| RAIL COACH FACTORY, KAPURTHALA | | | |
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1.0 **INSTRUCTIONS TO TENDERERS FOR FILLING TECHNICAL BID**

1.0 Bidders are required to give clause wise comments on the technical specifications, confirming compliance/non-compliance with details of deviations if any along with their effect on the performance. Back references to be avoided, offers are likely to be ignored in case of non-compliance of these instructions for furnishing the information.

1.1 Unless otherwise stated, latest alterations/ revisions of specifications/ standards/ drawings shall be applicable. In respect of safety standards and environmental standards relevant to the machine, the machine manufacturers shall ensure compliance with international (CE/ISO/DIN/JIS)/National standards (IS) (wherever applicable).

1.2 Tenderers should offer and quote for all the specified concomitant accessories, as these are considered essential for commissioning and utilization of the machine. Even if bidder does not recommend the purchase any of these accessories, the price must be quoted for comparison purposes and their recommendation/suggestion indicated in the offer.

1.3 Tenderers should also quote for optional accessories, spares and consumable spares as asked in the specifications.

1.4 In case, any item is required in sets, please specify nos./pieces per set. This is essential for proper technical evaluation of the offer. Offers received without this may be considered as incomplete and liable to be rejected.

1.5 The bidder should quote only for the specified make of sub-assemblies and equipment wherever specified. Makes of sub-systems other than the specified ones will normally not be acceptable. In case, some other make is quoted, specific reasons for the same including its features/advantages over specified makes must be brought out in the offer.

1.6 In case there is a contradiction in any information provided (some parametric values given in the specification and those given in the brochure or some other document enclosed by the tenderer), unless specifically mentioned in the deviation cum confirmation statement the values as given in the specification shall be taken as confirmed by the tenderer and offer evaluated accordingly.

1.7 The Purchaser may accept internationally accepted alternative specifications which ensure equal or higher quality than the specifications mentioned in the Technical Specification. However, the decision of the Purchaser in this regard shall be final.

1.8 Purchaser reserves the right to verify the details submitted by the bidder by actual site visits.

1.9 Other terms & condition of the contract will be as per Indian Railway Standard conditions of contract.

1.10 Tenderer not submitting the requisite information may note that his offer is liable to be ignored.

1.11 **Tenderer shall design the arrangement as per RCF requirement.**

**1.12** The CAMC (Comprehensive Annual Maintenance Contract) shall be kept for a period of 05 years after the completion of the warranty period, irrespective of the type of machine/equipment. **The tendered item shall be treated as ~~Critical/~~ Non-Critical from CAMC point of view.**

1.13 Bidder shall quote year-wise CAMC cost for a period of 5 years in the following format:

| Year | AMC Charges (in Rupees) Without Taxes | Remarks |
|---|---|---|
| | | |

| | | |
|---|---|---|
| Ist Year | | |
| IInd Year | | |
| IIIrd year | | |
| IVth year | | |
| Vth year | | |

In case, any bidder has not quoted year-wise cost of CAMC and only single value has been offered for 05 years CAMC, linear cost division method shall be followed for calculating yearly CAMC cost. It will imply that CAMC cost of each of the 05 years will be *total quoted CAMC cost divided by tenure in years of CAMC*.

1.14 For CAMC, a Bank Guarantee (BG) equivalent to 10% of the PO value of the machine/ equipment shall be deposited by the contractor to the concerned division/section of Executive department as authorized by PHOD/ CHOD of the department, 90 days before the expiry of warranty. BG shall have validity of 5 years and 6 months. The period of CAMC can also be decided to be less than 5 years, if need be at this stage, with the approval of PHOD/CHOD, in which case the validity of BG will be decided accordingly. In addition to the above, Railway reserves the right to cancel the CAMC at any stage of Contract.

1.15 As indicated above, CAMC cost shall be made part of Evaluation Criteria of the Tender. However, this cost will not be part of the Contract Value (PO value).

The CAMC payment will be made quarterly after certification by the consignee/user regarding satisfactory performance.

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**2.0 PURPOSE**

**2.1** This item is required to provide a portable solution for the weighing of rail coaches on track, along with real-time monitoring and tracking capabilities. The system must be capable of weighing each axle individually, displaying both the total weight of the coach and the individual weights of each wheel and axle on an integrated indicator.

