

REQUEST FOR QUOTATION (RFQ)

FOR

**MANUFACTURE OF THE TMT PMA/SSA SHIPPING
CONTAINER FOR THE THIRTY METER TELESCOPE
PROJECT.**

**INDIAN INSTITUTE OF ASTROPHYSICS
INDIA TMT CO-ORDINATION CENTRE
KORAMANGALA, BENGALURU - 560 034.**

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1. LIST OF ABBREVIATIONS

AD	Applicable Document
ANSI	American National Standards Institute
ARIES	Aryabhata Research Institute for Observational Sciences
ASME	American Society of Mechanical Engineers
BOQ	Bill of Quantities
DOR	Development Order Review
EIDP	End Item Data Package
GD&T	Geometric Dimensioning and Tolerancing
IGES	Initial Graphics Exchange Specification
IIA	Indian Institute of Astrophysics
ITCC	India TMT Co-ordination Centre
M1	Primary Mirror
M1CS	Primary Mirror Control System
MRF	Mirror Rod Flexure
MoM	Minutes of Meeting
NCR	Non-Conformance Report
QA	Quality Assurance
RD	Reference Document
Rev	Revision
PQP	Production qualification program
RFP	Request for Proposal
RFQ	Request for Quotation
SC	Shipping Container
SOW	Statement of Work
SSA	Segment Support Assembly
STEP	Standard for the exchange of Product model data
TIO	Thirty Meter Telescope International Observatory
TMT	Thirty Meter Telescope
TMTPO	Thirty Meter Telescope Project Office
TR	Tangential restraint
TPI	Third Party Inspection
WBS	Work Breakdown Structure

2. BACKGROUND INFORMATION

The Thirty Meter Telescope (TMT) International Observatory (TIO) is a joint venture of scientific institutions in Canada, China, India, Japan and the US to build a 30-meter diameter optical infra-red telescope. As a part of India's contribution to TIO, the India-TMT Coordination Centre (ITCC) intends to develop and supply various sub-systems to be delivered to the observatory.

The India-TMT group is led by the Indian Institute of Astrophysics (IIA), Bangalore, the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, and the Aryabhata Research Institute for Observational Sciences (ARIES), Nainital. The activities of India-TMT are coordinated by ITCC that is hosted at IIA, Bengaluru.

The primary mirror ("M1") of the TMT is comprised of 492 hexagonal mirror segments. Each mirror segment is 1.44 meters measured across corners. These segments need to be maintained at the required surface accuracy and stability, against structural deformations caused by temperature, gravity, wind and seismic vibrations. For this, each segment is passively controlled by the Segment Support Assemblies (SSA).

2.1. PRIMARY SEGMENT ASSEMBLY

To achieve the required surface accuracy and stability each segment will be supported by a passive support system consisting of nearly independent axial and lateral support systems. The axial support system is a 27-point whiffletree, and the lateral support employs a central diaphragm. Figure 1 shows a Primary Segment Assembly (PSA) installed on the top-chord members of the mirror cell. For simplicity, only three top-chord members are shown, in reality the mirror cell is a network of many such members. The PSA includes the PMA and the Subcell.

