



**RESEARCH DESIGNS AND STANDARDS ORGANISATION
Manak Nagar, Lucknow-226011**

Track Machine and Monitoring Directorate

SPECIFICATION NO TM/HM/6/361 REV-1

**SPECIFICATION OF BOLT FOR TAMPING UNIT OF UNIMAT 08-475 4S
(Part no.W37.2382)**

(Date effective: --/--/2025)

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**SPECIFICATION NO. TM/HM/6/361 REV-1
(Provisional)**

**SPECIFICATION OF BOLT FOR TAMPING UNIT OF UNIMAT 08-475 4S
(Part no.W37.2382)**

- 1.0 Scope:** This specification covers the dimensional, functional, and material requirements with testing criteria of the Bolt for Tamping Unit of UNIMAT 08-475 4S (UNI-4S). This specification may be treated as provisional subject to modifications based on service performance.
- 2.0 Reference Document:** Following Document and specification have referred to in this specification. Full set of relevant drawings and the referred codes/specifications duly incorporating the updated corrections / amendments shall be available for reference at manufacturer's work.
- i) BS: 970 Part II Specification of direct hardening alloy steel.
 - ii) IS: 77- 1976: Linseed oil for paints specifications.
 - iii) Drawing No: RDSO/TM/06/15 Rev-1 Bolt for Tamping Unit of UNI-4S
- 3.0 Functional Requirement:** The Bolt for Tamping Unit of UNI-4S is provided to hold the bearing rail. All surfaces meant for machining shall be finished as mentioned in the Drg. No. RDSO/TM/06/15 Rev-1
- 4.0 Dimensions and Tolerance:** Dimension and tolerance of the Bolt shall be as mentioned in drawing no. RDSO/TM/06/15 Rev-1.
- 5.0 Material:** The Bolt for Tamping Unit of UNI-4S shall be made of steel grade 817M40 ~~(EN24)~~ (EN-19) conforming to BS: 970 Part- II Specification of direct hardening alloy steel.
- 6.0 Manufacturing Process:** The Axle Bolt for Tamping Unit of UNI-4S shall be made by forging and machining process of specified material.
- 7.0 Heat Treatment:** Heat treatment of the Bolt shall be done to achieve case hardening of 50-55 HRC up to 1.25 mm depth.
- 8.0 Marking:** Month and year of manufacture and manufacturer's code/identification shall be engraved / embossed on the non-functional surface of each component.
- 9.0 Inspection and Acceptance Criteria:**
- i. Each component offered by manufacturer shall be checked visually for their surface finish, freedom from defect like porosity, cracks, improper edges etc. Machined surface shall be checked by any suitable pneumatic or electronic equipment.
 - ii. The component found suitable after visual inspection shall be checked for their dimensional characteristics as per relevant drawing.
 - iii. Minimum one or 2% of sample of the Corner Roller randomly picked up from each lot of consignment shall be checked for their hardness per Para no.7.0.

- iv. Minimum one no or 2 % sample of the Corner Roller randomly picked up out of each lot of consignment and shall be subjected to chemical composition test. The consignee shall test the material for chemical composition at his laboratory or get the material tested in a reputed (NABL accredited or accredited by other international body like APLAC, MRA, ILAC etc) laboratory having proper facilities for testing. Before sending the samples for testing, the same shall be duly sealed and secret coding shall be done.
- v. Any deviation in the test result shall be the cause of rejection.

10.0 Packing and Protection: Each item shall be protected with one coat of boiled linseed oil conforming to IS: 77-1976 (Linseed oil for paint) and shall be packed in cardboard case.