2.2 Operation shall be simple: as the wheel flange rolls onto the equipment ramp, the tyre is slightly raised above the rail head to enable accurate weighing. The system must support axle-by-axle weighing, placing no restrictions on coach type. It shall be factory pre-calibrated, with the capability to obtain individual wheel weights.

**3.0 DESCRIPTION AND SCOPE OF SUPPLY**

**3.1** The scope covers design, manufacture, supply, installation and commissioning of Portable Rail Weighing Bridge as per below specifications and major parameters.

**3.2** The system should be:

i) Compact, sturdy, and lightweight, suitable for transport in the boot of a car.
ii) Easily deployable, enabling spot checks and weighing of rail vehicles or trains anytime and anywhere.
iii) Load cell-based, designed to fit the inner sides of most conventional rails.

**3.3** It shall include Loadcells, Scale main bodies, Set of shoes (to suit nominated rail type), Set of spacers, Height measuring rod (to suit nominated track gauge), Weight indicator and printer housed in carry case, Rechargeable batteries, Battery charger, Spanner, Cable set, Operation manual, Transportation case, Laptop and a customized PC software that:

i) Displays all weighing results clearly.
ii) Records and stores data for analysis and tracking and related equipment, training of personnel in operation and maintenance of equipment and supply of technical documentation.

**3.4** The supply shall also include all equipments and accessories which the manufacturer considers essential to make the equipment fully functional when installed and put into operation.

**3.5** Other concomitant accessories/ equipment which the manufacturer considers essential to make the machine fully operational when installed and commissioned with requirement of utilities, etc if any, shall be clearly indicated by tenderer in the offer.

**3.6** The total value of the offer will be calculated on.

i. The cost of the basic equipment.
ii. Cost of the concomitant accessories according to tenderer specification.
iii. Cost of any other accessory treated as concomitant accessory.
iv. Application duties and taxes, insurance, freight and installation and Commissioning charges.
v. Cost of CAMC for period 05 years. However, this will not form part of Contract Value.
vi. Cost of Preventive Maintenance during warranty.

**3.7** Technical experts of the manufacturer during commissioning of machine will fully and adequately train the operators/ maintenance staff nominated by the consignee including repairs of electronic gadgets and sub-assemblies. Training must include ergonomics, health and safety, and fail-safe procedures in accordance with IS 14489.

**4.0 GENERAL FEATURES**

**4.1** The system should provide the weight of each wheel, axle, bogie, coach and rake.

**4.2** The system should provide the balancing detail of L/R wheel, axle – axle, Bogie – Bogie.

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**4.3** The system should be portable/movable/mobile so that it can be installed at a desired location without any civil or mechanical modification at the site or the system.

**4.4** The system should be able to install in the pit/bay of the workshop or on the raised track outside the workshop of the factory without any modifications in the system or site.

**4.5** The system should be robust enough to stay installed full time on the track even when the coaches are not weighed or moved. Protection class should be confirming to IP-68/IP-65. Also, the necessary provision should be made to reduce the system's wear and tear while installed but not in use. If any additional accessories are required to achieve this purpose, they should be supplied with the system.

**4.6** The desired time for installation of the system at the site should not be more than 1 hour after the availability of clear site.

**4.7** The system should use load cell based technology.

**4.8** The supplier should provide robust and secure carrying cases for all the system components for easy movement in the field and convenient storage

**4.9** The same system should be suitable for different types of rails, i.e., UIC 52 and UIC 60.

**4.10** The system should be factory pre-calibrated without the requirement of test weights or calibrated wagons at the site.

**4.11** The supplier must provide the calibration jig/system for periodic calibration of the load cells in-house. The calibration bench or test jig should also be able to test or simulate the conditions under which the system is actually used, which simulates the in-track conditions

**4.12** The system should weigh the coaches in static and dynamic modes as per the user's requirement.

**4.13** The connectivity between a remote controller/PC and the parts of the system installed on the track/rail, should be wireless. The wireless connectivity shall use 2,4 Ghz Telemetry and shall use the free frequency band. Wheel Weights, Axle Weights, Bogie weights should be only displayed on the remote controller / PC.

**4.14** The system should be able to measure the weight and balancing of the four-axle rail vehicle irrespective of the type of the vehicle/coach and varying axle distances.

**4.15** The four-axle system should be upgradable to a six or eight-axle weighing system by adding the hardware for the additional axles only and reusing the existing hardware of the four-axle system.

**4.16** The GUI of the software should be the same for all types of axle configurations and irrespective of the type of rail vehicle.

