

Annexure I

BMR/WDC/SOW/TT/2-R0

**SCOPE OF WORK MANUFACTURING OF TRAVERSE TROLLEY FOR OTR  
TUNIR TP**

**1. Refer:**

A. RFP NO: BM(H)/CMM/RFP/25-26/2128 date: 22 Jan 2026

B. The IPR of the all the fabricated deliverables, their designs and 3D models,

**2. IPR** manufacturing drawings and documents will solely rest with BAPL.

A. All the data shared with the vendor is confidential in nature and must be protected as per the government norms.

B. Any sharing of data to any external member without prior written permission of BAPL is not permitted.

C.

**3. Scope of work:**

The scope of work includes:

A. Manufacturing and supply of Traverse Trolley as per Technical Specifications document.

B. Development of test facility and conduct of tests (such as fitment, Acceptance test, Qualification test and other tests) as per Technical Specifications document and Quality Assurance Plan at OEM ex-works.

C. Preparing and supplying documents as per Technical Specifications document.

D. List of deliverables is given below. All the items have to be delivered as per the deliverables mentioned below.

**4. List of deliverables**

The vendor has to supply the following as part of the order:

Sl. No.	Item Description	Quantity
1	Traverse Trolley as per attached Technical Specifications document - QT hardware	1 no.
2	Traverse Trolley as per attached Technical Specifications document - AT hardware	1 no.



3	Drawings, models and documents as per Technical Specifications document. Drawings and documents to be submitted in soft copy and hard copy.	01 set
4	Technical, operational and maintenance manual with IETM – soft copy and hard copy	02 sets
5	Tools and spares as per Technical Specifications document	1 set
6	Accessories as per Technical Specifications document	1 set
7	Supervision in Installation and Commissioning, training	1 set

Table 1: List of deliverables

## 5. Technical Requirements

### A. Design

- (i) Design should be made to meet all the technical specifications as per Technical Specifications document.
- (ii) The design to be approved by BAPL prior to initiating manufacturing of trolleys. Design document consisting of design details, BOM, design calculations and FEM analysis reports to be submitted for approval. 3D model and FEA model to be submitted for approval.

### B. Manufacturing drawing

- (i) Manufacturing drawings are to be prepared and submitted for approval by BAPL.
- (ii) Soft copy of manufacturing drawings in AutoCAD format to be submitted to BAPL.
- (iii) Manufacturing process sheets to be submitted to BrahMos for approval by BAPL.

### C. Quality Assurance Plan (QAP)

- (i) Detailed QAP will be jointly prepared by the vendor and BAPL. The QAP will be approved by BAPL.
- (ii) QAP should cover raw material checks, heat treatments checks, welding checks, surface treatment checks, painting checks, visual and dimensional checks, functionality checks, Load tests, Pre-delivery inspection and Joint Receipt Inspection.



- (iii) QAP should also cover Illustrated List of Spares (ISPL), Manufacturer recommended list of spares (MRLS) and Catalogue of all bought out items - mechanical, electrical, hydraulic, rubbers, chemicals etc.
- (iv) Soft copies of Quality Assurance Plan (QAP) to be submitted.

#### **D. Manufacturing**

- (i) **Basic parameters and dimensions:** The dimensions and parameters of the assembly/sub-assembly/parts should be as per the technical drawings and any deviation from the drawings is not recommended. However, design / material / QAP amendments, if required, shall be with prior approval and clearance of BAPL.  
\* BAPL will be the inspection agency for the deliverables.
- (ii) Inspection may be carried out by BAPL / BAPL nominated agency at various stages of manufacturing process.

#### **E. Painting**

- (i) Painting to be as per technical specifications provided.
- (ii) Inspection of the painting will be carried out as per QAP and technical specifications document.

#### **F. Quality and AT / QT**

- (i) Qualification tests (QT) will be carried out on the first hardware manufactured after freezing the design.
- (ii) Post clearance of QT of 1<sup>st</sup> hardware, next hardware will be manufactured. QT hardware will be yellow banded.
- (iii) Acceptance tests (AT) will be carried out on all the hardware manufactured of same design after QT on the 1<sup>st</sup> hardware is complete.
- (iv) The infrastructure required for all the tests is in the scope of vendor.

#### **G. Reviews and Inspections**

- (i) Project reviews may be conducted on regular basis to assess the progress of works.
- (ii) All the test fixtures, tools, gauges, equipment, instrument etc., required for undertaking inspection and testing shall have valid calibration certificates.

#### **6. PDI and JRI**

- A. Pre-Delivery Inspection (PDI)** will be carried out jointly by M/s BAPL and supplier at vendor premises.
- B. Joint Receipt Inspection (JRI)** will be carried out jointly by M/s BAPL, supplier and Rep of Indian Navy at INS Tunir.

#### **7. Documentation**

- A. The documents to be submitted as per the list of deliverables at S. No. 4.**
- B. Additionally, a consolidated document consisting of following details shall be submitted to BAPL during final inspection and PDI.**

<b>S. No.</b>	<b>Description</b>
<b>1</b>	<b>Test reports as per QAP</b>
<b>2</b>	<b>Material data sheet</b>
<b>3</b>	<b>Material test certificate</b>
<b>4</b>	<b>WPS, PQR, WPQ</b>
<b>5</b>	<b>Electrode &amp; Filler wire certificates</b>
<b>6</b>	<b>Weld inspection reports with photos</b>
<b>7</b>	<b>Final dimensional report</b>
<b>8</b>	<b>Weight and torque tightening reports</b>
<b>9</b>	<b>Certificates of conformance of components</b>
<b>10</b>	<b>Packing list</b>
<b>11</b>	<b>As-built drawings</b>

Table 2: List of documents

#### **8. Marking and Packing**

- A. Marking is to be carried out at locations as specified in drawings. The details of the same will be shared during finalisation of manufacturing drawings.**
- B. The deliverables shall be packed as per Defence standards with highest quality.**
- C. Items to be properly latched along suitable supports for storage and transportation.**
- D. Vendor shall replace the items damaged during transportation without any cost to BAPL.**

#### **9. Installation and Commissioning**

- A. The installation and commissioning of the Traverse trolley at INS Tunir will be the responsibility of the vendor.**



- B. Vendor will provide onsite training to the end user regarding operation and maintenance of the trolleys and basic repairs which can be performed by them.

**10. Delivery schedule and location**

- A. The items to be supplied within **10 months** from the date of issue of purchase order.
- B. The vendor is responsible for final delivery of the items to INS Tunir and subsequently, installation and commissioning of the trolley.

**11. Warranty**

- A. The supplier should provide warranty for 24 months from the date of delivery of items. If during the aforesaid period of 24 months, the said items be discovered not to conform to description / quality / satisfactory performance or have deteriorated, vendor shall rectify the issues with the items within 21 days of reporting.
- B. The supplier should provide CAMC for 36 months from the date of expiry of Warranty of items. If during the aforesaid period of 36 months, the said items be discovered not to conform to description / quality / satisfactory performance or have deteriorated, vendor shall rectify the issues with the items within 21 days of reporting.
- C. The date of delivery will be considered as the date of final acceptance by the end user (Indian Navy) post successful completion of JRI.
- D. Certificate of conformance and Warranty certificate shall be issued by the vendor at the time of JRI.

