

NON-COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT FOR CRANES

INTRODUCTION:

The indent specification is for the annual maintenance of cranes which includes the preventive maintenance, annual maintenance, load testing and break down repair services of all the cranes available at IPRC. Cranes to be maintained with routine service like man-hour/day/stand-by duty support, spares replacement, etc.,

PERIOD OF CONTRACT:

The period of contract shall be for Two years after placement of the firm Purchase Order. The contract may be extended for further period on the same terms and conditions on mutual basis.

1. SCOPE OF WORK:

The contractor shall provide the service on demand basis as per IPRC requirement at various locations for the following work.

- 1.0 The work involves maintenance (Including mechanical, electrical and electronic in nature) and load testing of cranes during the validity of the contract. The scope includes periodical service, maintenance (breakdown/half yearly/annual) and load testing as specified in section 4.0. Detailed checks to be done during service, maintenance and load testing are provided as **Annexure-1**. However, the checks those are not specified/listed, but are required for operation of the cranes also to be carried out. A separate checklist will be issued after the award of the Contract for each type of cranes and same shall be duly filled and submitted by the contractor to concerned user division, on the same day after completion of each maintenance. The same checklist is variable based on site conditions/timely. All the observations and faults noted during the maintenance shall be recorded in the checklist and same shall be informed to the user division Engineer in-charge/crane focal point by the maintenance personnel or supervisor of the AMC team.
- 1.1 The **total number of cranes available at IPRC is 103**. The list of cranes along with details given in **Annexure-2**. All works shall be done following the in-house procedures/protocols following the checklists.
- 1.2 Break-down calls shall be attended within 24 hours. In case of emergency, the breakdown complaint shall be attended even on holidays and early hours, after office hours with prior permission from the concerned User Division.

- 1.3 The general maintenance of VVVF (Variable Voltage & Variable Frequency) drives (Minor service, adjustments as & when required) including all electrical & electronic/mechanical systems of cranes. Works like replacement of VVVF drives and control card, programming of the drive is under the scope of contractor as per **Annexure.C.1.**
- 1.4 All the bought-out materials at the contractor's scope shall be of same make and prescribed in **Annexure-C.1.** Certificates wherever applicable shall be provided along with the supply of the spares. All spares entering IPRC premises have to follow the IPRC protocols vide valid entry passes. If any item has to be moved for service out of IPRC premises, shall only done vide RETURNABLE GATE PASS through user division/facility representatives.
- 1.5 Required tested & certified slings, D-shackles and rings, safety equipments/gadgets etc., for service/maintenance/load testing shall be brought along with the necessary test certificates for the same, by the contractor.
- 1.6 Apart from regular load testing along with annual maintenance, performance testing with Safe Working Load (SWL) and essential safety checks shall be done for each crane after every brake adjustment/major breakdown maintenance. Separate charges for this load testing to be quoted as per **Annexure-B.**
- 1.7 Tools needed during the service, maintenance and load testing shall be brought by the contractor. No tools except forklift, trailers, scissor lift, height raisers, dead weights/concrete blocks upto 20 T shall be supplied by IPRC (arrangement of equipments, vehicles - to & fro by user facility). However, contractor shall also be capable in arranging suitable industrial heavy vehicles based on capacity for handling dummy loads from yard to respective facilities based on separate rate and clause as per **Annexure-C.2** of Price bid. (ie., if department industrial heavy vehicle are not in position to make use due to various reasons, the hired industrial vehicle by contractor to be put in operation to eliminate delay in work, refer **Annexure-C.2** of Price bid).
- 1.8 The consumables like grease, sealants, metal pastes, insulation tapes, Teflon tapes and cleaning agents like cotton waste, solvents, emery sheets, special tools/regular tools, gland packing, gasket materials, kerosene, wire brush etc. are to be brought by the contractor. Minimum quantity of consumables for the period of six months to be brought for servicing and maintenance of cranes is listed below (i.e., two times the quantities indicated below is required per year for work spot).

| Sl. No | Description | Qty |
|---------------|-----------------------------|------------|
| 1 | Cotton waste | 50 kgs |
| 2 | Shellac | 15 Nos |
| 3 | Applicable cleaning solvent | 20 Litres |

| | | |
|----|---|-----------|
| 4 | Kerosene | 30 Litres |
| 5 | Compressed asbestos gasket 0.5 mm thick | 02 Sq.m |
| 6 | Emery sheets, rough | 30 Nos |
| 7 | Emery sheets, smooth & fine | 20 Nos |
| 8 | Insulation tape | 16 Nos |
| 9 | Teflon tape | 05 Rolls |
| 10 | M-seal | 01 Kg |
| 11 | Paint | 25 liters |

However, any additional quantities and unlisted consumables if required for successful operation have to be borne by the contractor. The above list is indicative only.

- 1.9 Marking the date of testing, due date for next testing, crane number, crane history board/custodian board for each crane is under the scope of the contractor.
- 1.10 Scope includes supporting works like occasional type works, mobilization of dummy loads (to & fro) along with user division/facility, user facility engineer in-charge and extending support for Department vehicles for handling dummy load at yard connected with load testing works etc.
- 1.11 Scope includes, AMC team has to ensure the fitness of the newly commissioned cranes during warranty period with suitable loads on trial basis (end to end – limit cut) with due clearance of user facility before taking into AMC scope and claim for respective charges, Sif needed. Arrangement for mobilization of dummy loads (to & fro) by crane user division/facility.
- 1.12 Scope includes issuing checklist & receiving reports back for payment and documentation from user division/facility. All the format and checklist shall be offered to contractor during award of AMC purchase order and sufficient copies to be generated before starting AMC work. The digital copy of the AMC report to be shared with user facility by the AMC team within two days through allotted e-mail ID.
 - a. Pro-rata payment shall be made after satisfactory completion of Maintenance work as per **Annexure A, B, C.1, C.2** of price bid.
 - b. List of essential spares/consumables and its cost, applicable GST and warranty shall be furnished along with your quotation. As per **Annexure C.1**.
 - c. The Contractor should submit the monthly status of the maintenance of cranes performed to Engineer in-charge/focal point, safety division.
- 1.13 After completion of every maintenance works and friendly service visit within 07 days to be made by contractor team and to ensure the service quality and to receive comments from the user division crane focal person for improvements, if any.
- 1.14 AMC team is not authorised to do any service works for ensuring fitness of incoming power to building, modification and make shift arrangements beyond AMC scope of works.

- 1.15 Providing scaffolding for the height of above 0-35meter (approx.) on requirement basis is under the scope of the contractor. However, the in-house equipment's like forklift/scissor lifts/height raiser etc., shall be provided/arranged as per routine practice by respective crane user division as per **Annexure-C.2**.
- 1.16 No modifications shall be carried out in the crane wiring circuit without the approval of user division engineer in-charge/Electrical engineer in-charge by the maintenance personnel and focal point for crane maintenance of the AMC team.
- 1.17 AMC team side generated wastes like waste oil, cloths, etc., has to be cleared from site periodically (at least quarterly once) from IPRC premises.
- 1.18 All concrete block availability status to be monitored and arranged by AMC team along with crane user division/facility, facility crane focal point and to coordinate for smooth crane maintenance related works.
- 1.19 The contractor shall undertake machining and fabrication if required, for any crane with clearance and duly approval by Engineer in-charge of the concerned user division and its Division Head.
- 1.20 The contractor has to follow strictly the checklist for performing any maintenance like preventive/annual/load test/spares/service etc.,
- 1.21 Human resources deployed by the contractor shall wear cotton uniform dress while they are at work and the colour of the said uniform shall be decided by the AMC focal point in consultation with the contractor.
- 1.22 All the documents generated during the AMC period are to be handed-over to department while completing the period of contract.

2. PRE-QUALIFICATION CRITERIA (PQC):

Bidder shall meet the following qualification criteria. The bidder shall submit all the relevant documents supporting the qualification criteria.

Any lack of details or incomplete/ambiguous details or false information or information non-compliant with the PQC criteria or non-submission or incomplete submission of details shall be treated as sufficient cause to summarily reject the bids. The performance/work completion certificates and other documents related to pre-qualification furnished by the bidder along with the bid are liable to verification on authenticity. During the evaluation process, in case, the documents of the bidder(s) are found to be false/incorrect, then the bid(s) of such bidder(s) shall be rejected besides banning of such bidder(s) for a specific period as per the extant procedures.

- a) Bidder Profile: - A detailed profile of the bidder, in terms of the engineering expertise, infra-structure, quality management system, human resources inventory, etc shall be provided along with the bid.

- b) The bidder shall have minimum 5 years' experience in maintenance and testing of EOT cranes to any Central/State/PSU/Private limited.
- c) The bidder should have successfully executed/completed in each order as following:
 - i. Single purchase order with minimum 80 nos of EOT cranes in a single order, out of which minimum 04 nos EOT crane of capacity more than or equal to 20 T in each purchase orders,
 - OR
 - ii. Two purchase orders each consisting 50 nos of EOT cranes, out of which minimum 04 nos EOT crane of capacity more than or equal to 20 T in each purchase orders,
 - OR
 - iii. Three purchase order each consisting 40 nos of EOT cranes, out of which minimum 04 nos EOT crane of capacity more than or equal to 20 T in each purchase orders,

for similar services * in last seven years ending last day of the month previous to the one in which this tender enquiry is floated to any Central/State Govt. Organization / PSU / Private companies.

