doors which are categorized as under:
   a) Type of floor springs based on operation:
      i) Single action floor spring - Right hand floor spring
         Left hand floor spring
      ii) Double action floor spring
   b) Dimension and tolerances of floor springs is as per agreement between the purchaser and the manufacturer.

2. Considering the above, following grouping guidelines is developed for GoL/CSoL:
   a) One sample of floor spring of each overall dimension from each type i.e. single action and double action shall be tested for all requirements to cover floor spring of that overall dimension and type in the scope of licence.
   b) From single action floor spring, either right-hand floor spring or left-hand floor spring shall be tested to cover both right-hand and left-hand floor spring.

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

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Tests used in with Clause Reference</th>
<th>Test Equipment</th>
</tr>
</thead>
</table>
| 1.      | Dimension and tolerance (Clause 7)  | - Vernier calliper  
         | (As per agreement between the purchaser and the manufacturer) | - Micrometer  
         |                                                   | - Radius gauge  
         |                                                   | - Plug gauge  
         |                                                   | - Thread ring and plug gauge |
| 2.      | Construction (Clause 8)            | - Conditioning chamber to maintain temperature of 49 °C and – 10 °C |
| 3.      | Performance requirements (Clause 9) | - Endurance test setup with operation of door leaf of 125 kg at the rate of 6 to 8 operation per minutes with counter to measure the operations at 90° from the original position (As specified)  
         |                                                   | - Angle Protractor  
         |                                                   | - Stop watch  
         |                                                   | - Door opening force measurement arrangement such as spring balance etc. |

The above list is indicative only and may not be treated as exhaustive
ANNEX B

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 equipment.

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 6315: 1992

4. 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.

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

5. 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.
Further testing is not required if each consignment received is accompanied with test certificate or ISI marked. The product which is covered under mandatory certification of BIS shall be ISI marked and received with manufacturers test certificate.

In case of failure of sample, marking shall be stopped. Marking may be resumed only after passing of two improved lots in endurance test. Record of such testing shall be maintained.

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.

### TABLE 1

<table>
<thead>
<tr>
<th>(1) Test Details</th>
<th>(2) Test equipment requirement</th>
<th>(3) Levels of Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Methods</td>
<td>R: required (or) S: Sub-contracting permitted</td>
<td>No. of samples</td>
</tr>
<tr>
<td>Requirement</td>
<td>Clause</td>
<td>Reference</td>
</tr>
<tr>
<td>3 Material</td>
<td>3, Table 1</td>
<td>IS 6315</td>
</tr>
<tr>
<td>6 Manufacture and construction</td>
<td>6.1, 6.2</td>
<td>IS 6315</td>
</tr>
<tr>
<td>7 Dimensions and tolerance</td>
<td>7</td>
<td>IS 6315</td>
</tr>
<tr>
<td>8 Construction</td>
<td>8.1 to 8.7</td>
<td>IS 6315</td>
</tr>
<tr>
<td>9 Performance Requirements</td>
<td>Performance test</td>
<td>9.2, 9.3,9.4</td>
</tr>
<tr>
<td>Endurance Test</td>
<td>9.1</td>
<td>IS 6315</td>
</tr>
<tr>
<td>10 Workmanship and finish</td>
<td>10</td>
<td>IS 6315</td>
</tr>
<tr>
<td>11 Workmanship and finish</td>
<td>11.1, 11.2</td>
<td>IS 6315</td>
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