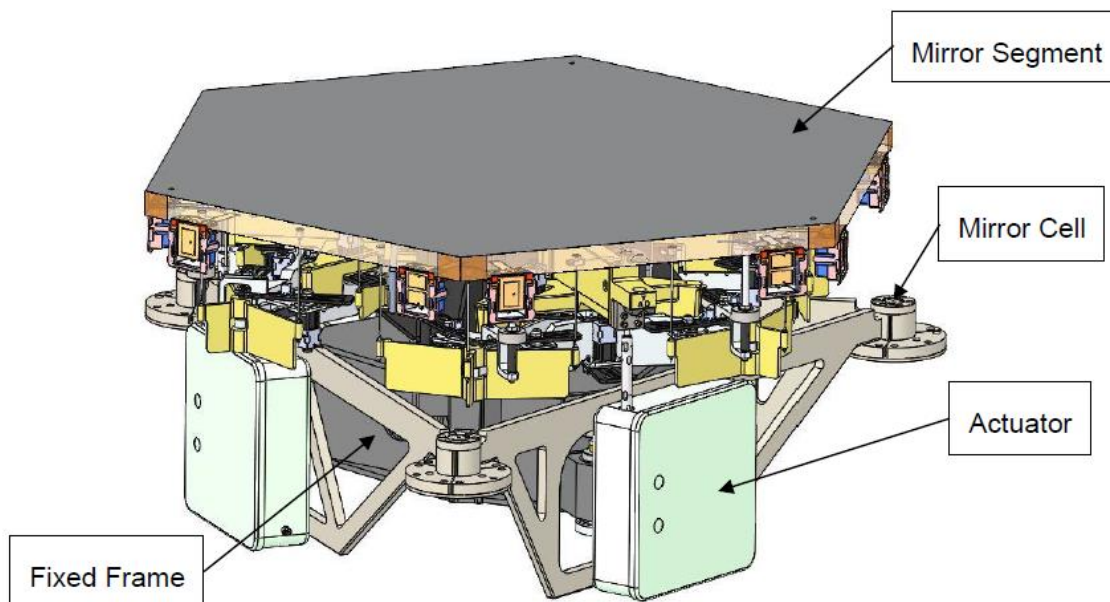


Figure 1: Primary Segment Assembly (PSA) mounted to Mirror Cell with Actuators

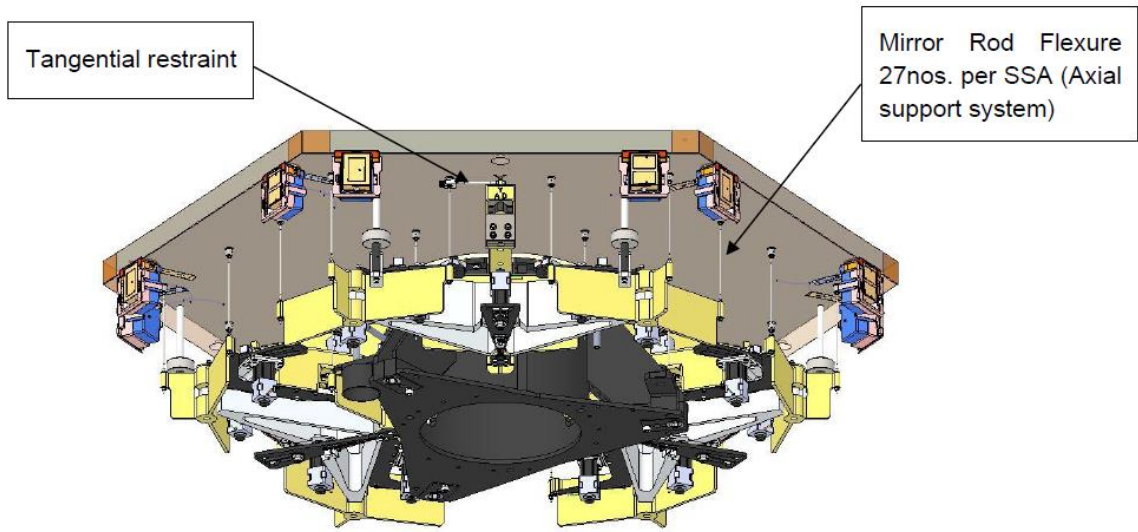


Figure 2: Segment support assembly with Installed Mirror, MRF and Tangential restraint components

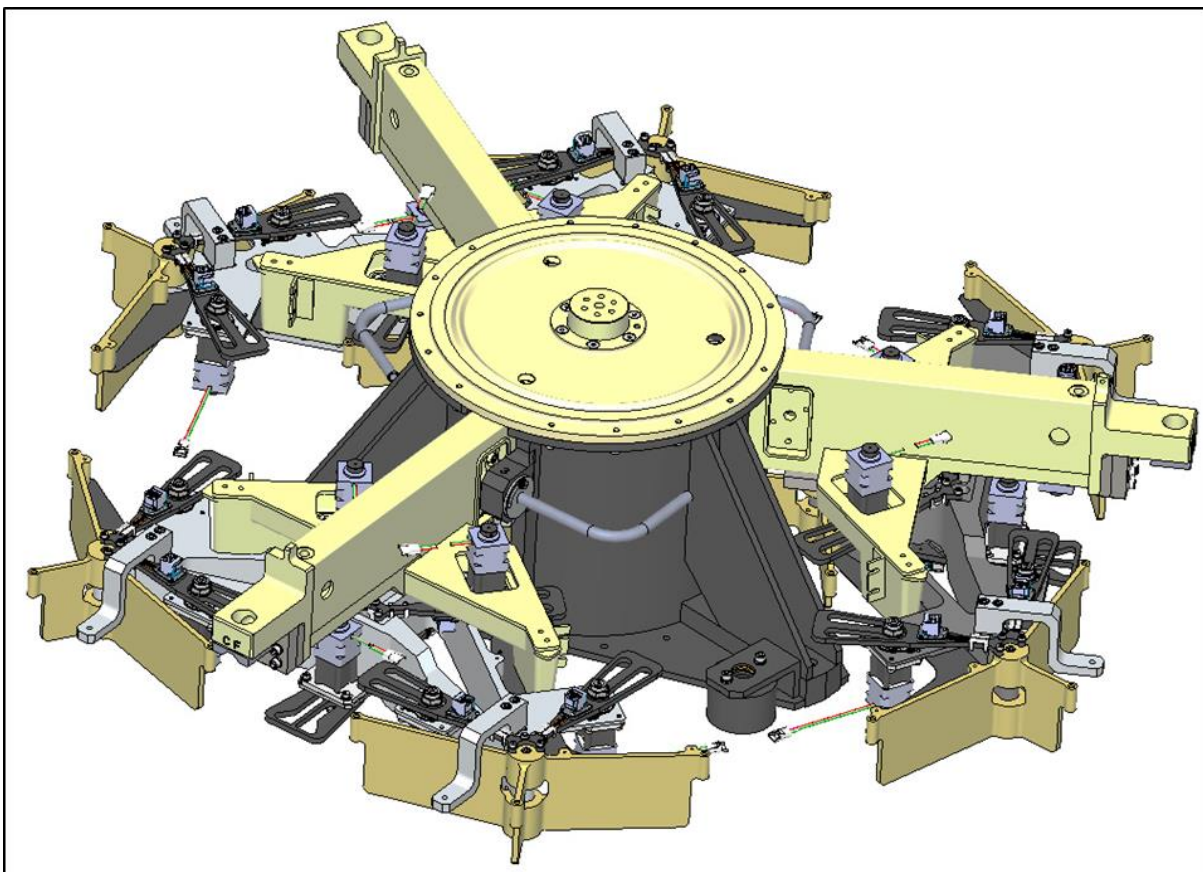


Figure 3: Segment Support Assembly (SSA)