**4.17** The system should be easily configurable for changes in the orientation of the coach/train and direction while weighing without resetting/closing the GUI/Software.

**4.18** The system should identify the wheels and axles by assigning the incremental numbers in the forward or reverse direction, always in the direction of the coach/train movement.

**4.19** The system should provide the print slip for the measurement immediately after the weighing, without transferring the results into another system.

4.20 The system shall be battery-operated and capable of functioning independently in the field without reliance on an external power supply. It must provide a reliable battery backup of 6 to 8 hours under normal operating conditions and should support fast charging, with the battery being fully recharged in approximately one hour.

4.21 There shall be no track downtime required during installation, and the system shall not require any costly civil works. Additionally, no test train shall be necessary for calibration, as the system shall be factory pre-calibrated and ready for immediate use.

4.22 Given the vulnerability of sensors to theft, the system design must incorporate measures to deter or prevent unauthorized removal or tampering.

**5.0 MAKE**

5.1 The supplier shall clearly mention whether the system quoted is Indian make or imported. If Indian make, the tender shall be accompanied by duly sanctioned factory license & relevant documents & also produce records of installation & satisfactory after sales service performance of their equipment from at least one govt. Institution of similar or large size for duration at least 5 Years duration.

5.2 In the case of an imported item, the Original Equipment Manufacturer (OEM) must have been registered and operational in India for a minimum period of the last five years. If this condition is not met, the dealer must have been an authorized regional supplier and service provider for the OEM for at least the last five years. Furthermore, the tender must be accompanied by an authorization certificate from the OEM, or the tenderer must be an authorized sales and service agent of the OEM.

5.3 The supplier shall furnish the complete details of Model No. Make & Manufacturer's details/ address, Country and authorization details of Dealership.

**6.0 CONCOMITANT ACCESSORIES**

Any other accessory, which in the opinion of the tenderer can contribute to higher performance, shall be indicated and quoted separately.

**7.0 SPARES & CONSUMABLES**

7.1 Details of warranty-covered spares shall be submitted as per *Annexure-A*. Important spare parts and accessories, with part numbers and costs, must be listed in the same format.

7.2 The tenderer shall provide a price list of spare parts required for the normal maintenance of the equipment over a period of two years in the same format of Annexure-A. In case any spare parts used are not manufactured by the OEM, the tenderer must specify the sources of supply for such parts.

7.3 Recommended spares for post-warranty maintenance up to the equipment's useful life must be listed, ensuring market availability through authorized stockists.

7.4 Recommended consumables for two years shall be quoted separately.

7.5 Useful life estimated/expected for each equipment and its sub assembly shall be indicated by the tenderers.

**8.0 DEVIATIONS:**

8.1 The tenderer shall certify that the offered machine fully meets the specification. Various design features incorporated in the machine to fulfil different technical performance requirements shall be fully explained in the offer. However, minor deviations from these specifications which do not affect or in any way interfere with the stipulated performance standards or would result in improved safety/ reliability or would reduce recurring maintenance/operating cost of the machine, can be considered for acceptance. The tenderer in such eventuality shall clearly indicate the details of these deviations and their implications in the offer.

8.2 All Deviations shall be clearly indicated in the deviation statement as per Annexure-B.

**9.0 INSPECTION AND TESTING AT MANUFACTURER'S WORKS:**

9.1 The machine shall be inspected and tested by the purchaser or his authorized representative at the supplier's or his sub-supplier's works. The Quality Assurance Programme shall be submitted along with the bid. The bidder must submit the exhaustive QAP incorporating the tests along with other tests /stage inspection as followed by them.

9.2 The QAP shall include a Sample Inspection Chart for inspecting the equipment which shall be supplied along with the bid. The inspection chart should indicate all the tests that are carried out during the machine manufacture and also the tests to be offered to inspecting agency. The standard to which this inspection chart conforms should be clearly indicated. Against each test, acceptable limit/ range of values shall be indicated.

9.3 A load and functional test shall be done as specified.

9.4 Manufacturers must have suitable facilities at their works for carrying out various performance tests on the sub-assembly/assembly/machine. The tenderer shall clearlyconfirm that all facilities exist and shall be made available to the inspecting authority. Test certificates in this regard shall be submitted by the supplier at the time of supply.

10.0. **TRAINING:**

10.1. Free training by the firm shall be imparted by technical experts from the manufacturer will fully and adequately provide training to operators and maintenance staff nominated by the consignee at the time of commissioning of the machine. Training must include ergonomics, health and safety, and fail-safe procedures in accordance with IS 14489.