*** Similar services mean** “Annual maintenance contract (AMC) for EOT cranes in which scope of work involves preventive maintenance, annual maintenance with load testing, break down maintenance and service experience on attending VVVF drive complaints and knowledge on its programming).

- d) The party shall have executed Minimum 04 nos EOT crane of capacity more than or equal to 20 T in each purchase orders complying to the above section C of PQC.

Note:

The documents in support of section Sl.no. C of PQC shall be accompanied with performance certificate issued by the customer on their letter head clearly specifying the address and contact details of customer for verification purpose. (All the documents submitted shall be self-attested and stamped by the party). Document proofs in support of above PO/WO should be submitted with the tender otherwise offer is liable to be rejected.

- e) For fulfilling the above criteria, the following documents shall be uploaded while submitting the bid online
 - i) For Govt/PSU Purchase orders: Purchase Order copy indicating the number and type of cranes & capacity and duly certified work completion certificate.
 - ii) For Pvt work orders: Work Execution certificate with details of type & capacity of cranes and TDS certificate.

- f) The Bidder shall submit a copy of GST registration and remittance details of the last paid GST and in addition, the vendor should have filed GST returns for the financial year 2023 – 24. Documentary proof in this regard shall be uploaded while submitting bid online.
- g) The bidder shall submit a Company's registration certificate/Certificate of incorporation/Partnership Deed/Any other registration certificate (as applicable). Documentary proof in this regard shall be uploaded while submitting bid online.
- h) Bidder shall submit a copy of PAN Card. Documentary proof in this regard shall be uploaded while submitting bid online.
- i) The bidder firm should hold Certification for "Quality management system for Erection, Service and Maintenance of EOT Cranes and related Material Handling equipment's". ie. ISO 9001:2015. Documentary proof with validity in this regard shall be uploaded while submitting bid online.
- j) Bidder shall have Independent Provident Fund code number allotted in favour of his establishment under EPF, ESI & Misc. Provisions Act 1952. Documentary proof in this regard shall be uploaded while submitting bid online.
- k) Bidder shall upload self-attested scanned print out of the online IT statement indicating Zero tax liabilities for 04 consecutive Assessment Years prior to the tender opening date. Documentary proof in this regard shall be uploaded while submitting bid online.
- l) The vendor should in a Profit making for during the last 3 financial years and copies of the audited balance sheet should be uploaded while submitting bid online.
- m) The vendor should submit "Non-blacklisting Declaration" as enclosed in **Annexure – 4** shall be uploaded while submitting bid online.
- n) All experience, purchase orders and other qualification criteria related documents shall be certified by the authorized signatory of the contractor firm. The credentials regarding experience and past performance as bid qualification criteria submitted by contractor may be verified from the parties for whom work has been carried out, for which the contact details for each work order shall also be provided. Documentary proof in this regard shall be uploaded while submitting bid online.

3. WORK EXPERIENCE & COMPETENCY:

- 3.1 Contractor shall submit the complete details of present workforce available including educational qualification and experience details in the maintenance of cranes.

3.2 The contractor shall make a presentation for expertise in maintenance of EOT cranes during Technical Bid Evaluation, if required.

4. TECHNICAL SPECIFICATIONS:

4.1 Periodicity of Maintenance and load test:

The periodicity of maintenance shall be as follows:

| | | |
|--|----------|--|
| Annual maintenance (AM) with load Testing | : | Once in 12 months. |
| Validity of load testing | : | One year from the date of last load testing (Provided no major repairs or major break down maintenance). ie., 01 time in a year after annual maintenance. |
| Periodic Preventive Maintenance (PPM) | : | Six months after the completion of annual maintenance with load test. |
| Breakdown Maintenance | : | As and when required. |

- a) **A gap of six months shall be ensured between the preventive maintenance and the annual maintenance along with load testing.**
- b) The contractor shall conduct the load test of cranes within two days of completion of Annual Maintenance.
- c) During the two-year period of Purchase Order contract, minimum 2 times Annual Maintenance (AM) and 4 times Periodic Preventive Maintenance (PPM) shall be executed subject to availability of the crane.

4.2 Load Testing:

- a) Every crane shall be tested once in 12 months with a dummy load equal to the cranes rated capacity (SWL) at the time of annual maintenance.
- b) Proof load test with a dummy load equal to 1.25 times the rated capacity of crane's shall be done, after any major breakdown works are carried-out as part of the contract.
- c) The deflection measurements shall also be carried out at SWL and recorded. The necessary equipment/instruments for deflection measurement shall be brought by the Contractor.
- d) The load test activities and report shall be witnessed by Department Safety Practices Implementation Committee member (SPIC)/Crane user facility representative, clearance and certification by the concerned user division Engineer in-charge and forward to AMC focal person for billing. Contractor should execute

all works as per checklist and forwarded to AMC Engineer in-charge/focal point of safety division for payment clearance.

4.3 Breakdown Maintenance:

- a) Failures involving brake system and adjustments, electrical failures such as connectors, contact failures, fuse wire, slip ring/brush contact failures, electrical/electronic component failure and such other failures shall be attended by the contractor as part of the AMC contract.
- b) Major Breakdown activities such as gearbox overhauling, opening and rectification of gears, shaft machining, Motors rewinding/replacement & alignment including works to be done outside IPRC on need basis. Charges for the same shall be quoted by the contractor in **Annexure-B** of Price bid. The payment for the Major breakdown shall be paid only after due certification by the user facility Engineer In-charge and concerned Divisional Head.
- c) The major breakdown works not mentioned/included under the **Annexure-B** of Price bid which needs to be carried out for the efficient functioning of the crane shall be done by the respective user division/facility through separate purchase order by following due purchase procedures.
- d) Removing and bringing down any defective equipment/components such as motors, gear box, brakes, shafts, etc. from the crane for further repair is the responsibility of the contractor along with necessary tools and tackles/equipments. The contractor shall refit the parts immediately after repair.

4.4 Replacement of Spares/Materials:

- a) A tentative list of essential spares is provided along with this document as per **Annexure-C.1**. This list is only indicative, the payment will be made only as per actual spares & quantity used.
- b) Required replacement materials, spares, components like gear oil, brake oil, wire rope compound, brake shoes, etc. shall be under the scope of the contractor and rate for the same shall be quoted separately in **Annexure-C.1** of Price bid. Only genuine OE parts and approved high quality spares shall be supplied by the contractor. The same shall be ensured/replaced only with the approval of the Engineer in-charge of user division and its Division Head. In case any parts are required to be reconditioned/repared out of premises, which shall be taken out with prior approval to be obtained from Engineer in-charge of user division and its Division Head or suitable competent authority. ie., the respective crane user facility

arrange/issue gate passes for taking out the serviceable materials as and when required and receive after completion of work. The defective spares shall be the property of IPRC.

4.5 Painting:

- a) The date of testing, due date of next testing, SWL and crane number shall be painted on each crane. The date of testing and due date shall be updated after each testing/ painting of the cranes and including minor paint works like touch-up/patch works as per site requirement, refer **Annexure-C.2** of Price bid.
- b) The paints, primer, thinner and other required solvents, brushes and other accessories, consumables required for the job are under the scope of the Contractor. The charges for above painting works shall be included in the offer refer **Annexure-C.2** of Price bid. The crane shall be painted with Golden Yellow (for girder), Black (for Plummer block, hooks etc.) and P.O Red (for hook latch).

4.6 Role of User facility:

- a) User facility shall assign crane focal point (department personal) for their facility equipment and all the AMC related communication will be made through him and same to be communicate to AMC focal person. Whenever there is any change, the same will be intimated.

5. IPRC OBLIGATIONS & ARBITRATION:

- a) Fork lift, trailer, tractors, scissor-lift, height raiser, dead weights/concrete blocks up to 20 T for the movement, handling of concrete blocks & dead weights, for load testing shall be arranged by IPRC (refer Section 1.7).
- b) Dispute, if any, shall be settled mutually, failing which, it shall be settled or any other enactment in accordance with the Arbitration & Conciliation Act 1996 (Amendment 2015), whose decision shall be final and binding on both parties. The applicable language for Arbitration shall be “English” only.
- c) Work under the Contract shall be continued by the Contractor during the pendency of arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the Department or unless the matter is such that the works cannot be possibly continued until the decision (whether final or interim) of the Arbitrator is obtained.

6. WORKFORCE & RESPONSE TIME:

The contractor shall mobilize skilled workforce immediately upon the call/placement of order by IPRC. The contractor shall ensure the response time is contained with 24 hours.

