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Document Title: Manufacturing of Rail drilling Machine			



सत्यमेव जयते
Government of India

**ITEM SPECIFIC GUIDELINES
&
Schedule of Technical Requirement
FOR
MANUFACTURE AND SUPPLY
OF**

Rail Drilling Machine

ट्रैक मशीन एवं मॉनिटरिंग निदेशालय
अनुसंधान अभिकल्प एवं मानक संगठन
मानक नगर, लखनऊ - 226011

**Track Machines & Monitoring Directorate
RESEARCH DESIGNS & STANDARDS ORGANISATION
MANAK NAGAR, LUCKNOW – 226011**

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1243467/2022/O/o PED/INFRA-1/RDSO

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1.1 SCOPE:

This schedule of technical requirement covers the material, technical and functional requirements and testing criteria of ‘Rail drilling Machine’ which is needed for drilling holes in all section of rails using drill bit. In this specification “Rail Drilling Machine” will be termed as “Machine” for conveniences. The machine should comprise of an integrated driving engine with drilling unit coupled together rigidly to form a compact unit.

1.2 The schedule of technical requirements covers the norms for manufacture and supply of ‘Rail drilling Machine’.

1.3 Supplier is fully responsible to maintain the quality of product supplied to Indian Railways as per specification.

2.0 REFERENCE DOCUMENT:

Following IS codes have been referred to in this specification. Updated copies of the same shall be available in the works of the manufacturer/Suppliers.

- i) IS: 5103–1969 (Reaffirmed 2008): specification for Twist Drills, Morse Taper Shanks.
- ii) ISO Apex Documents of RDSO.

3.0 General and Manufacturing Facilities:

The vendors seeking approval shall comply all the below mentioned requirements.

3.1 The firm should possess experienced and sufficient man power like manager, supervisors, laboratory in charge, quality controller and workmen. The necessary qualification of the work force should depend upon their job requirements. The firm should maintain approved QAP, copy of which should be available at the firm’s premises. The specification and drawings along with all the IS/BIS specifications mentioned in Rail drilling Machine should be available at site for reference. The firm should preferably possess a valid ISO certification.

3.1.1 The firm should have adequate Space for stacking/storage of Raw material & finished product. The lay out plan of firm should be available.

3.1.2 Covered area free from dampness and humidity with adequate space for storage of related components.

3.1.3 The firm should have environment conducive to the production of Quality goods. (Orderliness, lighting, cleanliness of around working conditions etc.)

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3.1.4 The weighing facilities for measuring various raw material constituents and the product at various stages.

3.1.5 Facilities for installation of components.

3.1.6 Grinding machine, Drilling machine, Cutting machine, lathe machine, Painting equipment, shaper machine, Milling machine and welding equipment etc.

3.2 **TESTING FACILITIES:** The Following testing facilities and measuring instruments should be available with the firm.

3.2.1 A separate room/laboratory, mixing with all testing facilities required for testing of the component of product.

3.2.2 Necessary tools with measurement gauges such as surface plate, height gauge and Vernier Calipers with a least count of 0.02 mm should be available in the tool room.

3.2.3 Steel Scale (Linear), weighing machine, spindle rotation measuring equipment, thickness gauge should be available.

3.2.4 Any other facility required for testing method given in the specification.

4.0 **Quality Control Requirements:**

There should be a system to ensure the traceability of the product from raw material sample to finished product stage. This system should also facilitate to identify the raw material composition from the finished product stage.

4.1 There should be QAP for the product detailing following aspects.

- i) Organizational chart
- ii) Flow Process Chart
- iii) Stage inspection details
- iv) Plants and machinery as per STR.
- v) All the relevant specification and IS Standards should be available with the firm.

5.0 **Major Components details:**

SN	Name of component	Self-make	Procured from outside agency	Remark
1.	Base	Drawing details, manufacturing details should be available.	Details of Outside agency should be available.	Raw material / equipment shall be procured only from the reputed & well-proven
2.	Pulley	-Do-	-Do-	

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3.	Trolley frame	-Do-	-Do-	sources, conforming to relevant standards. Critical components shall be procured from reputed OEMs or their accredited agents / RDSO approved sources.
4.	shaft	-Do-	-Do-	
6.	Rail clamp	-Do-	-Do-	
7.	Water bouquet	-Do-	-Do-	

Test of major components:

SN	Name of component	Test
1.	Engine	Checked visually, dimensionally and also should be as per specification.
2.	bearings	-Do-
3.	V. belt	-Do-
4.	Castings	-Do-

6.0 Working manual:

The firm should have working manual of product.

- i) Detailed operating manual
- ii) Maintenance manual
- iii) Safety precautions to be taken
- iv) Service manual
- v) Parts manual

7.0 Power availability (KVA): Following document should be available.

- (a) General allotted capacity
- (b) Standby generator and its capacity, if available.
- (c) Name the party/person in whose name the power is sanctioned and your agreement with the party/person (Support with documents)

8.0 Calibration Record :

SN	Name of the machine & quantity	Year of manufacture	Capacity	Date of calibration	Due date of calibration

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9.0 Details of Manpower:

- i) The firm should have separate in-charge of Quality Control & production.
- ii) The firm should have minimum 01no. skilled staff and 02 nos. un-skilled staff.

SN	Name of Staff	Designation	Qualification	Experience

10.0 Raw material record:

The firm should maintain list for raw material/bought outs.

SN	Name of Item	Quantity	Date of Incoming	Approved source (Yes /No)	Details of source

11.0 Document:

- i) Ownership details of the firm should be available.
- ii) The firm should have necessary updated specifications, ISO apex. Document, IS Codes, Drawings, STR/Specification guidelines.
- iii) The firm should possess digital signature & its registration with IREPS.
- iv) The firm should have valid SSI/NSIC/ Factory license.
- v) The firm should have valid GEM registration.
- vi) The firm should have Local content details.

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