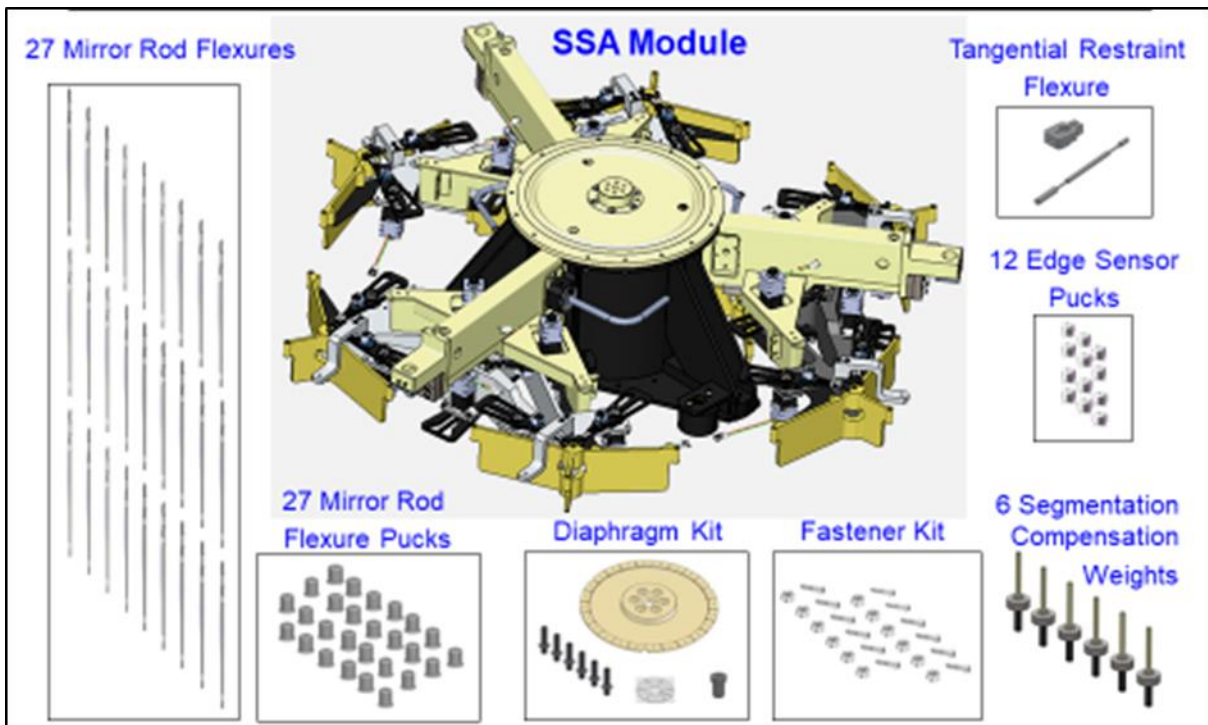


Figure-4 Total PMA Kit

The PMA Kit consists of SSA and loose parts as shown in the above figure.-4

SSA along with all loose parts shown above will be packed in the shipping container and shipped to international destinations.

Note that the above provided data is only for information purpose.

3. BIDS

Bids are invited from the contractors/manufacturers who are capable of manufacturing the PMA shipping container as per the design given by ITCC/IIA

3.1. SUBMISSION OF BIDS

Bidders are requested to submit their bids as per the CPP portal.

The compliance statement (Refer to Section 3.2) and price bids should be uploaded separately.

The bid shall be addressed to:

THE DIRECTOR,

INDIAN INSTITUTE OF ASTROPHYSICS

2nd BLOCK KORAMANGALA, BENGALURU-560 034

IIA/ITCC may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents, in which case all rights and obligations of IIA/ITCC and Bidder previously subject to the deadline will thereafter be subject to the deadline as extended.

At any time prior to the deadline for submission of Bids, IIA/ITCC may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, notify changes in the bidding documents through a corrigendum.

In order to allow reasonable time for the prospective bidders for taking the corrigendum into account in preparation of their bids, IIA/ITCC may, at its discretion, extend the deadline for the submission of the bids.

The corrigenda, if any, shall be notified in writing at the IIA/ITCC website, and the amendments shall be binding on all Bidders. Hence, Bidders shall view the notification in complete before submitting their bids.

A Bidder responding to announcement shall be deemed to have read and understood the documents in complete. Where counter terms and conditions have been offered by the company, the same shall not be deemed to have been accepted by IIA/ITCC, unless a specific written acceptance thereof is obtained.

Any effort by a Bidder to influence IIA/ITCC in the bid Evaluation, bid Comparison or contract award decisions may result in the rejection of their bid.

Any clarifications pertaining to this document may be obtained from IIA/ITCC by Bidders by writing at the following address at least fifteen days prior to the due date for submission of bids.

3.2. TECHNICAL BID - DETAILS

A compliance sheet clearly indicating any deviation with reference to the terms and specifications shall be included. Limitations and assumptions, if any, should be clearly mentioned. Scope description may explicitly state anything which is not covered.

The Technical bid shall include details of but not limited to the following items:

- i. The bidder should be registered in India and ISO 9001 certified and certification details to be submitted.
- ii. Raw material sourceability and incoming inspection.
- iii. Earlier experience in direct import of standard parts
- iv. Should have In-house manufacturing capability and various types of machines & capacity. Detail of wood working and metal working facility available to be provided.
- v. Detail of assembly area available, size and photograph to be provided.
- vi. ISPM15 complaint
- vii. Details of Inspection facility & Instruments.
- viii. Any other information / facilities related wood fabrication, drilling/machining, welding, secondary coating/plating details of facility available for any sub-vendors associated etc., special operations if any.
- ix. Details of similar shipping container fabricated earlier if any with photo graphs.
- x. Strategy to be followed for the execution of the project including tools and technologies to be used and tie-up with any other industry for the exaction of the contract.
- xi. Project execution and management details, including details of the project team, escalation paths etc.