- The contractor shall mobilize the following minimum qualified and experienced workforce for maintenance of the cranes.

| Sl. No | Category | Qualification and competency/knowledge of crane service Personnel's |
|--------|-------------|--|
| 1 | Supervisor | Diploma in Mechanical/Electrical Engineering with Three years' experience in erection, commissioning and maintenance of cranes. |
| 2 | Fitter | ITI certificate in fitter trade with minimum Three years' experience in maintenance of EOT cranes. |
| 3 | Electrician | ITI certificate in electrician trade with minimum Three years' experience in maintenance of EOT cranes and shall be electrical license holder. or Diploma in Electrical Engineering with <u>minimum three years</u> in maintenance of EOT cranes. |
| 4 | Helpers | 10 th class minimum with Two years' experience in maintenance of EOT cranes. |

- The following minimum work force needs to be deployed by the Contractor for the maintenance of each crane for two years.

| Sl No | Category | No. of persons (Minimum) | |
|--------------|-------------|--------------------------|--|
| 1 | Supervisor | 03 | a) Minimum Two teams to be engaged by the contractor for carrying out the maintenance activity at IPRC premises based on the requirement. b) Continuous engagement of the team of service personnel to be ensured by the contractor. In case of absence of any person, suitable substitute to be provided. The details of the substitute proposed to be engaged about to be submitted in advance. |
| 2 | Fitter | 02 | |
| 3 | Electrician | 02 | |
| 4 | Helpers | 02 | |
| Total | | 09 | |

- Depending on the workload, the contractor may have to increase the work force by additional man power/existing minimum man power to work earlier, beyond office working hours/day as per the due instructions of the user facility Engineer-in-charge and AMC focal point, Safety group.
- The contractor shall furnish complete details of the workforce deployed (Number of persons, qualification and experiences of work) to the Engineer-in-charge/ focal point of the AMC before the commencement of the work for arranging entry passes.

- c) The Contractor shall submit the necessary documentary evidence for the qualification and experience of the persons engaged for work.
- d) The **Contractor should appoint/ identify one Supervisor** commonly for work for the co-ordination of teams and he should update the AMC focal point, safety group regarding the deputation of crane maintenance teams on daily basis.
- e) General **working timings for the maintenance workforce** including supervisor is 9.00 hrs to 17.00 hrs on working days (Monday to Saturday, six days a week). Depending on requirement, the working day/hour and on holidays shall be extended on mutual agreement between Engineer-In-charge of the user facility and service agency and with approval of AMC focal point, safety group as applicable.
- f) In case, the contractors fail to complete the maintenance of cranes as per the schedule in any particular month, it is the responsibility of the contractor to mobilize additional workforce (day/hour) to complete the same within the stipulated time and also for IPRC issued free spares. **No extra payment will be made** for the additional workforce engaged for above said works.
- g) The work schedules are indicative only. The actual schedule will be confirmed by the Engineer-in-charge of user division/facility based on the field requirements and informed to the contractor well in advance for planning the resources.
- h) The contractor will be paid based on the actual workforce, hired industrial vehicles engaged and quantity of spares utilized. For this purpose, the contractor should provide the man days/hours cost break-up in price bid Annexure A & C.2. The estimated workforce indicated in the **Annexure-A & C.2**. The actual workforce may vary based on the site conditions and category. The payment will be made as per actual man day/hour utilized.

7. GENERAL CONDITIONS:

- a) The Contractor shall arrange own conveyance/transport for their team and materials etc. Contractor must have a vehicle to reach respective work spots (Minimum 04 numbers of vehicles) for the transportation of his workforce inside IPRC. It must be noted by the contractor that their workforce shall travel about minimum 6 to 10 km daily to reach various work spots within IPRC. Valid driving license and insurance document for the vehicles being used to be carried by the users with IPRC premises. The Department will not provide any transport support.
- b) The health fitness of personnel's, vehicle fitness and respective operator's health fitness is mandatory to work within IPRC premises. In case of any health problem noticed, will not be accounted for continuing the job in the premises. Any hired

vehicle breakdown within premises, their lost in working hours/day will be deducted from the total hours/day. Payment will be made based on unit rates and based on the requirements, refer **Annexure-C.2**.

- c) The Contractor shall make his own arrangements for lodging and boarding of his maintenance team during the period of contract. Contractor will not be permitted to construct any shed inside the range for the purpose. Department canteen (lunch) / Kiosk facility shall be utilized by affording the actual prices involved, if required.
- d) The Contractor shall register the list of all his items, tools, and equipment etc., brought inside the range every time at the IPRC main CISF security gate.
- e) For Contractor's equipment, tools, materials, etc. which are to be taken out from IPRC, Mahendragiri campus after completion of work, proper entry shall be made at the main gate duly endorsed by CISF.
- f) The Department shall issue necessary gate passes for taking out the Contractor's materials, as and when required and after completion of work.
- g) Department may or not provide place to keep a lockable storage cabinet at Work center for keeping the tools. The contractor shall self-equipped with infrastructure towards various gadgets for their materials, issuing reports, documentation and certificates and along with provision for rendering printouts/scanning after approval of competent authority. The Contractor shall not make any claim on the department for the loss of his instruments, tools etc.
- h) The Contractors shall **indemnify the Purchaser**/and/or any Officer, employee or any assignee thereof harmless from any loss, damage, liability or expense, on account of damage to the property or environment and injuries including death, to any persons not limited to, employees or agents of the Department, employees of the contractor or its sub-contractors and all other persons performing any part of the work here under any occurrence caused by any act of commission/omission of the contractor or his sub-contractors or any of them. The contractor shall at his expense defend any suits or proceedings brought against the Department on account thereof and shall satisfy all judgments and pay all expenses which may be incurred by or rendered against them or any of them in connection therewith. The Contractor shall fulfill all the obligations required under Workmen Compensation act as amended from time to time. The Contractor shall ensure the minimum wages to their work force as per Minimum Wages Act from time to time.
- i) **The contractor shall insure him and all his workforce against accidents for the duration of the contract period at his cost. The Department will not be responsible for any type of injury including death caused to the contractor's personal during the work. Contractor shall also submit the proof of renewal of**

the same policy at least two days before the expiry date of the previous policy to IPRC. The contractor shall not be allowed to carry out any activity without necessary insurance coverage of their workforce. The contractor shall fulfill all the obligations required under workmen compensation act amended from time to time.

- j) The Department will not accept any liability for the contractor or his sub-contractors, their officers, employees or agents, servants or assigners or any of them or for their property while on the premises or in the service of the Department. ie., Department shall not be responsible for any loss of life of your service personnel while performing the contract at our premises due to natural calamities/accidents/explosion etc.
- k) In case of any equipment or property of the Department is damaged by the contractor or his employees/agents, the same shall be rectified “free of cost” by the contractor within the period specified by the AMC focal point and respective user facility in-charge. If the repair is not carried out within the specified period defined by focal point of AMC, the contractor shall pay immediately the amount specified by the Department for the damage otherwise it will be recovered from their dues and also lead to termination of contract complying Department procedures, if required.
- l) The offer should include all the necessary labour, materials, equipment, transportation services and incidentals connected with the servicing and maintenance (breakdown/preventive/annual/load-test/spares/service for 2 years) of the cranes.
- m) A feedback form (Form-1) certified by the user division/facility and the Load test certificate duly signed by the contractor, user facility engineer in-charge/SPIC and Head of the concerned division, shall be submitted to the AMC focal point, Safety Group after the completion of each maintenance. The feedback form will be provided to the user division after the award of the contract.
- n) **Department reserve the right to add/delete any number of similar equipment to this Contract during the currency of the Contract.**
- o) Before quoting, **the contractor may visit the site** for getting necessary inputs about the site conditions such as crane locations and other aspects. Pre-bid site visit of the facility shall be arranged, with prior communication and on mutually agreed dates, on any working day at least 7 days prior to due date of bid submission.
- p) The offer for Servicing & maintenance of EOT Cranes, Major modifications / rectifications works, major breakdown, spares and total maintenance cost etc shall

be as per tender **Annexure-1, 2, 3, 4, A, B, C.1, C.2** of Tender document. (Other type of offers or offer with any other conditions will not be accepted).

- q) If there is any dispute, on the quality of the work or schedules, the decision of the Engineer in-charge of the respective user facility and AMC Focal Point, safety group is final and binding on the contractor.
- r) **The contractor's workforce shall wear suitable uniform, Personnel Protective equipment (PPE) such as helmets, cotton uniform, gloves, safety belts, shoes, safety goggles etc., to all the work force engaged and same to be worn in work site.**
- s) The contractor shall not remove or engage any person without the knowledge and concurrence of the AMC focal point, Safety Group of respective work site.
- t) The contractor should abide by the statutory provisions, rules and regulations of Government of India and Government of Tamilnadu in force from time to time for his personnel including ensuring of minimum wages, remittance of EPF and insurance, medical allowance etc. The contractor shall furnish necessary documentary proof to that effect to the satisfaction of the department as and when demanded. The **proof of remittance of EPF subscription** and the employee's contributions etc., shall be submitted to the department authorities from time to time.
- u) The contractor has to follow strictly the checklist for performing any maintenance like preventive/annual/load test etc., and If any deviation found, department shall reserve rights to close the contract, if required.
- v) It is the responsibility of the contractor/his workforce to maintain the cleanliness of the maintenance bay, office working premises etc.
- w) Contractor shall **mobilize his team within 10 days** from the date of receipt of the purchase order. The contractor should arrange a local office nearby IPRC within 15 days from the award of the contract and the same shall be communicated to IPRC. If the contractor fails, the purchase order is deemed to be cancelled.
- x) The contractor should deploy the maintenance workforce with age not exceeding 58 years.
- y) The technical information, drawings, specifications and other related documents forming part of enquiry or contract shall be the property of the Department and shall not be used for any other purpose, except for execution of the contract. This technical information, drawings, specifications and other related documents shall be returned to the Department with all approved copies and duplicates, if any, immediately after they have been used for the agreed purpose.

