

ISO 9001:2015	Document No: TM/HM/6/537	Version No:0.0	Date effective: 19/06/2023
Specification of Guide Rod for Tamping Unit (Part no. WN153.82f7.1340.01)			



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SPECIFICATION NO.TM/HM/6/537
SPECIFICATION OF GUIDE ROD FOR TAMPING UNIT
(PART NO. WN153.82f7.1340.01)

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- 1.0 Scope:** This specification covers the dimensional, functional and material requirements with testing criteria of guide rod for tamping unit. This specification may be treated as provisional subject to modifications based on service performance.
- 2.0 Reference documents:** Following documents have been referred to in this specification. Full sets of relevant drawings and the referred codes/specifications, duly incorporating the updated corrections/amendments, shall be available for reference at manufacturer's works.
- i) BS: 970 - Part II -Direct hardening alloy steel - Specification.
 - ii) IS: 77-1976 - Linseed oil for paints - Specification.
 - iii) RDSO Drg. No. RDSO/TM /06/23 – Guide rod for tamping unit.
- 3.0 Functional requirement:** Guide rods are provided in tamping unit for guiding the up and down movement of tamping unit. It is fixed in machine frame and has relative clearances for movement with tamping bank. All surfaces meant for machining shall be finished as mentioned in the drawing no. RDSO/TM/06/23.
- 4.0 Dimension & Tolerance:** Dimensions and tolerances of the guide rod for tamping unit shall be as mentioned in RDSO drawing no. RDSO/TM/06/23.
- 5.0 Material:** The guide rod for tamping unit shall be made from Steel of Grade 817 M40 (EN-24) conforming to BS: 970 Part-II Specification of direct hardening alloy steel.
- 6.0 Manufacturing Process:** Guide Rod for tamping unit shall be made by closed die forging only under belt drop forged hammer of adequate capacity capable of delivering minimum energy or force required for deformation during closed die-forging of guide rod. Forging shall be machined to get final shape.
- 7.0 Heat Treatment:** Heat treatment of each component shall be done by induction hardening process to achieve case hardening of 50-55 HRC up to 1.25 mm depth.
- 8.0 Chromium plating:** Hard chrome plating of 0.07-0.10mm shall be done to provide hard, corrosion resistant surface of the guide rod.

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9.0 Marking: Month and year of manufacture and manufacturer's code / identification shall be engraved / embossed on the non-functional surface of guide rod.

10.0 Inspection And Acceptance Criteria:

- i) Each components offered by manufacturer shall be checked visually for their surface finish, freedom from defects 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 dimensions as per relevant drawing.
- iii) Minimum one or 2% of sample randomly picked up from each lot of consignment shall be checked for their hardness and hard chrome plating as per Para no.7.0 & 8.0.
- iv) Supplier shall produce the certificate that the raw material used for manufacturing of the Guide Rod for tamping unit conforms to the Steel Grade 817M40 (EN-24) of BS:970 Part II as mentioned in Para 5.0.
- v) Minimum one no or 2 % sample of the guide rod 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.
- vi) Any deviations in the test result from the requirement of the specification and drawing shall be the cause of rejection.

11.0 Packing and Protection: Each component shall be protected with one coat of boiled linseed oil conforming to IS:77-1976 (linseed oil for paint) and shall be packed in card board case.

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