

**Government of India
Ministry of Railways**



**GUIDELINES
FOR PROCURING STAINLESS STEEL PLATE
TO BE EMBEDDED WITH RAIL PAD
(Provisional-2019)**

**Track Design Directorate
Research Designs and Standards Organisation
Manak Nagar, Lucknow-226011**

0. Foreword

- 0.1 This guideline is being issued for the first time as, in compliance to Railway Board's letter no. 2004/Track-II/22/22/1 Pt. (RDSO) dated 02.04.2019, as per requirements of Indian Railways.
- 0.2 This guideline is intended to cover the technical provisions relating to material, manufacturing and tests of Steel plate for Steel Embedded Rubber Pad for Zero Toe Load Fastening System on H – Beam Sleepers.

1. Scope

- 1.1 This guideline covers the requirements, methods of sampling and tests for the Steel plate to be embedded with 10mm thick grooved rubber sole plate to IRS Specification of 10mm thick grooved rubber sole plates for placing beneath the rails (Provisional) - 1989.
- 1.2 Un-vulcanized rubber sheet shall be placed on the prepared surface of the Stainless Steel Plate for molding to a hydraulic press on recommended time & temperature in a closed mould.

2. Material

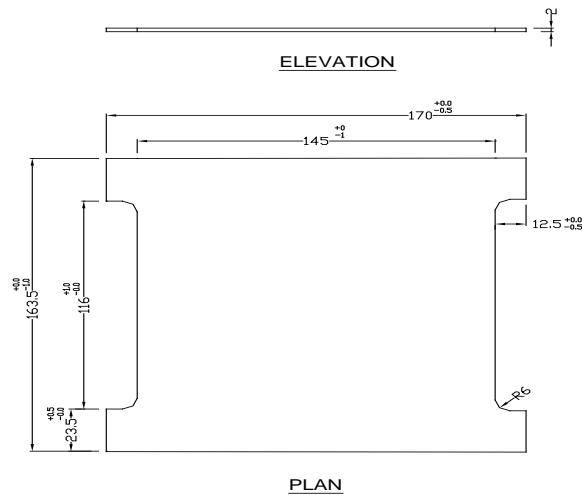
- 2.1 The Stainless Steel Plate as per ASTM A-240 Grade Type 410 to be procured from the reputed suppliers.
- 2.3 The brands of raw material shall be on the discretion of the manufacturer, provided the product meets all the requirements stipulated in this specification.

3. Manufacture

- 3.1 Stainless Steel Plate shall be suitably treated to ensure proper adhesion between the rubber and the plate by adhesive.
- 3.2 Adhesion test shall be conducted according to ASTM D – 429, in tensile testing machine having a speed of 50 mm/ minute and the load of separation between Rubber & Stainless Steel is not less than 23 Kgf/sq.inch in stripping test.

4. Dimensions & tolerances

- 4.1 The Dimension and tolerances of Steel plate for steel embedded rubber pad shall be as per the following drawing.



5. Lot size and sampling

- 5.1 For the purpose of inspection, 1000 steel plates or a part thereof shall form a lot.

6. Inspection

6.1 Tests

Nature of Test	No. of Samples Per batch	Acceptance level
(i) Material	1	Clause 2.1
(ii) Adhesion	2	Clause 3.2
(iii) Dimension	50	Clause 4.1

All the samples shall pass in the respective tests.

- 6.2 The Inspecting or Purchasing authority shall have free access at all reasonable times to the works where the Steel plates for Steel embedded rubber pads are manufactured. He shall be at liberty to inspect the manufacture at any stage and to reject any material or supplies that do not conform to the terms of the specification.
- 6.3 The manufacturer shall supply the samples required for testing free of charge and shall at his own cost furnish and prepare the necessary test pieces and supply labour and appliances for such testing as may be carried out in his own premises in accordance with this specification.

7. Documentation

7.1 The results of testing shall be documented in suitable format.

7.2 The inspection and test results shall be furnished before delivery.

8. Packing

8.1 The steel plates for embedded rubber pad shall be packed in multiple of 1000 numbers, placed flat one upon another in box of suitable size with waterproofing property on the outer layers of the box.

--- XXX ---.