8. ENTRY PASSES FOR CONTRACTOR'S WORKFORCE:

- a) The contractor and his workforce need photo entry passes issued by the department to enter into work spots at IPRC, Mahendragiri. For this purpose, the contractor shall provide 02 Nos. of passport size photographs, Aadhar card proof of all his workforce and address proof, conduct certificate from local authorities (Police verification certificate) to the department before commencement of the work. The contractor shall abide by the security restriction imposed by the department for his personnel, tools and materials from time to time.
- b) Contractor personnel if removed from role, the entry passes shall be returned to the Department immediately under intimation to the AMC focal point. Non-surrender or misplacement of any entry pass shall be charged from the contractor at the rates prescribed by the Department from time to time. As IPRC, Mahendragiri is a highly restricted and sensitive area, the service workforces deputed/ planned for maintenance shall have very good character, habits and high integrity.
- c) The request for entry pass and complete details of the workforce deployed along with their qualification and areas of work shall be submitted to the focal point of the AMC.
- d) If the Contractor needs to add any workforce to the contract, the contractor shall submit necessary document in order to verify the qualification criteria.

9. COMPLIANCE OF SAFETY REGULATION:

- a) Contractor shall ensure that the person deployed to render the service shall observe all safety norms at his cost. IPRC will not be responsible for any eventuality arising out of any negligence on the part of contractor in observing the safety norms.
- b) Contractor should engage only those workers who are qualified and experienced for the work to be done and for which PO has been placed. Engaging work force with knowledge in English, Tamil language is preferable.
- c) The Contractor shall deploy Indian National only for execution of the work. Only skilled employees with experience of this particular work shall be employed. No person below the age of 18 years shall be employed. The contractor shall pay to each person, wages not less than those specified by Minimum Wages Act.
- d) Work shall be supervised all the time during the execution period either by the contractor himself or by qualified authorized supervisor of the contractor.
- e) It is the responsibility of the contractor to ensure safe working of his workers while carrying out the work and shall follow all Statutory Safety norms and precautions.

Contractor shall provide and ensure use of PPEs such as Safety Belts, Face Shield, Masks, Goggles, Glasses, Ear Plug, Welding Shields, Hand Gloves, Safety Shoes, safety belts etc. by their workers for safe working.

- f) The Contractor shall ensure proper size of Slings and 'D' Shackles etc., are used in consultation with user division Engineer in-charge. In no case under capacity or rejected or damaged polyester belt, wire ropes /Slings/ 'D' Shackles, winches etc, shall be used. Test certificate of polyester belt, wire ropes, slings and 'D' Shackles shall be submitted to AMC focal point, Safety Group before the commencement of work.
- g) Special precautions shall be taken while working at height or handling heavy jobs. Contractor shall ensure that none of his workers work at a height without using **Safety Belts**. The Contractor himself or his qualified supervisor only shall supervise the work while his personnel work at heights or while handling heavy jobs.
- h) In case of any accident occurs causing injury or casualty to any of Contractor's workforce or Contractor himself while carrying out the work, the complete responsibility lies with the Contractor. Contractor shall ensure to provide immediate medical help to his injured worker/workers and shall provide compensation as per Workmen's Compensation Act' 1923, in case of injury or casualty to his workers out of accident while on work at IPRC.

10. TAXES AND DUTIES:

The contractor **shall clearly indicate the HSN code and respective GST rates applicable** for the services rendered under this contract. Contractor shall submit to IPRC documentary evidence of GST registration certificate specifying name of services covered under this contract. Contractor shall submit serially numbered GST invoice, signed by him or a person authorized by him in respect of taxable services provided, and shall contain the following, namely,

- a) The name, address and the registration number of the contractor,
- b) The name and address of the contractor receiving taxable service,
- c) Description, classification and value of taxable service provided and,
- d) The GST payable thereon.

All the four conditions shall be fulfilled in the invoice before release of GST payment.

11. REJECTION OF TENDER & OTHER CONDITIONS:

The acceptance of tender shall rest with IPRC, which does not bind itself to accept any tender and reserves to itself full rights for the following: -

- a) To reject any or all tenders.
- b) To award the work in part.
- c) Conditional tenders, tender containing unrealistic rates, tenders which are incomplete or otherwise defective and tenders not in accordance with the tender conditions, annexures, specifications, etc., are liable to be rejected.

12. SECURITY DEPOSIT:

The contractor shall deposit a sum equivalent of 3% of annual cost of maintenance as Security deposit in the form of bank guaranty or by demand draft valid till the contract period. In case cancellation of contract due to fault of contractor, the security deposit will be forfeited (in case of bank guaranty the same will be encashed). In case of successful completion of contract, the security deposit will be refunded without any interest.

13. DOWN-TIME COMPENSATION:

In case the maintenance/breakdown is not attended in time, down-time compensation at the rate of 0.5% of the order value per week shall be recovered from the contractor. The reasons for non-attending the maintenance calls in time shall be informed to the division within 12 hours and if the reasons are genuine and convincing, the focal person of AMC and user facility In-charge of crane/crane custodian shall mutually certify service report condoning the delay with the approval of Division Head of respective crane.

ie., In case the break-down calls are not attended in time, i.e., within 24 hours of our intimation, down-time compensation at the rate of 0.5% of the Annual Maintenance Charges per day shall be recovered from you subject to a maximum of 5 -10%.

14. VALIDITY OF CONTRACT:

This AMC Contract shall be operational for a **period of Two years from the date of placement of purchase order.** The AMC contract shall be extended for further periods on mutual consent at same rates and Contract terms & conditions. However, IPRC reserve the rights to extend the same for further periods on mutual agreements or short close the same by giving one-month prior notice in writing without any financial obligation on either side.

15. PAYMENT TERMS:

- a) Payment shall be made on pro-rata basis after the completion of periodical maintenance or annual maintenance with load testing of each crane. The break down charges shall be paid as per the rates quoted by the contractor, the bills of which shall be certified by the user division Engineer in-charge and its Division Head.
- b) For arranging payment, the contractor shall submit invoice and service call report, to Accounts officer through focal point of AMC, Safety group after duly certified by the

user facility Engineer In-charge/crane custodian and concerned Division Head. The invoice shall include the following:

- Maintenance works attended in detail.
- Spare parts supplied if any.
- Breakdown works carried out if any.

16. CANCELLATION OF ANNUAL MAINTENANCE CONTRACT:

- a) The **scope of work cannot be split into parts (preventive and annual maintenance)**, as the resources for executing the contract are shared over a period of execution of contract uniformly. Contractor shall complete the maintenance of cranes due for maintenance /load testing and as per the schedule given by the Department in a year. As per the scope of the tendered works viz. maintenance (Periodical/Annual maintenance/Major Break down) works, load testing and stand-by duty and supply & installation of spares etc., are not separable.
- b) In case the contractor does not carry out the work as per terms and conditions of the Contract or their services are not satisfactory, the Department reserves the right to cancel the Annual Maintenance Contract with the contractor by giving an advance notice of one month.
- c) The contractor shall be bound by the details furnished by them to the Purchaser while submitting the Bid or at any subsequent stage. In case, any of the documents furnished by them is found to be false at any stage, it would be deemed to be a breach of the Terms and conditions of the Work order making the Vendor liable for legal action besides termination of Work order/blacklisted and forfeiture of Security deposit.
- d) The department shall **reserve the right to terminate the contract** in the circumstances detailed hereunder:
 - i. if the Contractor fails to rectify, re-construct or replace any defective system/sub-system/equipment within a specified period after the Department having given a notice to the Contractor to rectify, re-construct or replace the said defective system/subsystem/equipment or the Contractor delays, suspends or is unable to complete the system/sub-system/equipment by the date mutually agreed upon.
 - ii. if the Contractor commits breach of any of the terms and conditions of the contract.
 - iii. if the government of India decides to terminate the contract in public interest.

- e) When the Contractor makes themselves liable for action under the circumstances mentioned above, the Department will have power to **forfeit the security deposit** of the Contractor and the Contractor shall have no claim for damages whatsoever on such forfeiture.

17. REPLACED COMPONENTS/SPARES & QUANTITY VARIATION:

- i. All components/spares replaced during the maintenance work shall be returned to the concerned user division of IPRC on completion of each work and to obtain a certificate for payment terms from user division/facility as per checklist.
- ii. Contractor shall provide the rates for the spare parts required for any replacement during AMC as per **Annexure-C.1**. The quantity mentioned is only indicative and shall be placed on need-to-need basis.
- iii. Contractor shall be paid only for the spare included in **Annexure-C.1** which is replaced during the AMC period.
- iv. Contractor shall obtain approval from the user division/facility Engineer In-charge for replacement any spares parts as per checklist.
- v. The total quantity of works executed with respect to PO is permitted to vary to the **maximum of 20% of the total value of PO**. However, if any additional work arises beyond 20% over the total price specified during the time of execution, the same shall be notified to the Department to make suitable amendment to the PO.
- vi. For all the items regarding this scope and the delivery point is at IPRC Mahendragiri.
- vii. In the event of item rejection, in order to minimize the consequential losses, faulty equipment shall be retained until a new replacement arrives at site for installation. It should be noted that the faulty equipment has not been accepted and not taken over by the Department, the responsibility for it lies entirely with the Contractor. During this period, the Contractor shall not limit the use of faulty equipment except for reasons of safety during operation both for personnel and equipment.
- viii. All the materials supplied or used shall be new and of first quality and manufactured and tested in accordance with the latest editions of the relevant Indian/International standards. Wherever imported components are used, they shall be manufactured in accordance with the relevant standards published in the country of manufacture after allowing for specific aspects under Indian conditions such as tropical climate, etc. Any material or work, where no specific standard is applicable, shall be fabricated as per the instructions and directions of the Department.