**Note: All training should be imparted in English/Hindi only.**

**11.0. INSTALLATION, COMMISSIONING AND PROVING TESTS: (ON TURNKEY BASIS)**

11.1. **Joint Check** — The contractor or his agent would be required to carry out a joint check at consignee's end, along with the consignee, before unpacking is done, to avoid subsequent complaints regarding short shipment/transit damages. It is necessary that this joint receipt inspection be done immediately on receipt of the machine by consignee & bidder's representative to avoid commissioning delays due to shortages/transit damages. After receipt of the machine as above a Joint Receipt Inspection note (JRI) as per Annexure-C shall be prepared by the consignee and the firms representative indicating the tentative time schedule for various activities of installation and commissioning. For Indian manufacturers, JRI note shall accompany the bill for 80% payment.

11.2. **RESPONSIBILITIES OF CONSIGNEE AND BIDDER**

11.2.1. The consignee shall be responsible for-

i) The consignee shall arrange the raw material for prove out at their end within 15 days of the dry run of the machine (installation, power connection, auxiliary connection like air, water connection) failing which such components will be deemed to have been proved out. The components supplied by the consignee in time will be required to be proved out as per time schedule chart.

11.2.2. The bidder shall be responsible for-

i) Provision of all tools and equipment, technical and unskilled manpower, material handling accessories/ equipment and material for installation and commissioning.

ii) Unloading of the machine on receipt (both imported and indigenous machine) and its movement to the site of installation including provision of road mobile crane.

11.3. The bidder should ensure the proper earthing for the machine and its peripherals/accessories.

11.4. Consignee will provide only 415 V+10%-20%, 3 phase 50 Hz+3°/» AC supply at a single point (mains). All types of cables, connections, circuit breakers etc. required for connecting power supply point to different parts of the machine/control cabinets, shall be the responsibility of the bidder.

11.5. The supplier shall demonstrate machine performance and prove out the claimed capability for successful commissioning at the consignee's works to the entire satisfaction of consignee. The M&P shall be deemed to be "commissioned" at consignee premises on the date when it is tested and meets with the specified capabilities/functions according to the technical specifications.

A Joint Commissioning Note (JCN) to this effect shall be made as per the format at Annexure-D. If some minor breakdowns are noticed after the issue of JCN, these shall be attended as per warranty obligations and suitable extension of the warranty period, under intimation to M&P/RCF.

11.6. If an assembly/sub-assembly requires to be taken back to the manufacturer's premises for repair/replacement either before commissioning or during warranty, the manufacturer or his agent would be required to submit BG of suitable amount. In case the entire machine has to be taken back, a Bank Guarantee for the cost of the machine would have to be submitted. The bank guarantee should be of adequate value so as to cover the cost of the assembly/sub-assembly/paid up cost of the machine.

11.7. The performance appraisal report/ Warranty Discharge certificate in the format as per the Annexure-E would be issued by consignee on completion of warranty period should be prepared by the consignee and given to the firm. Copies of this performance appraisal report/ Warranty Discharge certificate should also be sent to PCMM, PFA/RCF and CPE. On getting the performance appraisal report/ Warranty Discharge certificate, the firm will request PCMM for release of WBG. If this report is not received within the validity of WBG, the WBG should either be extended for one year or encashed as the case may be as provided under the rules.

**12.0 DELIVERY SCHEDULE**

| S N | Activity | Activity Code | Time Schedule (to be accepted by firm) |
|---|---|---|---|
| 1 | Issuance of PO | D1 | NA |
| 2 | Supply of Machine | D2 | D1+120 days |
| 3 | Power/ Compressed air Connection for the machine and other on site requirement to be provided by railways. | D3 | Latest by D2 |
| 4 | Installation, Commissioning and Prove Out of machine | D4 | D3+15 days |
| 5 | Warranty | D5 | D4+24 months |

**13.0 SERVICE FACILITY IN INDIA AND TECHNICAL SUPPORT**

13.1 The tenderer will clearly spell out in the offer the facilities available with him or his agent for providing adequate after-sales service in India during warranty period. The complete details such as organization for after sales service, availability of technically competent engineers and warehousing facilities for spares should be clearly indicated. Bidders not offering complete servicing/repair facilities in India to ensure quick response to maintenance/ servicing calls are not likely to be considered.