- xii. Prior experience in executing similar projects.
- xiii. List of Customers within the State/Country/abroad.
- xiv. Details of the data expected to be provided by IIA/ITCC to the successful bidder for undertaking the project.
- xv. Risk identification and mitigation plans.
- xvi. Quality audit, control and assurance plans.
- xvii. On-site inspection capability.
- xviii. Detail of Environmental, health and Safety standard followed.
- xix. General workmanship standards for fabricated components
- xx. Change control process.
- xxi. Detailed time schedule for the project.
- xxii. Commercial terms and conditions.
- xxiii. Responsiveness & Communication: Online meeting.
- xxiv. Acceptance criteria and test plans in the factory and on-site.
- xxv. A copy of the Price Bid **without indicating the quoted Price**

3.3. COMPLIANCE STATEMENTS

Bidder shall provide compliance statements for technical and managerial requirements as per the scope of this document.

3.4. PRICE BID – DETAILS

The Price bids shall be provided in Indian Rupees.

IIA/ITCC may ask additional details of the break-up of the cost, at a later stage.

The offer should be complete to indicate that all products and services (which shall include tooling, GST, Transportations, & Other etc.) are quoted.

The Price bids shall include the following:

- i) Contractors shall provide the total cost per Shipping Container.
- ii) Applicable taxes, duties or other statutory payments.
- iii) Any other cost such as for tooling if is to be listed separately but to be included in the total cost.
- iv) The quoted total price per shipping container shall be applicable for order of 10 or 6 shipping containers
- v) Total cost along with proposed payment stages, with schedule and percentage to be paid at each stage and advance payment if any.
- vi) The offer should be complete to indicate that all products and services asked for are quoted.

3.5. PRICEBID VALIDITY

Price bid shall be valid for a period of 90 days from the date of opening of bids. IIA/ITCC may ask Bidder's consent to extend the period of validity. Such request and the response will be made through informal communication. A Bidder agreeing to the request of IIA/ITCC for extension of the price bid will not be permitted to modify the bid.

3.6. EVALUATION OF BIDS

Bidder may email to the given contacts to obtain clarifications regarding the technical details, and price bid terms and conditions.

Both the technical bids and Commercial bids will be evaluated by specialist Committee/s. The criteria for qualifying for the tender evaluation stage shall include the following:

i) Technical criteria:

- a) Core technical competencies.
- b) Quality certifications (ISO 9001), including Quality Control.
- c) Project management capabilities, including scheduling, planning and availability of suitable staff.
- d) Prior experience in executing similar technically challenging projects. Photographs and proofs to be provided.
- e) Compliance to technical requirements.

ITCC evaluation team may visit to verify the stated facility and technical capabilities of the bidder. Any wrong information may lead to disqualification of the bidder.

ii) Price Criteria:

- a) Total price offered for the Shipping Containers.

To assist in evaluation of bids, IIA/ITCC may at its discretion ask Bidder for a clarification of its bid. IIA/ITCC may call for meetings with Bidder to seek clarification at appropriate times in its premises in Bengaluru or on on-line meetings. IIA/ITCC team may at its discretion may visit the Bidder premises for physical verification of stated technical requirements. The request for clarification and the response shall be in formal communication. Bidder shall attend the meeting if any at their own cost.

The quoted price per container shall be applicable and valid for ordering 10 nos. or 6 nos. of shipping containers.

After completion of the technical Compliance and technical capability Evaluation, the Price bid of the technically qualified Bidders will be opened, and the selection of Contractor(s) will be made based on the lowest price offered (L1).

For risk mitigation, at the discretion of IIA/ITCC, orders may be placed with two Contractors only on L1 price, In such an instance, the distribution of quantity will be in the ratio of 6:4 for the L1 & L2 bidders respectively (where L2 is the price closest to L1), L2 will be required by IIA/ITCC to match the L1 price, there shall be no order price variation.

iii) CONTACTS:

TECHNICAL CLARIFICATION:

Surojit Kumar Roy

Project Junior Engineer

India TMT Coordination Centre (ITCC),

Indian Institute of Astrophysics,

Koramangala, Bengaluru 560034,

(surojit@iiap.res.in)

&

Karthic Kumar

Project Engineer -II

India TMT Coordination Centre (ITCC),

Indian Institute of Astrophysics,

Koramangala, Bengaluru 560034,

(karthic.itcc@iiap.res.in)

ADMINISTRATIVE CLARIFICATION:

Shri K.P. Vishnu Vardhan,

Stores and Purchase Officer

Indian Institute of Astrophysics,

Koramangala, Bengaluru 560034,

(vishnu.vardhan@iiap.res.in)

&

Shri C.H. Basavaraju,

Consultant (Administration)

India TMT Co-Ordination Centre,

Indian Institute of Astrophysics,

Koramangala, Bengaluru 560034

(basavaraju@iiap.res.in)

4. SCOPE OF WORK

This SOW is for the manufacture, inspect, assemble and deliver 10 nos. SSA/PMA shipment containers in good condition to the location specified as per complete drawing specifications M1S-560-00100_C or as per the latest revised drawing provided by ITCC/IIA-

- a) Manufacturer(s) should satisfactorily meet the drawing requirements, inspection and quality criteria and have to deliver on schedule, the contracted shipping containers.
- b) ITCC will not accept subcontracting the entire work or major part of the work by the Manufacturer, only some specific/special machining operations and process can be sub-contracted with prior approval from ITCC/IIA. Technical tie-up between manufacturing industry and wood working is accepted and in such tie-ups, details and consent for the other industry is to be provided in technical bid and in such case both facilities will be considered for technical evaluation, however the main bidder will be responsible for the execution of contract.
- a) The technical quality of the containers and on-time delivery is very important for TMT. It is important to maintain the quality and schedule. The performance of the Manufacturer will be evaluated periodically. If the quality requirements are not met or if the schedule is not maintained, the bidder(s) is liable to be disqualified. ITCC will be evaluating the contractor/manufacturer performance during this round. If the Manufacturer doesn't meet the drawing requirements and agreed schedule, the manufacturer shall not be eligible to bid for future production manufacturing.
- b) the ordered/contracted quantity of parts may be reduced, or the order may be cancelled by ITCC.