- ix. All the electrical equipment's used shall conform to the latest Indian Electricity Rules as regards safety, earthing and other essential provisions specified therein for installation and operation of electrical parts.
- x. In case the material/spares are not in the stock with the department, the contractor will be asked to purchase the material/spares, if required by user division engineer in-charge. The contractor shall ensure competitive prices while procuring the materials from market. The same shall be reimbursed at the actual cost-plus applicable transportation charges at actuals against documentary evidence and as per department terms and conditions. The contractor shall produce original invoice for the actual expenditure made in procuring materials/spares. The payment for the same will be settled by user division/facility by considering reasonableness of the price based on the prevailing market rates of the price at which the contractor has purchased such materials.

18. SCHEDULE OF WORK:

On receipt of the AMC purchase order, the contractor shall contact the concerned user division Engineer in-charge for the maintenance schedule of the cranes which are due for maintenance/load testing. The maintenance work shall be executed by the contractor as per the schedule provided by IPRC.

19. SUB-CONTRACT:

- a) The contractor shall not subcontract the job or part of it to any other agency without the written permission of IPRC. In case IPRC permits to employ a subcontractor if found competent and in the interest of the work, it shall not imply any limitation of contractor's liability to fulfill the work order. The subcontractor shall also abide to the terms & conditions as per the contract.
- b) All the works carried-out by such sub-contractors shall also be scrutinized, inspected and approved by the Department. However, the responsibility of the performance of such sub-contracted systems shall lies with the Contractor. Any delay in carrying out the work by the sub-contractor which affects the overall schedule of the work does not absolve the Contractor from payment of compensation for the delays. All terms and conditions applicable to the Contractor shall also be applicable to the sub-contractor who has been assigned the sub-systems.

20. COMPLIANCE OF WORKMAN'S COMPENSATION INSURANCE:

- a) The contractor shall abide by the statutory provisions, rules and regulations of Government of India and Government of Tamilnadu in force from time to time for their workforce including ensuring of minimum wages, remittance of PF, insurance,

etc., The contractor shall furnish the documentary proof to that effect to the satisfaction of the Department as and when demanded. The proof of remittance of PF subscription and the employee's contributions etc. shall be submitted from time to time as and when demanded.

- b) Person deployed to render the services must be insured under the Workman's Compensation Act Policy. The contractor shall keep such policy always current and in force. The contractor at his cost shall settle all the claims of his personnel under this policy. The copy of the same shall be submitted to IPRC on award of the Purchase Order.
- c) All statutory requirements as per labour laws, ESI, PF etc. shall be met by the contractor.

21. FALL CLAUSE (w.r.t supply of item):

The charges quoted by contractor shall in no event exceed the lowest charges at which is undertake of AMC of identical description to any other contractor during the period of this contract. If at any time, during the said period, contractor reduces such charges to any other customers, it shall be forthwith notified to us and the charges payable under the contract for servicing done after the date of coming into force of such reduction of charges shall stand correspondingly reduced.

22. INFORMATION TO BIDDERS:

22.1 The quotation should be in two parts:

PART - I: TECHNICAL AND COMMERICAL BID

PART - II: PRICE BID

- a) The proposals are invited on behalf of the President of India by the Head, Purchase & Stores, IPRC, Mahendragiri, from the Bidders for the work described in this document for IPRC, Mahendragiri. The bids shall be submitted online through IPRC centre e-link.
- b) The bidder/contractor is required to submit a complete bid for the entire work mentioned herein. Any incomplete bid will be summarily rejected.
- c) The bidder shall give a minimum validity period of SIX MONTHS from the tender due date for the bids.

22.2 BID SUBMISSION:

Bids duly filled in by the Bidder should invariably be submitted as stipulated in the Letter inviting bid. Bids shall be submitted in the following manner.

➤ **PART – I: Un priced Techno-Commercial Part of the Bid for the Work:**

- a) Complete Techno-commercial part of the bid shall be filled online in the “Vendor Specified Terms” form of the e-tender. Any documents related (demand draft for tender fee & EMD), technical literature, guarantee / warrantee certificates and any other relevant documents as per the tender shall be scanned in lower resolution format and uploaded to the e-tender under ‘Documents solicited from Vendor’ form only in ISRO e-procurement portal (<https://eprocure.isro.gov.in>). In case if the space for uploading is not sufficient, hard copy of the balance documents shall be submitted before due date. In-case, the contractor mentions price in the techno-commercial bid, it will be considered as invalid.
- b) The following enclosures shall be attached along with the techno-commercial bid as attachments:
1. Confirmation to the pre-qualification criteria
 2. Confirmation/Compliance statement as per Annexure-3.
 3. Confirmation for Debarment declaration as per Annexure-4.
 4. Any other techno-commercial information related to the tender.
 5. Confirmation of submission of price bid as per Annexure - A, B, C.1, C.2 along with ‘Price Bid’ (Part-II).

The technical bid shall be marked with following:

| PART - I : TECHNO-COMMERCIAL BID | |
|---|---|
| Name of client | : ISRO Propulsion Complex IPRC Indian Space Research Organisation |
| Title of the proposal | : |
| Due date and time of the opening | : DD/MM/YYYY |
| From (Name of the bidder with address) | : |
| To: Head, Purchase & Stores IPRC Dept. of Space Govt. of India Mahendragiri – 627133, Tirunelveli Dist, Tamilnadu, India | |

The deviation statement and checklist shall be filled online, without which the **bid will not be considered.**

➤ **PART – II: Price Part of the Bid for the Work:**

Price bid shall be filled in the on-line ‘price bid’ form of the e-tender only in ISRO e-procurement website <https://eprocure.isro.gov.in>. The cost of spares and other prices shall be filled in the respective forms available on-line in the e-portal. Any **other terms and conditions** given in this part **shall not be considered and if insisted upon by the Bidder, bids are liable for rejection.**

- a) IPRC may open **PART-I** of the bid on the due date of opening subject to meeting the minimum evaluation criteria. Price Bids (**PART-II**) of technically and commercially acceptable offers shall be opened at a later date.
- b) IPRC reserves the right to reject any or all the Bids without assigning any reasons thereof.
- c) The break-up of prices as per **Annexure-A, B, C.1&C.2** (with prices) shall be enclosed along with price bid.
- d) **Any bids/offers with price details in Techno-Commercial Offer (PART -I) shall be rejected.**
- e) IPRC reserve rights to place order for either full quantities of all items or partial quantities and partial items based on the unit rates available.
- f) Any additional price detail may be attached as a pdf. Document (signed & scanned) to price bid only. Mentioning **any form of price in the techno commercial part will result in summary rejection** of the bid submitted by the particular bidder.

NATURE OF SERVICING AND MAINTENANCE TO BE CARRIED OUT PERIODICALLY ONCE IN SIX MONTHS IN A YEAR

1.0 PERIODICAL AND PREVENTIVE MAINTENANCE: ONCE IN SIX MONTHS IN A YEAR WORKS TO BE CARRIED OUT FOR EACH CRANE:

1.1 BRIDGE RAILS (L.T & C.T) WITH CLAMPING SYSTEM:

- 1.1.1 Check the fastening of crane rails and clamps and rectify, if required.
- 1.1.2 Check rail wear on top and sides and report any abnormality.

1.2.0 GANTRY GIRDERS ON BUILDING & CRANE:

- 1.2.1 Check the foundation bolts, splices, loose bolts or missing bolts/rivets etc., and for cracked welds and Splices and rectify wherever required.

1.3.0 END CARRIAGE (END TRUCKS):

- 1.3.1 Check the overall condition of end carriage and report any cracks in the welds or abnormal wear of rail and wheels. Rectify wherever required.
- 1.3.2 Rail sweeps to be checked and fixed properly, if needed.
- 1.3.3 WHEELS: Check for the non-uniform wear, correct the Wheel axle for proper alignment.
- 1.3.4 BUMPERS: To be checked and rectified if there is any defect.
- 1.3.5 End carriages and the bridge girder fasteners are to be checked and properly tightened.
- 1.3.6 Attachment to end carriages – loose or missing rivets or bolts etc., or broken/cracked welds to be checked and rectified.

1.4.0 DRIVE SYSTEM (L.T & C.T):

- 1.4.1 Check the tightness of the bolts of the motor base, Plummer blocks, and its supports, brake unit Supports, gearbox supports, L.T & C.T. Shaft connecting the wheels etc., and rectify, if required.
- 1.4.2 Check the coupling condition and tightness of the key.
- 1.4.3 Check the Plummer block bearing condition.
- 1.4.4 Check the gearbox for leakage of oil, loose bolts or cracks in the gearbox, observe the noise level and report before rectification.