13.2 After the warranty period and AMC period, if any, the manufacturer or his agent shall agree to provide service supports for trouble shooting and obtaining spare parts. The manufacturer shall be obliged to provide spare parts required by the Purchasers for a period of 15 years from the date of delivery of the machine at the ultimate destination to safeguard against obsolescence.

13.3 Tenderer who are OEM, shall undertake to supply spare parts for a period of expected life of machine. Other tenderers shall submit undertaking from OEM for supply of spare parts for a period of expected life of the machine.

13.4 During warranty period, the supplier or his authorized agent shall attend for break down as soon as possible, but in no case later than 48 hours of receipt of intimation of the breakdown.

**14.0 BOUGHT OUT ITEMS**

14.1 The bidder shall furnish along with the offer a list of all critical items/ sub- assemblies which are bought out by the bidder and proposed to be used, along with the manufacturer's name, brand model etc. The successful bidder may be required to produce invoices to ensure genuineness of such products verification by the Inspecting agency.

14.2 The bidder should clearly indicate that in case of components/sub assemblies taken from reputed companies, the parent company has already entered into contract with their Indian units/affiliates for undertakings repairs/after sales service during warranty and post warranty.

**Note:** 1. In case any other reputed make is offered, satisfactory justification for the same will have to be given in the offer.

2. The bidder should explicitly mention "Not applicable", against the items, indicated above, whichever is not applicable in the offered machine.

**15.0 COLOUR:** The machine and its accessories shall be painted in Apple Green Colour No.281 to IS:5-1978,(if any specific colour code standardized by BIS is available, the same be given). The machine can also be painted in equivalent RAL/DIN/other International Standards. If there is a standard color scheme of the manufacturer, the same can also be considered and may be specified.

**16.0 WARRANTY OBLIGATION -**The following conditions regarding Maintenance and reliability shall also apply:-

**16.1** The machine under consideration shall be designed to have a life expectancy of 20 years. Both the structural components of the machine and its foundation shall be mandated to withstand normal operational conditions for a minimum of 20 years, safeguarding against cracks, breakages, and etc. during the course of normal operations. Tenderer would submit suitable undertaking.

**16.2** In addition to warranty obligations as per IRS condition of contract (i.e. the equipment offered should be warranted against defective design, material, workmanship etc. for a period of 30 months from the date of delivery at ultimate destination or 24 months from the date of commissioning and proving test at destination, wherever, the contract stipulates, or from the date of placement in service whichever is earlier provided defects and/or claims are notified to Contractor within 2/3 months of such date) the warranty period would also cover comprehensive preventive maintenance, which will be inclusive of all spares, material and labour cost. All maintenance consumables like lubricants and grease except hydraulic oil / machine coolants shall form part of the scope of the preventive maintenance during the warranty. The cost of preventive maintenance to be carried out during warranty period should be quoted separately

**16.3** If at any point of time during the first 20 years post commissioning including during the warranty/CAMC period or otherwise, in case the machine develops cracks in the main frame/beam for any reason including on account of failure/cracking of welded joint, the machine shall be liable to be replaced by the supplier with an equivalent new machine at no additional cost to the purchaser. Such replacement would normally be arranges at the earliest but in no case any later than 6 months from the date when a demand for such replacement has been communicated to the

supplier by the purchaser.

**16.4** The payment of preventive maintenance schedule carried out during warranty period shall be made by consignee annually at the end of each year after completion of the work and issue of certificate by the consignee.

**16.5** The machine shall at all times give contractual out-put and accuracy. Any deficiency or break down for a total of 01 hr. or more for a day would be treated as failure for the day, for the purpose of extending warranty period in terms of IRS condition of contract.

**16.6** The tenderer shall ensure that in case a failure is reported by a consignee qualified service engineers shall visit the site within 48 Hours from the date of complaint on calendar day basis. The period of 48 Hours (Excluding date of compliant) after the failure reported shall be treated as grace period, which will not count towards breakdown time for up to one failure per month and a maximum 3 failures per quarter. In case the number of failure exceeds one failure per month or three during any quarter of warranty, grace period of only one day will be permissible for such additional failures. Complaints shall be lodged by consignee by fax, phone, and email whatsapp message or per bearer at address given by the tenderer.

**16.7** The details of preventive maintenance to be provided during warranty period shall be indicated by the tenderer giving details of type of preventive schedule, periodicity on items to be checked, items to be replaced and expected plant down time. Preventive maintenance schedules shall be conducted on weekends as far as possible or any other day through mutual agreement with consignees. Total breakdown hours shall be calculated after discounting grace period and preventive maintenance period.