4.1. APPLICABLE DOCUMENTS

The drawing in PDF with STEP Model will be shared along with the RFQ document for fabrication of the components.

Bidder shall accommodate any minor changes in the drawing before start of fabrication with provided prior information to ITCC with approval.

AD1. Drawings and Models which includes the following.

- a) PDF drawing
- b) IGES files
- c) STEP files

AD2. TMT Quality Assurance Plan, TMT.PMO.MGT.10. 008.CCR09

AD3. Request for Waiver or Deviation, TMT.PMO.ECR.15. 001.REL01

AD4. GUIDELINES FOR SUPPLIER QUALITY REQUIREMENTS,
TMT.PMO.MGT.10. 009.CCR04

The final 2D drawings in PDF will be given by ITCC to Bidder during the manufacturing phase; Bidder shall consider these as the final versions for the build. Bidder shall report discrepancies, if any, related to the drawings and the CAD models immediately to ITCC. ITCC is not responsible for the situations in case the Bidder has taken assumptions on the specifications. In case of discrepancy between the provided drawings and the CAD models, the Drawing shall be considered as the final document for manufacturing, inspection and delivery of the parts. The bidder shall report the discrepancies to ITCC. Whenever required bidder shall seek clarifications from ITCC/IIA.

All the above listed documents are available in the given link (required drawings) and bidders are requested to download the necessary documents.

Link:

https://itmtiiap-my.sharepoint.com/:f/g/personal/actuator2_itmtiiap_onmicrosoft_com/EpReLwnQt4xNtDORJ6Wq83YB5u7j1FnBQ_uMUCLkiwQM9w?e=8YGxYm

4.2. DESCRIPTION OF WORK TO BE PERFORMED

Contractor shall perform the following work:

Contractor shall review all Applicable Documents, and communicate in writing to ITCC any questions, concerns or comments, including recommended edits to improve accuracy/clarity.

Upon receipt of ITCC's written Authorization to Proceed after the Pre-build meeting, Contractor shall manufacture the specified number components as per the purchase order.

- i) Contractor shall manufacture, inspect, delivery and assemble 10 containers.
 - a) Contractor to import necessary specific brand parts for all 10 set (and spares as applicable) in one batch.
 - b) Contractor to fabricate two shipping containers in first batch.
 - c) On meeting the satisfactory quality requirement and progress clearance will be given for next 8 containers.
 - d) If the performance is not satisfactory and quality requirements are not met the contract shall be terminated. And cost of remaining imported parts will be paid as per the actuals on surrendering the parts to IIA/ITCC in good condition with necessary certificates.
- ii) Contractor shall label parts as per drawing requirements.
- iii) Contractor shall inspect all incoming material and fabricated parts with traceability record as per internal Inspection Plan.
- iv) Contractor to share the inspection report as per the format provided by ITCC (AD1 e)
- v) The loose parts and assemblies have to be packed individually in a separate boxes (separate packets for small components) and these boxes/packets have to be suitably placed and anchored inside a bigger shipping box and then to be shipped in specified batches to the delivery location mentioned by ITCC (within India) along with EIDP documents. Contractor shall provide a description of the proposed shipping approach and will be reviewed by ITCC.
- vi) If the contractor doesn't perform well in this lot will not be eligible to apply for the production tendering.

5. DELIVERY LOCATION

Hardware and Documentation Hardcopies: to

**Larsen & Toubro Limited, Defence IC | Precision Manufacturing & Systems Complex |
Malumichampatti Campus, L&T Bypass Road, PO Box No. 4440, Coimbatore - 641 050 |**

Documentation Softcopies: by electronic delivery to surojit@iiap.res.in, karthic.itcc@iiap.res.in & and mark a copy to: pkmahesh@iiap.res.in, viswanatha.itcc@iiap.res.in or as directed by ITCC.

6. QUALITY ASSURANCE

Contractor Quality Assurance activities shall comply with [AD2].

The Contractor shall submit an Inspection Plan to ITCC for approval no later than one week prior before the Pre-Build meeting. The inspection plan shall call for 100% inspection of all the features. ITCC will provide bubble drawings for inspection.

6.1. TREATMENT OF NON-CONFORMANCES

ITCC shall be informed of any non-conformance of components manufactured, raw material procured or any other matter which does not meet the specification (collectively referenced as “Non-conforming Components”). Non-conforming components shall be identified and segregated immediately upon detection. If non-conforming components can be reworked, re-made or purchased to comply with the drawing and/or specifications required under this Contract with no delay on the delivery date, then ITCC does not need to be notified.

If the non-conforming components are reworked or re-fabricated should comply with the drawing and/or specifications are likely to affect the delivery date, then ITCC shall be notified within 48 hours of the Contractor’s identification of the non-conformance.

Contractor shall use the TMT form “Request for Waiver or Deviation” [AD3] to request a waiver of any kind. Contractor shall maintain sufficiently detailed non-conformance reports (“NCR”) on all non-conforming components. Contractor shall attach pertinent NCRs to the applicable “Request for Waiver or Deviation” form(s) for that non-conforming component. Contractor shall email the completed Request for Waiver or Deviation form(s) to ITCC personnel as mentioned above.

A root cause analysis shall be performed for all non-conformances and proposed corrective action are to be provided in a fully filled “Request for Waiver or Deviation” form within 5 days.

Acceptance and rejection of waiver request is sole discretion of IIA/ITCC.

Supplier will have to make efforts to reduce the no of non-conformance(s).