1.5.0 HOIST DRIVE SYSTEM MAIN/MICRO/AUXILIARY WHEREVER APPLICABLE:

- 1.5.1 Check the free rotation of the hook.
- 1.5.2 Check the free movement of snatch block.
- 1.5.3 Check for the wear and free rotation of pulleys.
- 1.5.4 Check tightness of fasteners at the end fixing of wire rope on rope drum and also rope drum fixing system.
- 1.5.5 Check the freeness of equalizer pulley system.

- 1.5.6 Check the tightness of plummer block assembly.
- 1.5.7 Check all the fasteners for proper fixing of motor, gearboxes, plummer blocks, brake units etc.
- 1.5.8
 - i) Check the coupling condition.
 - ii) Check the tightness of the key.
- 1.5.9 Check the plummer block bearing condition.
- 1.5.10 Check the gearbox for leakage of oil, loose bolts, or cracks in the box, observe the noise level and report before carrying out repair works.

1.6.0 BRAKE UNITS: (FOR L.T & C.T AND HOIST MOTIONS):

- 1.6.1 Brake shoe connecting linkages shall be checked and to be adjusted if required.
- 1.6.2 Adjust the spring tension for proper braking condition.
- 1.6.3 Check the condition for brake liner and replace, if require.
- 1.6.4 In electro-magnetic (E.M) type of brakes, ensure that the plunger inside the core shall be at least 1/3 of the core depth for proper operation.
- 1.6.5 Check the brake coil guide assembly (EM Brake) for proper plunger operation (for all motions).
- 1.6.6 In case of thruster brakes, check for oil condition and level and rectify, if require.
- 1.6.7 Brake currents are to be measured and recorded wherever the brakes are adjusted. (Before and after the adjustments)

1.7.0 LUBRICATION:

1.7.1 GEARBOXES (FOR L.T., C.T. AND HOIST MOTIONS):

Check the condition of oil and replace if required.

1.7.2 CENTRALISED LUBRICATION SYSTEM:

All grease nipple and oil points shall be packed with lubricant.

- 1.7.3 Lubrication of all mechanical components (viz., hook, pulleys, rope, brake, gears, gearboxes, plummer blocks, wheels and axels, coupling, bushes etc.) topping up or replacing lubrication oil wherever required. (Galvanised hard core wire ropes should not be lubricated).
- 1.7.4 If the pipelines of the centralized lubrication system are blocked, it shall be repaired before the application of lubricants.

1.8.0 LIMIT SWITCHES; (FOR L.T., C.T. AND HOIST MOTIONS):

- 1.8.1 Check all operation of all limit switches for L.T., C.T. and Hoist (upper & lower) and also for gravity limit switch and rotary limit switches.
- 1.8.2 Check the rotary limit switch cam system.

1.9.0 ELECTRICAL SYSTEMS:

- 1.9.1 Check the free movement for guide, guide rail /rollers, push rod, connecting chains, clamping of all trailing cable units, bus bar and rectify the defects, if any.

1.9.2.0 INSPECTION OF INCOMING PANEL AND CONTROL PANELS;

- 1.9.2.1 Tighten all terminals inside the panel.
- 1.9.2.2 Check the correct fuse ratings.
- 1.9.2.3 Check the over load relay settings (set over load relay to full load current of the motor).
- 1.9.2.4 Check the chattering and sluggish operation of power contactors and ISR relays.
- 1.9.2.5 Check the earthing of the motors for proper tightness and contact.
- 1.9.2.6 Ensure all panel door bolts are fixed.
- 1.9.2.7 Check and tighten all electrical connections in the motors.
- 1.9.2.8 Clean the terminal blocks of motors, brakes, junction boxes, limit switches etc.,
- 1.9.2.9 Check the limit switches functioning for all motions.
- 1.9.2.10 Check the brake coil operation for non-humming condition and proper closing.
- 1.9.2.11 Check the brake coil resistance.
- 1.9.2.12 Roller actuation of the limit switches shall be checked manually.
- 1.9.2.13 Check all electrical connections of the pendant.
- 1.9.2.14 Check all push button's actuation.
- 1.9.2.15 Check for proper operation for all motions of pendant push buttons.

1.10.0 CLEANING:

- 1.10.1 After all the works are completed; remove tools, tackles, wastes, oilcan, grease etc.
- 1.10.2 Secure all covers after maintenance.
- 1.10.3 Clean the crane, L.T., Girder, walkways etc. thoroughly.

2.0 ANNUAL SERVICING AND LOAD TESTING ONCE IN A YEAR

In addition to the work mentioned under periodical preventive maintenance (from point 1.0 to 1.10.3), the following works are also to be carried out for Annual Servicing and Load testing for each crane.

2.1.0 L.T. & C.T. DRIVE SYSTEMS:

- 2.1.1 All couplings are to be removed, checked and refitted.
- 2.1.2 All plummer blocks are to be opened and inspected thoroughly, oil seals / gaskets etc., shall be changed, if require.
- 2.1.3 All gearboxes have to be opened and inspected thoroughly, Oil seals/gaskets etc., shall be changed, if required.
- 2.1.4 Alignment of all drive chains shall be checked and corrected, if required.

2.2.0 HOIST DRIVE SYSTEMS (AUX. AND MAIN):

- 2.2.1 All couplings are to be removed, checked and refitted.
- 2.2.2 All Plummer block covers are to be removed, bearings are to be checked and refitted.

2.2.3 All gearboxes have to be opened and inspected thoroughly. Oil seals/gaskets etc., shall be changed if required.

2.2.4 Alignment of all drive chains including rope drum shall be checked and corrected, if required.

2.3.0 INSPECTION OF WIRE ROPES:

2.3.1 Check the hoist rope reeving, rope wear, twist, kink, break, interference with any other member etc., while in operation. New rope is to be laid, if the old wire rope is required to be replaced.

2.3.2 Check the condition of hoist drum (rope drum) bolts tightness, bearing condition, grooves and ridges. Replace with new ones, if required.

2.3.3 Check the general condition of bull gear and connecting gear train. Replace with new ones, if required.

2.4.0 BRIDGE RAILS (L.T. & C.T.):

2.4.1 Check and align the rails, if required.

2.4.2 Check the end stoppers and rectify, if required.

2.5.0 BRIDGE GIRDERS:

2.5.1 Check the welding condition, rivet or bolted joints throughout the length of the girder and rectify, if required.

2.5.2 Check the splice joints for any abnormality and rectify, if required.

2.5.3 Check walkway plates and hand rails and rectifies, if found defective.

2.6.0 ELECTRICAL SYSTEMS:

2.6.1 Inspection of Incoming panel and Control Panels:

2.6.2 Clean power contractors in the incoming panels and replace the contractors if required.

2.6.3 Clean the ISR relays and power contractors, magnetic core etc.,

2.6.4 Measure the insulation resistance of all power and control cable connected to motors and motor windings.

2.6.5 Measure the winding resistance of motors.

2.6.6 Check the electrical motor bearing condition and replace if required.

2.6.7 Check the condition of fan blades of motors and tighten all the fasteners.

2.6.8 Measure insulation resistance value of all cables including pendant cables.

2.6.9 Check the condition of electrical trailing cables, bus bar, L.T, C.T., down shop leads etc., and rectify, if required.

2.6.10 Check the cable glands for proper condition and replace, if necessary.

2.6.11 Check loose connection inside the limit switches and tighten them, if necessary.

2.7 LOAD TESTING:

2.7.1 After carrying out the annual servicing and maintenance of the crane and satisfactory completion of the written report, each crane shall be load tested to SWL in the presence of the concern user facility Engineer-in-charge and Divisional Safety Focal point following the checklist. Mobilization of dead weights for load testing from facility to facility will be at contractor scope. However, the department will play a prime responsibility on supply/arrange the dead weights required for the load testing and industrial heavy vehicles, dead weights/concrete blocks, forklift, hydra, scissor lift, height raisers, trucks/trailers, slings/belts etc. for transporting dead weights from facility to facility, yard to facility and arranging industrial vehicles by respective user facility as per checklist and contractor has to extend supporting works without extra cost. However, on non-availability of department vehicles contractor shall operate the separate clause for the arranging suitable industrial heavy vehicles for handling dummy loads from yard to respective facilities as per Annexure-C.2.

ie., if department vehicle is not in position to make use due to various reasons, the hired vehicle by contractor to be put in operation to eliminate delay in work.

2.7.2 The minimum tools and accessories required to carry out the load test as given in the following list have to be brought by the contractor for each work centre.

- a. Measuring tape, 50 meters or instruments.
- b. Plumb-bob
- c. Piano wire
- d. Steel rule, 1 meter
- e. Stop watch - 01 no.
- f. Try Square
- g. Multi meter
- h. Tong tester for current measurements
- i. Meggar etc.,
- j. Laser system for deflection measurement.

Note: all the instruments used should have been calibrated before use and the certificate to this effect should be shown to the Engineer-in-charge, if demanded. If the Engineer-in-charge demands re-calibration of any item, it has to be carried out immediately.

2.7.3 The contractor shall follow the procedure laid down by the Engineer-in-charge to carry out the load test.

2.7.4 The currents of all the motors and brakes as well as the speeds of LT, CT and Hoist motions are to be measured and recorded in the prescribed format.