**16.8** Maximum permissible down time till it is restored back to the contractual output and accuracy levels, in any quarter of the year during the warranty period, shall be 150 hrs. To ensure this a record of breakdown (duly signed by shop in charge) in hours on quarterly basis should be maintained by the consignee and joint report with the contractor shall be made for each breakdown attention. At the end of first and second year of warranty, these details of breakdown hours during warranty period should be prepared as per performance appraisal report given in Annexure – E. The firm will then request RCF for release of WBG annexing the performance appraisal report as per Annexure-E and the breakdown details mentioned above.

**16.9** Penalty will be levied on the bidder for breakdown period on working days basis (excluding holidays) after discounting for the grace period. Penalty will be calculated as percentage of annual preventive maintenance charges and will be deducted from the respective annual payments as under.

| **Breakdown period** | **Applicable penalty** |
|---|---|
| Up to 150 hours in each quarter and not exceeding 500 hours annually | Nil |
| Exceeding 150 hours - up to 200 hours in any quarter and not exceeding 500 hours annually | 5 % of annual preventive maintenance charges |
| Exceeding 500 hours - up to 750 hours annually | 10% of annual preventive maintenance charges |
| Exceeding 750 hours - up to 1000 hours annually | 25% of annual preventive maintenance charges |
| Exceeding 1000 hours annually | 50% of annual preventive maintenance charges and Encashment of Warranty Bank Guarantee besides other action like noting adverse |

| | |
|---|---|
| | performance of the bidder and/or agent for future tenders and their offer in the subsequent tenders will not be considered for placement of any order. |

16.10 The Contractor shall warrant that everything to be furnished hereunder shall be free from defects and faults in design, material, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards for goods of the type ordered and in full conformity, with the contract specifications and samples if any and shall if operatable, operate properly.

16.11 This warranty shall survive inspection of, payment for and acceptance of the goods and shall expire after 24 months from the date of commissioning of machine at ultimate destination, Any approval of acceptance by purchaser of the Stores or of the material incorporated here in shall not in any way limits the contractor's liability.

16.12 The contractor's liability in respect of any complaints defects and or claims shall be limited to the furnishing and installation of replacement parts free of any charge or the repair or defective parts only to the extent that such replacement or repairs are attributable to or arise from faulty workmanship or material or design in the manufacture of the stores, provided that the defects are brought to the notice of Contractor with in 3 (Three) months of their being first discovered during the warranty period or 3 (Three) months from the date of expiry of warranty period or at the option of the Purchaser to the payment of the value, expenditure and damage as hereafter mentioned.

16.13 The contractor shall, if required, replace or repair the goods or such portion thereof as is rejected by the Purchaser free of cost at the ultimate destination or at the option of the purchaser, the contractor shall pay to the purchaser value thereof at the contract price or in the absence of such price at price decided by the Purchaser, and such other expenditure and damages as may arise by reason of the breach of the condition herein specified.

16.14 All replacement and repairs that the purchaser shall call upon the contractor to deliver or perform under this warranty shall be delivered and performed by the contractor within 1 (one) weeks**,** promptly and satisfactorily. The warranty period will be extended by the number of days the machine remains under breakdown during the warranty period and the warranty Bank Guarantee would be returned at the end of such extended warranty period for the full machine.

16.15 If the Contractor so desires, the replaced parts can be taken over by him or his representative in India for disposal as he deems fit at the time of replacement of goods/parts. No claim whatsoever shall lie on the Purchaser for the replaced parts thereafter.

16.16 The warranty herein contained shall not apply to any material which shall have been repaired or altered by the Purchaser, or on his behalf in any way without the consent of the Contractor, so as to effect the strength, performance or reliability or to any defects to any part due to misuse, negligence or accident,

16.17 The decision of the Purchaser in regard to Contractor's liability and the amount, if any, payable under this warranty shall be final and conclusive.

16.18 The warranty period in the offer shall survive for a period of 24 months from the date of commissioning of machine. If the offer is found with less than 24 months or ambiguous/uncertain on warranty conditions, the tender is liable to be rejected.

16.19 The Purchaser, without prejudice, shall be entitled and it shall be lawful on his part to forfeit the amount of the Guarantee Bond furnished in respect of Warranty in whole or in part in the event of

any default, failure or neglect on the part of the Contractor in the fulfillment or performance in all respects of the warranty provisions under reference or failure to extend the validity of Guarantee Bond for the period of break down occurred during warranty period and for such part(s) replaced and/or repaired and part(s) immediately connected thereto as per clause 16.14.