6.2. INSPECTION AND ACCEPTANCE

100% inspection of all features shall be performed. ITCC reserves the right to witness all inspections, in process and end item, and to utilize a third-party inspection company to inspect and verify Contractor’s fabricated components and inspection results in full or partial. To facilitate Third-Party inspection, Contractor need to provide facility, tools, & required equipment’s, etc. to conduct Third-Party inspection at the Contractors facility. The Contractor shall provide the inspection reports.

Contractor shall ensure that the inspection report format(s) is reviewed by IIA/ ITCC before use (preferably by Pre-Build Meeting).

Acceptance of the Shipping containers shall be in two stages. The first stage acceptance, inspection and satisfactory compliance at factory and cleared for shipment. The second and final acceptance shall be the inspection and satisfactory compliance at delivery location.

6.3. END ITEM DATA PACKAGE (DOCUMENTS DELIVERABLES)

- i) Formal Acceptance Letter signed by Contractor’s Quality Assurance Officer or designee.
- ii) Material Certifications traceable to each part by serial number and other traceability documents.

- iii) Wood type, quality and treatment certificates confirming to the drawing specifications.
- iv) COC for bought out and imported parts.
- v) Contractor QA inspection reports for each part with associated balloon drawing.
- vi) Calibration certificates for all QA measuring instruments.
- vii) Special process certificates like fumigation certificate, coating and other documents as per the drawing (AD1) requirements.
- viii) Certificates of Compliance for Bought-out Parts/items.
- ix) As built-list
- x) Assembly procedure and logs.
- xi) All Non-Conformance Reports (NCRs) The NCR shall identify a root cause analysis, the agreed disposition(s) and corrective and preventive action(s). Each NCR to record only one deviation. A record shall be kept determining if the NCR is closed or open. The NCRs will be reviewed by the Material Review Board of TMT/ITCC and dispositioned accordingly with guidance from the TIO Project Office.
- xii) Traceability Data

7. REPORTS AND MEETINGS

7.1. REPORTS

Contractor shall submit a bi-weekly (every two weeks) written "progress report" by email to ITCC, describing all work carried out and the corresponding schedule status. The Contractor shall provide a process list detailing the status relative to schedule of each piece of procured material, fasteners, and machined parts. The progress report shall include all questions and areas of concern regarding the Work. All written communication by Contractor to ITCC shall have surojit@iiap.res.in, & karthic.itcc@iiap.res.in in distribution to pkmahesh@iiap.res.in, & viswanatha.itcc@iiap.res.in, or as identified by ITCC. The "progress report" shall be made available to ITCC two days prior to the "Bi-Weekly Progress Meetings".

7.2. MEETINGS

The Contractor shall participate in the following meetings. The meetings may be via telephone or video. ITCC reserves the right to have visit or in-person meetings at the Contractor's facility.

- i. **A "Kick-off Meeting"** shall be held in the first week after the Effective Date of the contract/purchase order. The meeting shall review the drawings and answer any Contractor questions. This meeting may be in person at the Contractor's facility or via video or telecom at ITCC's discretion.
 - The Kick-Off meeting shall be held for.
 - Vendor and ITCC to introduce its team and team structure which will be working on the India-TMT project.
 - Identify single point of contact at vendor and ITCC.

- IIA/ITCC shall make available to vendor the final drawing set for the specified components.
 - IIA/ITCC to bring forward some of areas where utmost care must be taken by the vendor
 - IIA/ITCC to bring forward its concern for Raw Material Procurement of specific items
 - Comments/clarifications on drawings, processes etc. by the vendor
 - List of identified machinery for the Project
 - Risk involved in realization of shipping container
 - Discussion on Schedule requirements.
 - Any suggestions by the contractor for ease of fabrication and improvements
- ii. **A “Pre-Build meeting”** shall be held at date to be determined by the Parties. At the Pre-Build meeting, ITCC shall finalise decision on any changes to the drawings or component/material substitutions proposed by Contractor. Sub-contractors may only perform Work if they receive prior written approval from ITCC. The Contractor’s proposed detailed schedule shall be submitted to ITCC for approval no later than one week prior to the “Pre-Build meeting”. The Contractor shall provide its components Specific Quality Assurance Plan to ITCC for approval/review (whichever applicable) no later than 1 week prior to the Pre-build Meeting. The contractor to propose any alternate or better materials, parts, process or changes to the drawing for IIA/ITCC consideration, accepting or rejecting the proposals is solely left to the discretion of IIA/ITCC. The Contractor Inspection and Process Plan shall be provided to ITCC for approval no later than one week prior to the Pre-Build meeting.
- Pre-build meeting shall be held at manufacturing Contractor facility or online in order to discuss on:
 - The Kick-off meeting Action Items, if any.
 - Clarifications on the drawings, if any.
 - Contractor’s QA plan
 - Finalised Inspection Plan
 - Finalised Project plan which shall include following minimum details to execute and manage the activities as per the scope of this document
 - Identified persons under each department
 - Final Risk mitigation plans, if any
 - Detailed Schedule. The detailed schedule shall capture the work breakdown structure (WBS) with all activities and milestones included to manage and monitor the activities as per the scope of this document.
- iii. **Progress** meetings shall be held bi-weekly (every two weeks) during the term of this Contract. The bi-weekly meetings shall review status, progress reports and address any outstanding concerns or issues regarding the Work. Contractor shall maintain a record of major discussion (MoM) & action item list with due dates and priorities. Progress meetings

may be held via telecon, online (go-to meeting or MS team meeting or as identified by ITCC) or in person at the Contractor’s facility as determined by ITCC.

- iv. **Assembly readiness review** for first/two Shipping Container/s
- v. **Pre-ship** reviews.

ITCC reserves the right to invite TMT Project Office Staff to participate in any of the above meetings, in such cases the meetings may have to be scheduled in the early hours or in late evening hours to facilitate TMT Project Office Staff participation.