2.7.5 The deflection measurements shall also be carried out and recorded.

ANNEXURE - 2

DETAILS OF LIST OF CRANES FOR AMC (for 2 years)

| SL. NO | CRANE ID. NO | FACILITY AND TYPE | CRANE CODE | SWL IN TON (t) |
|---------------|---------------------|--|-------------------|-----------------------|
| 1 | 1 | LUS - HAT 4 (F) - EOT | B148 | 5 T |
| 2 | 2 | HIGH PRESSURE INSTALLATION (F) - EOT (JIB) | B138 | 2 T |
| 3 | 3 | TCT-25 TEST BAY (F, @) - EOT | B112 | 5 T |
| 4 | 4 | MET (F, @) - EOT | B099 | 12 T |
| 5 | 5 | PTS (F, @, %) - EOT | B071 | 20 T |
| 6 | 6 | COLD FLOW TEST FACILITY (@) - EOT | B015 | 5 T |
| 7 | 7 | CYLINDER YARD (@) - EOT | B070 | 5 T |
| 8 | 8 | TPT (F) - EOT | B016 | 5 T |
| 9 | 9 | CRYO HIGH PRESSURE INSTALLATION - EOT (JIB) - WALL MOUNTED | B017 | 2 T |
| 10 | 10 | CST FACILITY (@) - EOT | B021 | 5 T |
| 11 | 11 | PLASMA COATING - EOT | A122 | 3 T |
| 12 | 12 | DIS-ASSEMBLY - VIKAS ENGINE - EOT | A124 | 3 T |
| 13 | 13 | E & S BLDG - GROUND VIKAS ENGINE INTEGRATION (@) - EOT | A121 | 3 T |
| 14 | 14 | PRE - ASSEMBLY - EOT | B106 | 2 T |
| 15 | 15 | PS2 INTEGRATION BLDG (@) - EOT | A079 | 10 T |
| 16 | 16 | PS2 CLEAN ROOM - EOT | A079 | 5 T |
| 17 | 17 | PSLV PRE-ASSEMBLY (@) - EOT | A078 | 5 T |
| 18 | 18 | L40 BLDG (HIGH BAY) - EOT | A076 | 5 T |
| 19 | 19 | L40 BLDG (LOW BAY) - EOT | A076 | 5 T |
| 20 | 20 | INTEGRATED BONDED FACILITY (@) - EOT | A077 | 5 T |
| 21 | 21 | OLD HARDWARE STORAGE (@) - EOT | A082 | 5 T |
| 22 | 22 | C25 SPRAY TANK CLEANING FACILITY (F, @) - EOT | A083 | 3 T |
| 23 | 23 | CRYO DIS-ASSEMBLY (F, @) - EOT | A083 | 3 T |
| 24 | 24 | FLIGHT HARDWARE (F) - EOT | A085 | 2 T |
| 25 | 25 | CE-20 WELD BAY (F, @) - EOT | A086 | 3 T |
| 26 | 26 | GCTF BLDG (@) - EOT | A108 | 6 T |
| 27 | 27 | SAFETY RELIEF VALVE FACILITY (@) - EOT | A107 | 1 T |
| 28 | 28 | THERMAL PAINTING - EOT | A106 | 3 T |
| 29 | 29 | FC-03 BLDG (@) - EOT | A103 | 5 T |
| 30 | 30 | INTEGRATED STAGE STORAGE (@) - EOT | A105 | 12 T |
| 31 | 31 | FC-04 & 06 BLDG (@) - EOT | A101 | 12 T |
| 32 | 32 | FC-05 BLDG (F, @) - EOT | A 100 | 5 T |
| 33 | 33 | L 110 PRE - ASSEMBLY BLDG (@) - EOT | A 098 | 5 T |
| 34 | 34 | L 110 CHECK OUT ROOM (@) - EOT | A 088 | 3 T |
| 35 | 35 | L 110 BLDG (@) - EOT | A 088 | 20 T |
| 36 | 36 | C25 BAY (@) - EOT | A 088 | 12 T |
| 37 | 37 | C25 STORAGE (@) - EOT | A 088 | 10 T |
| 38 | 38 | INSULATION PROCESS (F) - EOT | A 087 | 3 T |
| 39 | 39 | CRYO INTEGRATION BLDG (@) - EOT | A 086 | 10 T |
| 40 | 40 | CE-20 (@) - EOT | A 086 | 3 T |
| 41 | 41 | EXTN. TO HARDWARE STORAGE (@) - EOT | A 082 | 5 T |
| 42 | 42 | NEW HARDWARE STORAGE (@) - EOT | A 090 | 5 T |
| 43 | 43 | UNLOADING BAY (@) - EOT | A 091 | 10 T |

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|----|----|--|---------|-------------|
| 44 | 44 | PICKLING & PASSIVATION FACILITY (@) - EOT | A 048 | 2 T |
| 45 | 45 | I & QC - EOT | A 057 | 3 T |
| 46 | 46 | MRS (HOT) | D 001 | 6 T |
| 47 | 47 | ILHP STORE - EOT | D 029 | 3 T |
| 48 | 48 | ASU – ILHP (@) - EOT | D 037 | 7.5 T |
| 49 | 49 | FC 04 & 06 - AIRLOCK ROOM - MONORAIL (@) - EOT | D 101 | 3 T |
| 50 | 50 | INTEGRATED CLEAN ROOM (@) - EOT | A 096 | 5 T |
| 51 | 51 | INTEGRATED CLEAN ROOM AIR LOCK ROOM – MONORAIL (@) - EOT | A 096 | 3 T |
| 52 | 52 | LOADING BAY IN NEW VIKAS (@) - EOT – <u>AUTOMATED CRANE - THROUGH HMI.</u> | A 062 | 10 T |
| 53 | 53 | ENGINE PREPARATION IN NEW VIKAS (@) - EOT – AUTOMATED CRANE - THROUGH HMI. | A 062 | 10 T |
| 54 | 54 | CONTAINER MOVEMENT AREA IN NEW THRUST CHAMBER (@) - EOT - AUTOMATED CRANE - THROUGH HMI. | A 063 | 5 T |
| 55 | 55 | AUTOMATED GRID BLASTING FACILITY IN NEW THRUST CHAMBER (@) - EOT – <u>AUTOMATED CRANE - THROUGH HMI.</u> | A 063 | 3 T |
| 56 | 56 | THRUST CHAMBER (EOT - JIB) - FLOOR MOUNTED CRANE | A 063 | 1 T |
| 57 | 57 | VIKAS ENGINE (EOT - JIB) - WALL MOUNTED CRANE | A 062 | 1 T |
| 58 | 58 | INTEGRATION BAY IN SEMI-CRYO (@) - EOT | A 061 | 10 T |
| 59 | 59 | CONTAINERISATION BAY IN SEMI CRYO (@) - EOT | A 061 | 10 T |
| 60 | 60 | NEW GAS CYLINDER TEST FACILITY (@) - EOT | A 104 | 10 T |
| 61 | 61 | INTEGRATED CRYO FLUID STORAGE (@) - EOT | A 142 D | 5 T |
| 62 | 62 | PS2/GS2 BUILDING (@, %) - EOT | A 080 | 12 T |
| 63 | 63 | HARDWARE PREPARATION (@, %) - EOT | A 110 | 20 T |
| 64 | 64 | STRUCTURAL TEST BAY (@, %) - EOT | A 111 | 20 T |
| 65 | 65 | CYLINDER YARD - IET (@) - EOT | B 026 D | 5 T |
| 66 | 66 | CYLINDER SHED - IET (@) - EOT | B 026 E | 5 T |
| 67 | 67 | FIELD ASSEMBLY - IET (@) - EOT | B 026 K | 5 T |
| 68 | 68 | CTPT TEST FACILITY (F, @) - EOT | - | 2 T |
| 69 | 69 | HIGH ENERGY - X - RAY HALL (@) - EOT | - | 5 T |
| 70 | 70 | CRYO ENGINE ASSEMBLY AIRLOCK ROOM - MONORAIL - EOT | A086 | 2 T |
| 71 | 71 | NEW CRYO - FC04 & 06 (@) - EOT | A101 | 12 T |
| 72 | 72 | ILHP - GH2 COMPRESSOR BLDG - HOT | - | 10 T |
| 73 | 73 | NEW PS4 INTEGRATION BUILDING (@) - EOT | - | 5 T |
| 74 | 74 | CRYO ENGINE HARDWARE AND BONDED STORE (@) - EOT | - | 5 T |
| 75 | 75 | EARTH STORABLE AND CRYO STAGE HARDWARE (@) - EOT | - | 5 T |
| 76 | 76 | VIKAS ENGINE THRUST CHAMBER STORAGE (@) - EOT | - | 5 T |
| 77 | 77 | SIET - LOX PUMP ROOM - HOT (MONORAIL) | - | 5 T |
| 78 | 78 | SEMICRYO FABRICATION FACILITY CNC MACHINE HALL (@) - EOT | - | 10 T |
| 79 | 79 | SEMICRYO FABRICATION FACILITY CONVENTIONAL MACHINE (@) - EOT | - | 10 T |
| 80 | 80 | SEMICRYO FABRICATION FACILITY WELDING ASSEMBLY HALL (@) - EOT | - | 10 T |
| 81 | 81 | CST - UT - SUBSYSTEM TEST BAY (F, @) - EOT | - | 2 T |
| 82 | 82 | CST - UT - ISROSENE TEST BAY (F, @) - EOT | - | 2 T |
| 83 | 83 | SIET TEST STAND (F, @) - ENGINE BAY | - | 10 T |
| 84 | 84 | SIET TEST STAND (F, @) - STAGE BAY | - | 35 T |
| 85 | 85 | PLASMA COATING (@) - EOT (JIB) - FLOOR MOUNTED | A 122 | 1 T |
| 86 | 86 | COLD FLOW TEST FACILITY - MATERIAL SHED (@) - EOT (SIDE BAY) | - | 5 T |
| 87 | 87 | SEMI CRYO CLEANING FACILITY (F, @) - EOT | - | 3 T |
| 88 | 88 | NEW LAM - TEST FACILITY (F, @) - EOT | - | 5 T |
| 89 | 89 | OLD HARDWARE STORAGE (@) - EOT (AC) | A 082 | 5 T |
| 90 | 90 | C-25 STAGE INTEGRATION COMPLEX - 01 (@, %) - EOT (AC) | - | 10 T |

