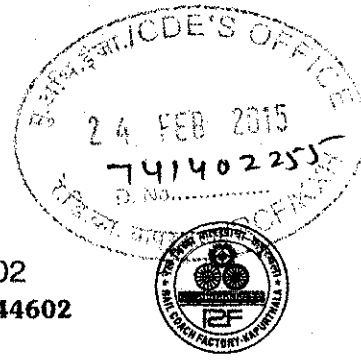




रेल डिब्बा कारखाना, कपूरथला-144 602
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MD 46231/

Dated:23-02-2015

Sub: Issue of specification no. MDTS-11273 Rev-Nil for schedule of infrastructure requirements for cold rolled formed (CRF) products for passengers coaches.

Please find enclosed a copy of specification no. MDTS-11273 Rev-Nil as subjected above.

M. S. Misra
Dy CME/D3

CQM

CPLE

CWE/Shell

CWE/Fur

CMM/RCF

CMT


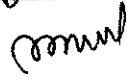

CMM/TKJ

✓ SSE/Record
SSE/Lib/Design,
SSE/Design/RCF/TKJ

Copy for kind information to:

Dy CME/D-1
CDE

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Name	Designation	Signature	Date	Level
Pradeep Kumar	SSE/Underframe		23.2.15	Prepared
Lalit Kishore	Dy CME/D-III		23.2.15	Reviewed and Agreed
Parmanand Singh	CDE		24.2.15	Approved

Rev. No.	Details of Changes	Date
Nil	Nil	Nil


Prepared By


Agreed By

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1. Scope:

This schedule describes the infrastructure requirements for cold rolled formed products at the tenderer premises in working order.

2. Eligibility Criteria:

- 2.1. Bulk or regular procurement orders shall only be given to the firms who have infrastructure as mentioned in para # 3, 4 and 5 of this specification and should have supplied at least 100 MT of CRF sections in stainless steel in any of the last three financial years. Firm will be assessed by CDE/RCF wherever required for ascertaining the infrastructure.
- 2.2. Developmental order shall be given to the firms who have supplied less than 100 MT of CRF sections in stainless steel in any of the last three financial years and shall have infrastructure as mentioned in para # 3, 4 and 5 of this specification. Firm will be assessed by CDE/RCF wherever required for ascertaining the infrastructure.
- 2.3. The tenderer must submit detailed clause-wise comments on the specification specifying the availability of infrastructure with them along with the capacity and make. In absence of above, offers shall be deemed as incomplete and may not be considered.

3. Infrastructure requirements:

- 3.1. Firm should have separate covered area for manufacturing only stainless steel to avoid iron contaminations and also having adequate space underneath for storage of raw materials e.g. sheets, billets, round corner squares, rounds etc. The covered area should have display board showing different colour shades nominated to different grades of steel to avoid mix up of materials. Arrangement of painting the billets, rounds etc with particular paint shade previously nominated according to the grade of steel should be available.
- 3.2. Firm should have capability to prepare flower diagram of sections, software to validate the flower diagram of the sections and capability to prepare design and drawing of rollers required, based on the flower diagram.
- 3.3. Firm should have technical literature, specifications, etc. related to Cold Roll Forming.
- 3.4. Firm should have facilities for manufacturing rollers (outsourcing is permitted).
- 3.5. Firm should have slitting machine (not applicable if using pre-slit sheets, also outsourcing is permitted)
- 3.6. Firm should have decoiler.

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- 3.7. Handling equipment such as slings, hooks and lift truck forks should be protected with clean wood, cloth or plastic buffers to reduce contact with the iron surface.
- 3.8. Firm should have CRF mill capable of width, height and thickness of coil/plate for manufacturing of tendered items. The width of mill shall depend on the type of product. The width of mill must be mentioned in the offer.
- 3.9. Firm should have facility for marking on each piece of Cold Roll Formed section using suitable means (in-process electronic punching / Power Press/ Any other means).
- 3.10. Firm should have at least 1 No. Fork-lift and 1 No. Over-head crane of 2t (Min.) capacity.
4. If there is need of welding in the product, besides requirements mentioned in clause-3 above, firm should have facility for TIG welding with only Argon gas or MIG welding with Tri- Mixture gas (90% Argon +5% O₂ +5% CO₂ gas).

5. Testing Facilities:

5.1. **Chemical Lab:** The tenderer should have permanent arrangement with NABL certified Lab or a reputed steel making company for arranging the spectrum analysis of the material.

5.2. **Physical Testing Lab:** The tenderer should have physical lab at firm premises having universal Testing machine of suitable capacity with load/ deflection plotting arrangement to conduct UTS, Yield strength. The firm shall have arrangement for conducting non- destructive test for welding as per requirement of the purchaser in house.

5.3. **Measuring Instruments:** Firm should following measuring instruments, duly calibrated, at firm's premises:

- 5.3.1. Digital Vernier Calipers - 0 mm to 300 mm.
- 5.3.2. Measuring scales – 3 meter
- 5.3.3. Inside & outside Micrometers - Ranging from 0 to 150 mm
- 5.3.4. GO & NO-GO gauges.
- 5.3.5. Profile gauges
- 5.3.6. Filler gauges

6. Testing and Approval of Prototype:

6.1. Tenderer must submit and get approval of Quality Assurance Plan from CDE/RCF before taking up prototype manufacture.

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7. Code of Practice for Quality Control and Inspection:

- 7.1. Regular inspection shall be done by inspecting agency as per approved Quality Assurance Plan.
- 7.2. The manufacturers shall furnish to the purchasing/ inspecting authorities information in respect of quality control systems in force at their works on various materials used in the manufacture of components.
- 7.3. The manufacturers shall furnish to the Purchasing/ Inspecting authorities the details of tests and inspection records and other relevant records as required under the quality control systems in force.
- 7.4. These records and reports shall be maintained by the Competent Technical Authority of the manufacturer and shall be open to examination by the Purchasing/ Inspecting Authorities at all reasonable time.
- 7.5. Purchasing/ Inspecting Authorities at their discretion may draw samples of products at any stage of production for conformity tests at the works of the manufacturer or in an approved laboratory. In case the samples do not conform to the requirements of the specification, double the number of samples from the same lot/batch shall be drawn for re-tests. If any of the re-test samples do not conform to the requirements, the entire lot/batch shall be rejected.
- 7.6. RCF may carry out in-process inspection of manufacturing of at the firm premises.

8. Identification Marking:

- 8.1. Each product shall be stamped with an easily visible identification indicating the serial number, year of manufacture and manufacturer's name to facilitate identification/correlation with the inspection/ test results.

9. Packing:

- 9.1. The packing shall be such that the product is not deformed during transportation.

10. Warranty:

- 10.1. The manufacturer shall warrant the product for conformance to quality for a period of 30 months from date of supply or 24 months from date of installation which ever shall be sooner, as per IRS conditions.

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