8. SCHEDULE

Step	Milestones	Schedule
1	Date of this announcement	T0
2	Last date for receipt of bids	T0 + 3 Weeks
3	Opening of technical bids	T0 + 4 Weeks
4	Opening of Price Bids	T0 + 6 Weeks
5	Award of Contract and Kick-off meeting	T1 (T0 + 8 Weeks)
6	Pre-Build meeting	T1 + 2 Weeks
7	Manufacturing completion of first SC & EIDP Submission	T1 + 12 Weeks
8	ARR for 1 st SC	T1 + 13 Weeks
9	Assembly of 1 st shipping container	T1 + 14 Weeks
10	Build & assembly acceptance of 2-5 SC & EIDP Submission	T1 + 18 Weeks
11	Build & assembly acceptance of 6-10 SC & EIDP Submission	T1 + 22 Weeks
12	Pre-ship Review meeting	T2 (T1 + 24 Weeks)
13	Delivery and assembly of containers to L&T	T2 + 1 Week

The detailed component wise schedule preferable in excel or Microsoft project format shall capture the daily workflow and reference all milestones from the above schedule table.

Note: Importing and long lead items to be planned to procure them in advance to avoid impact on the schedule.

9. SUBCONTRACTS

The Vendor shall be an independent contractor and not agent of IIA/ITCC, all necessary personnel, materials, equipment and facilities to perform the Work shall be available in house. Surface treatments and heat treatment or any minor operations can be outsourced on approval from ITCC.

The Vendor shall not assign its rights or obligations to a third party without the prior written approval of IIA/ITCC.

Notwithstanding any subcontract under this Agreement, whether approved by IIA/ITCC or not, the Vendor shall remain fully liable and responsible for the satisfactory and timely completion of the Work.

9.1. PAYMENT

IIA/ITCC shall pay the Vendor the price in accordance with a milestone payment schedule after the acceptance of the work.

Upon completion of each milestone, the Vendor shall submit to IIA/ITCC an Invoice for the amount corresponding to that milestone in Schedule.

The Vendor shall submit reasonable documentary evidence, including but not limited to photographs and illustrations, as verification of completion of each Milestone. IIA/ITCC may at its own discretion verify and substantiate that the milestone has indeed been performed or completed as invoiced by the Vendor. Such verification may require Vendor to submit to IIA/ITCC additional documentation regarding quality control normally expected during process of manufacture, and/or inspection by IIA/ITCC representatives. Any request for substantiation under this clause shall be made by IIA/ITCC within fourteen (14) days of IIA/ITCC's receipt of the corresponding Invoice.

9.2. ACCEPTANCE CRITERIA

ITCC/TMT reserves the right to witness all inspections, in process and end item, and to utilize a third-party inspection company to verify Contractors fabricated components and inspection results in full or partial, and only qualified components shall be considered for acceptance. Delivery 100% confirmed.

Final acceptance will be provided by ITCC/ IIA after successful review at delivery location.

9.3. ACCESS TO WORK

Work in progress and data and documentation related to the work, including process and inspection data necessary to understand the ability of the work to meet the specifications are subject to examination, evaluation, and inspection by IIA/ITCC, on behalf of TMT-India, at reasonable times and with reasonable notice to the Vendor.

The Vendor shall provide IIA/ITCC access to such documentation and to those of its premises where work on or in connection with the subject of this contract is being performed during normal business hours and subject to prior arrangement.

IIA/ITCC may depute Engineers/Scientists of its choice from time to time who will be allowed by the Vendor to witness the Work in respect of the disciplines in which they are specialized.

10. TERMS AND CONDITIONS

The successful Vendor who is awarded the Purchase Order shall be subjected to the Terms and Conditions that include, but not limited to the following.

10.1. INTELLECTUAL PROPERTY RIGHTS

All Intellectual Property Rights existing in a party prior to the Contract ("Existing Intellectual Property Rights") shall remain with that party. Except to the extent necessary to complete the Work or expressly stated otherwise, neither party grants any rights in its Existing Intellectual Property Rights to the other party.

Intellectual Property Rights arising directly from the Work ("Work Intellectual Property Rights") shall, upon completion of the Work, vest in IIA/ITCC and TMT project.

10.2. CONFIDENTIAL INFORMATION

The Receiving Party shall protect the confidential information and keep it secure, and shall not at any time (except with the prior written consent of the disclosing Party):

- i) Directly or indirectly disclose or distribute the confidential information to a representative, employee, agent or advisor of the receiving party except where such disclosure is necessary for the purpose of the Work.
- ii) Use or copy the confidential information except for the purpose of the work.

Where the receiving party discloses confidential information to a representative, employee, agent or advisor, the receiving party shall ensure that such person is aware of the confidential nature of that confidential information and is bound by suitable obligations of confidentiality to ensure that that person protects and keeps secure that confidential information and does not use the confidential information for any reason other than the purpose of the Work.

The receiving party shall, on demand by the disclosing party, or where the purpose of this Purchase Order has been served, promptly return to the disclosing party all confidential information (including copies or reproductions of the same) which is reasonably capable of being returned which is in the possession or control of the receiving party.

This Purchase Order is not intended to restrict the use or disclosure of confidential information by the receiving party to the extent that it is required to be disclosed by law provided that the receiving party has taken such steps as are available under law (but not the institution of legal action) to protect such confidential information and notifies the disclosing party hereunder of its obligation to make such disclosure prior to the time such disclosure is made.

10.3. WARRANTY

The Vendor warrants that all Deliverable Items shall be free and clear of all liens and encumbrances pertaining to title at the time of acceptance by IIA/ITCC. The Vendor's liability and IIA/ITCC's sole remedy under this warranty shall be limited to the Vendor procuring the removal of any such lien or encumbrance or the replacement of the goods and parts thereof that has been identified as defective of title. The Vendor will provide a one-year warranty from date of acceptance of the deliverables by IIA/ITCC.