**17.0 TECHNICAL LITERATURE**

17.1 One copy of the printed illustrative catalogue showing technical features of the equipment and its elements must be enclosed with each copy of the bid.

17.2 The successful tenderer will have to furnish, for each equipment 4 copies of spare parts catalogue giving the detailed part list number of each component with exploded views and assembly drawings of major assemblies, maintenance manual, trouble shooting guide, operational manual of the machine and all electrical circuit diagrams to the consignee directly within 3 months of the placement of order. The bidders shall provide a list of literature, they will supply along with the machine. The technical literature shall be provided for complete machine including imported and indigenously purchased components/sub-assemblies. The same shall also be supplied in PDF searchable format.

**18.0 SPECIAL FEATURES**

Special features incorporated in the equipment, if any, shall be indicated separately by the tenderer, clearly indicating advantages of the features.

**19.0 PAYMENT TERMS**

80 % on receipt of machine and balance 20 % after commissioning and submission of Bank guarantee equivalent to 10% of P.O value valid up to the warranty period of the machine.

**20.0 DOCUMENTS TO BE UPLOADED FOR TECHNICAL EVALUATION**

Following documents must be submitted by the tenderer along with the offer:

20.1 Clause wise comments on technical specification

20.2 Detailed list of spares covered under warranty. (Annexure-A)

20.3 Details of deviations from specification if any as per Annexure-B

ANNEXURE-A

| S.N. | ITEM | PART NO. | SERVICE LIFE | PRICE |
|---|---|---|---|---|
| | | | | |
| | | | | |

ANNEXURE –B

DEVIATION STATEMENT (IF ANY)

| S.N. | Specification Clause No. | Deviation ( If Any) |
|---|---|---|
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |

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|---|---|---|---|
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**SCHEDULE-I**

## Portable Rail Weigh Bridge Major Parameters

| Sr. No. | Description | Quantity / Parameter |
|---|---|---|
| 1 | Weighing Capacity/ Capacity per load pad | 15.0t/Wheel or above, 30t/Axle or above |
| 2 | Length of the system per axle | Up to 660mm |
| 3 | Weight increment size | Static mode: 0.02t<br>Dynamic mode: 0.05t |
| 4 | Protection Class | IP-68 / IP-65 |
| 5 | Operating Temperature , Humidity | -20°C ~ +70°C , Humidity 5% to 95% |
| 6 | Mounting/Fitment | UIC 52 and UIC 60 |
| 7 | Accuracy | Static mode: ±0.5%<br>Dynamic mode: < 1% site dependent |
| 8 | Weighing speed | Up to 5 kmph (for dynamic weighing mode) |
| 9 | Material for track/wayside equipment | High-quality tool and mild steel |
| 10 | Power supply | 220V AC for charging the internal battery |
| 11 | Types of weighing System | Pitless Portable Rail Wheel Weighing system |
| 12 | Direction of Weighment | Bi-Direction |
| 13 | Weigh Bridge Should be capable of measuring weight of | 04 Axle Coach |
| 14 | Number of Load Pads | 4 pair ( 8 Nos) |
| 15 | Weighing Electronics | Micro Controller Based |
| 16 | Overload Protection | 150% of Full Load (Minimum) for load cell |
| 17 | Calibration of each sensor | Each load cell shall be factory calibrated with reference to a standard load cell traceable to the national/international accredited agency's calibration certificate. |
| 18 | Controller should be in the form of a laptop/PC/Tablet with portability (i.e. it should be possible to be carried in the field easily without any requirement of external wiring or a permanent desk for placement. The hardware should be rugged and industrial grade, complying with the MIL-STD 810G for (Drop, Shock,Vibration, Altitude, Freeze/Thaw, High/LowTemperature, Temperature Shock, Humidity). | Processor: Minimum - Intel® Core™ i5, 1.6GHz processor, 6MB cache,<br>RAM: 8 GB<br>Operating System: Windows 10 or higher<br>Storage: 110 GB SSD (Minimum)<br>Display: Minimum 11'' FHD (1920 x 1080)<br>I/O Interfaces: USB Ports: 2 ports (minimum)<br>Audio: Audio in/out (combo jack) x 1<br>Power: AC adapter: 100- 240v, 50Hz<br>Battery: Main battery Li-Ion, 11.1V, 3950mAh, 8 hours<br>Weight: Up to 1.5 kg |