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| 91 | 91 | C-25 STAGE INTEGRATION COMPLEX - 01 a (@, %) - EOT (AC) | - | 20 T |
| 92 | 92 | C-25 STAGE INTEGRATION COMPLEX - 02 (@, %) - EOT | - | 20 T |
| 93 | 93 | C-25 STAGE INTEGRATION COMPLEX - 03 (@, %) - EOT | - | 20 T |
| 94 | 94 | C-25 STAGE INTEGRATION COMPLEX - 04 (@, %) - EOT | - | 20 T |
| 95 | 95 | SIET – VACCUM PUMP - HOT (MONORAIL) | - | 5 T |
| 96 | 96 | NEW INSULATION FACILITY (F, @) - EOT | - | 10 T |
| 97 | 97 | SIET - NEW STORE ROOM (F, @) - EOT | - | 3 T |
| 98 | 98 | ILHP - GH2 COMPRESSOR BLDG (F, @) - HOT | - | 10 T |
| 99 | 99 | LINAC - RADIOGRAPHY EXTENSION (F, @) - EOT | - | 5 T |
| 100 | 100 | TANK STORAGE AND HARDWARE STORAGE (F, @) - EOT | - | 10 T |
| 101 | 101 | ILHP - HYDROGEN COMPRESSOR – 1 - HOT | - | 5 T |
| 102 | 102 | ILHP - ELECTRICAL DIESEL GENERATOR (DG) ROOM - HOT | - | 5 T |
| 103 | 103 | ILHP - LIQUID HYDROGEN PURIFICATION SYSTEM (LHPS) - HOT | - | 2 T |
| | | | | |
| 104 | 104 | TANK STORAGE AND HARDWARE STORAGE (F, @) - EOT - NOT ERECTED | - | 10 T |
| 105 | 105 | LOADING & UNLOADING BAY AT CRYO ENGINE ASSEMBLY - EOT - NOT ERECTED | - | 3 T |
| 106 | 106 | HEAT TREATMENT FACILITY - EOT - NOT ERECTED | - | 2 T |
| 107 | 107 | GRIT BLASTING FACILITY FOR VIKAS ENGINE THURST CHAMBER FACILITY - EOT - NOT ERECTED | - | 5 T |
| 108 | 108 | TANK STORAGE & HARDWARE STORAGE FACILITY (SC-120) – A - EOT - NOT ERECTED | - | 20 T |
| 109 | 109 | TANK STORAGE & HARDWARE STORAGE FACILITY (SC-120) – B - EOT - NOT ERECTED | - | 12 T |
| 110 | 110 | SPARES STORAGE BUILDING AT SIET FACILITY (SC-120) - EOT - NOT ERECTED | - | 5 T |
| 111 | 111 | ESS TANKAGE STORAGE BUILDING - EOT - NOT ERECTED | - | 12 T |
| 112 | 112 | PS2/GS2 BLDG NEW - MONORAIL - EOT - NOT ERECTED | A 080 | 3 T |

NOTE:

1. Cranes available in IPRC for **AMC at present is 103 nos.** (Sl.no. 01 to 103).
2. Maintenance of new cranes in Sl.no: 104 onwards may commence based on site conditions, tentatively from 2025 onwards or may not.
3. (F) indicated in bracket next to cranes indicates flameproof crane.
4. @ indicated in bracket next to cranes indicates VVVF drive cranes.
5. % indicated in bracket next to cranes indicates Radio frequency with remote controller.
6. AC indicated in bracket next to cranes indicates cranes with Anti Collision System.

CONFIRMATION/COMPLIANCE STATEMENT

| Sl. No | Description of terms and conditions | Compliance | |
|--------|---|------------|----|
| | | Yes | No |
| | SCOPE OF WORK | | |
| 1. | The period of contract shall be of Two years as per point 1.0 of tender document and entire indent specification along with annexure – 1, 2, 3, 4, A, B, C.1, C.2. | | |
| 2. | List of cranes and terms offered for maintenance as per annexure-2 of tender document. | | |
| 3. | Conducting PPM, AM, Load test and Brake down maintenance etc., as per the section 1.1 to 1.22 of tender document. | | |
| 4. | Acceptance of consumables supply as per section-1.8 of tender document. | | |
| 5. | Acceptance of Pre-qualification criteria and terms as per section-2 of tender document. | | |
| 6. | Work experience & competency and Man power & response time as per section-3, 6 of tender document. | | |
| 7. | Acceptance of Technical specification as per annexure-4 of tender document. | | |
| 8. | Acceptance of IPRC obligations & Arbitration and terms as per section-5 of tender document. | | |
| 9. | Acceptance of Work force & Response Time as per section-6 of tender document. | | |
| 10. | Acceptance of general conditions as per section-7 of tender document. | | |
| 11. | Acceptance of entry passes and terms as per section-8 of tender document. | | |
| 12. | Acceptance of Compliance of Safety Regulation and terms as per section-9 of tender document. | | |
| 13. | Acceptance of Taxes and Duties and terms as per section-10 of tender document. | | |
| 14. | Acceptance of Rejection of Tender & Other Conditions and terms as per section-11 of tender document. | | |
| 15. | Acceptance of Security Deposit and terms as per section-12 of tender document. | | |
| 16. | Acceptance of Down-Time Compensation and terms as per section-13 of tender document. | | |
| 17. | Acceptance of Validity of Contract and terms as per section-14 of tender document. | | |
| 18. | Acceptance of Payment Terms as per section-15 of tender document. | | |
| 19. | Acceptance of Cancellation of Annual Maintenance Contract and terms as per section-16 of tender document. | | |
| 20. | Acceptance of Replaced Components/ Spares & Quantity Variation and terms as per section-17 of tender document. | | |

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|-----|--|--|--|
| 21. | Acceptance of Schedule of Work and terms as per section-18 of tender document. | | |
| 22. | Acceptance of Sub-Contract and terms as per section-19 of tender document. | | |
| 23. | Acceptance of Compliance of Workman's Compensation Insurance and terms as per section-20 of tender document. | | |
| 24. | Acceptance of Fall Clause and terms as per section-21 of tender document. | | |
| 25. | Acceptance of Information to Bidders and terms as per section-22 of tender document. | | |
| 26. | Acceptance for Nature of Servicing and Maintenance and terms as per annexure -1 of tender document. | | |
| 27. | Acceptance for List of Cranes for AMC and terms as per annexure-2 of tender document. | | |
| 28. | Acceptance for Spares of EOT crane and terms as per annexure-C.1 of tender document. | | |
| 29. | Acceptance for Major works/ modifications/ rectification/ routine/ equipment etc and terms as per annexure-C.2 of tender document. | | |
| 30. | Party has to quote for annexure – A, B, C.1, C.2 of tender document. | | |
| 31. | Acceptance for similar work means “Annual maintenance contract (AMC) for EOT cranes in which <u>scope of work involves preventive maintenance, annual maintenance with load testing, break down maintenance and service experience on attending VVVF drive complaints and knowledge on its programming</u>) | | |
| 32. | Confirmation of submission of the experience in AMC of higher capacity cranes (minimum 04 nos EOT crane of capacity more than or equal to 20 T in each purchase orders). | | |
| 33. | Confirmation on Number of cranes maintained in a year and list of clients & work orders / P.O & completion certificates furnished along with techno-commercial part bid as per section-2 & 22 of tender document. | | |
| 34. | Confirmation/compliance statement (annexure-3) has filled and submitted along with techno-commercial part bid as per section-22 of tender document. | | |
| 35. | Acceptance for “Debarment declaration” as per annexure-4 of tender document. | | |

Debarment declaration

(To be given on Company Letter Head)

Date:

To,

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Sub: Declaration regarding Debarment/Blacklisting

Tender Reference No.:.....

Name of Tender/ Work: -

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Dear Sir,

We hereby declare that we are not debarred/blacklisted by any Central/State Government/agency of Central/State Government of India or any other country in the world/Public Sector Undertaking/Any Regulatory Authorities in India or any other country in the world for any kind of fraudulent activities.

Yours faithfully,

(Signature of the Bidder, with Official Seal)