Also, the Vendor warrants that:

- i) All deliverable Items that are procured or furnished by the Vendor or its sub-vendors or suppliers shall be new and shall conform in grade and quality to all the requirements of the contract; where the grade or quality is not specifically defined therein, deliverable items shall be of a grade or quality suitable for their intended use;
- ii) All workmanship employed in the manufacture of deliverable Items shall be of good quality, free from faults and defects, and shall conform to the relevant specifications applicable to the said manufacture; and
- iii) All deliverable Items shall be free from defects arising out of the use of defective equipment or materials that would result in a total or partial failure of any deliverable item or which would render a deliverable item unsafe for its intended use.

10.4. SETTLEMENT OF DISPUTES

All disputes arising in connection with the interpretation or implementation of the Purchase Order shall be amicably settled by IIA/ITCC and the Vendor, by direct discussion.

If IIA/ITCC and the Vendor are unable to resolve a dispute within 30 working days of the dispute being referred to them in accordance with Clause mentioned above, the parties may agree to refer the dispute to mediation.

ITCC and the Vendor appoint a mediation committee comprising of two nominees by IIA/ITCC and two nominees by the Vendor. IIA/ITCC and the Vendor will seek the opinion of this mediation committee to amicably settle the disputes.

In the event of a dispute or difference which cannot be resolved by mediation, the same shall be referred to an Arbitration Tribunal consisting of three members. Either party shall give notice to the other regarding its decision to refer the matter to arbitration. Within 30 days of such notice, one Arbitrator shall be nominated by each party and the third Arbitrator shall be nominated by agreement between the parties to this agreement. The venue of the arbitration will be Bangalore, India. Subject to the aforesaid, the Indian Arbitration and Conciliation Act, 1996 and the rules there under and any statutory modification thereof for the time being in force shall be deemed to apply to the Arbitration proceedings.

10.5. FORCE MAJEURE

- i) Neither party shall be held responsible for any losses, if the fulfilment of any terms and conditions of this contract are delayed or prevented by acts of lawful Government, revolutions and other disorders, wars (declared or undeclared), acts of enemies, strikes, fires, floods, acts of God and, without limiting the foregoing, any other cause not within the control of the party whose performance is interfered with and which, by the exercise of reasonable diligence, they are unable to prevent.
- ii) Each party will promptly notify the other in writing when a condition of Force Majeure arises. Neither party will be liable for any failure to perform its obligations hereunder if prevented from doing so by reason of Force Majeure, provided that it will have used all reasonable endeavours to perform its obligations notwithstanding such situation or event.
- iii) As soon as practicable after the lodging of such notice the Vendor and IIA/ITCC shall jointly determine whether the situation constitutes Force Majeure and if so the appropriate measures to meet the situation. Either party shall not be liable for any penalty or damage resulting in delays to perform its obligations because of Force Majeure.

10.6. TERMINATION

Repeated failure to maintain schedule and/or inadequate/wrong communication to ITCC/IIA and/or repeated technical errors will lead to termination of the work.

IIA/ITCC may terminate the Work with thirty (30) days prior written notice any time without assigning any reason or cause by notifying the Vendor in writing (Check with the purchase officer/Shri Basavaraju). If the Work is so terminated by IIA/ITCC then ITCC shall pay the Vendor total amount of the costs and liabilities incurred by the Vendor up to the date of termination.

IIA/ITCC may at any time terminate the contract by giving written notice with immediate effect in any of the following cases.

- i) If the Vendor is adjudged insolvent or if its financial position is such that within the framework of its national law, legal action leading towards bankruptcy is taken against it by its creditors or its Government, or
- ii) If it is determined through appropriate proceedings that the Vendor has resorted to fraudulent or corrupt practices in connection with its securing or implementation of this Purchase Order.

10.7. PATENTS, COPYRIGHTS AND OTHER PROPRIETARY RIGHTS

The Vendor warrants that any deliverable Item provided to IIA/ITCC shall to the best of its knowledge and belief be free of any rightful claim of any third party for infringement of patent, copyright, or other proprietary right.

10.8. PERFORMANCE GUARANTEE/SECURITY DEPOSIT:

The vendor shall furnish upfront Performance Bank Guarantee of 3% of the contract value (check with Purchase Officer), the validity of which will be during the performance of the contract and warranty period. The Bank Guarantee shall remain valid for a period of 60 days beyond the date of completion of contract period and warranty period.

10.9. TAXES

Applicable tax will be deducted at source at the applicable rates.

10.10. LIQUIDATED DAMAGES:

- i) If the party fails to deliver, as per Delivery schedule, within the stipulated time specified or any extension thereof, there will no liability for the first 30 (thirty) days of delay. Thereafter, for each completed calendar month of such failure, the IIA/ITCC will be entitled to claim from the party as liquidated damages, a sum of one-half of one per cent (0.5%) per week of the contract price relating to that portion of the delay up to a maximum value of ten per cent (10%) of the contract price of the portion of delay. The work or part thereof will be deemed to have been delivered/completed only when all its component parts are accepted by IIA/ITCC.
- ii) The detailed statement of liquidated damages will be notified to the party who will be entitled to submit the reasons against levy of liquidated damages to IIA/ITCC within 30 (thirty) days from the date of notification of the statement. Beyond this thirty (30) days period, the party is deemed to have accepted the liquidated damages claimed to have to be paid. This clause is not applicable when the delay is due to a failure on the part of the IIA/ITCC.

11. GOVERNING LAW

The Agreement shall be governed by, and construed in accordance with, the law for the time being in force in India.