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**ANNEXURE-C**

## JOINT RECEIPT INSPECTION NOTE

***Note**: With the issue of JRI, payment is released to the contractor, as per the terms of contract. Consignee shall satisfy themselves that the conditions of contract are met before issue of the JRI.*

**Date……..**

**Sub: Receipt of consignment for machine…….**
**Ref: RCF/KXH Contract No…….**

| | | |
|---|---|---|
| 1. | Name of consignee/Railway | |
| 2. | Machine name | |
| 3. | Quantity | |
| 4. | Name of supplier | |
| 5. | Consignment of the machine received on | |
| 6. | The foundation & associated works essential for "Safe Installation of Machine" are ready (for turnkey contracts only) * | |

* *If there are Delays on account of Consignee such as clear site is not given, then the condition 6 will not be a valid ground for holding JRI.*

It is certified that the consignment of the machine has been received complete and in good condition as per specification shown in the contract.

**Tentative plan for installation and commissioning of the machine is as under:**

| | | |
|---|---|---|
| 1. | Date of clear site provided | |
| 2. | Contract | Turnkey/Non-turnkey |
| 3. | **Status of readiness of foundation:** | |
| 3(a) | Already constructed on | |
| 3(b) | Under construction & likely date of its completion | |
| 3(c) | Construction yet to be started from and likely date of its completion | |
| 4. | Status of availability of electrical power, water and compressed air etc. | Available/Not-available |
| 5. | Number of components to be proved out on the machine | |
| 6. | Likely date for start of erection/installation | |
| 7. | Likely date for switch-on the machine | |
| 8. | Likely date of completion of commissioning of the machine | |

**Representative of firm**

**Designation**

**Representative of consignee**

**Designation**

**(Minimum Gazetted level)**

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|---|---|---|---|
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**ANNEXURE –D**

## JOINT COMMISSIONING NOTE

**Date:……**

**Sub:** Commissioning of (name of machine)…….

**Ref:** RCF/KXH AT No…….

| | | |
|---|---|---|
| 1. | Name of consignee/Railway | |
| 2. | Machine name | |
| 3. | Quantity | |
| 4. | Name of supplier | |
| 5. | Machine received on | |

6. All the parameters of the machine are found okay. The proving test on the machine was conducted from …… to …….. and machine is working satisfactorily.

7. Machine has finally been commissioned on…….. . The machine has been handed over for regular use and kept under one month observation to watch its performance.

8. Following minor deficiencies (if any) found during joint observation trials are to be attended/rectified by the firm during one month observation and before issuing the PTC for the machine:

   a.

   b.

   c.

Representative of firm

Designation

Representative of consignee

Designation

(Minimum Gazetted level)

**ANNEXURE –E**

**PERFORMANCE APPRAISAL FORM/ WARRANTY DISCHARGE CERTIFICATE**
**APPRAISAL ON COMPLETION OF WARRANTY PERIOD**

**Dated:……**

**To, M/s. ……**

| | | |
|---|---|---|
| 1. | RCF PO No. | |
| 2. | Consignee/Railway | |
| 3. | Name of supplier | |
| 4. | Machine Name | |
| 5. | Machine received on | |
| 6. | Machine commissioned on | |
| 7. | PTC issued on | |
| 8. | Warranty period expired on | |
| 9. | **Performance during warranty period:** | |
| 9(a) | Total number of breakdowns | |
| 9(b) | Total downtime in number of days | |
| 10(a) | Any warranty complaint pending on date | Yes/No |
| 10(b) | If yes, then the date and nature of defect(s) | |

11. In case, Reliability clause of the machine during warranty period is also given in, then following details of breakdown hours for preceding eight quarters may also be furnished.

| Quarter | Period From -------To-------- | Breakdown hours |
|---|---|---|
| 1 | | |
| to | | |
| 8 | | |

In view of the foregoing, the successful Warranty Completion, all obligations in respect of Warranty for the said machine on part of _____ (Supplier Name) stand discharged/ not discharged as on ____ (date)

**Signature----------**
**Name----------**
**Designation: DY.CME (User Shop)**
**Office Stamp**

**PCMM/RCF**
**PFA/RCF**
**CPE/RCF**

**Note: i.) This appraisal may please be sent immediately on completion of warranty period. If any extension of warranty period required, may please also be mentioned with details.**