

BAPL/EOI/Airframes/TS/01

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Expression of Interest (EOI)

SUPPLY OF COMPOSITE AIRFRAMES

Hyderabad
March 18, 2026

1	Introduction	2
2	Objective	2
3	Eligibility Criteria	2
4	EOI Submission	5
5	Evaluation Criteria	5
6	Confidentiality	5
7	Disclaimer	5
8	Contact Information	5

1 Introduction

BrahMos Aerospace Private Limited (BAPL), a joint venture between India's Defence Research and Development Organization (DRDO) and Russia's NPO Mashinostroyeniya, is a leading aerospace and defense corporation specialized in Design, Development and Production of supersonic cruise missile systems. BrahMos missile, a versatile weapon deployable from multiple platforms, the company plays a critical role in enhancing India's defense capabilities and is actively pursuing advancements in missile technologies, solidifying its position as a key player in the global defense sector.

BAPL invites Expressions of Interest (EOI) from qualified manufacturers for supply of Composite Airframe sections for BAPL's critical defense systems. Responses should demonstrate adherence to relevant military standards (GOST/OST), robust quality control procedures, and a proven track record in delivering reliable solutions for demanding defense applications.

Intending Manufacturing Industries are advised to read the EOI document, terms and conditions and other details carefully relating to the work contemplated in the procurement of Composite Airframe sections.

2 Objective

The EOI aims to develop new vendors qualifying to the technical requirements of Composite Airframes assemblies under consideration. The information collected will be used to identify suitable partners for subsequent phases of vendor development activity.

3 Eligibility Criteria

Interested manufacturing industries must meet the following minimum criterion in order to apply for EOI:

- a) The manufacturing industries must be an Indian Registered Partnership / LLP/ Company with a majority stake of the company held by a Resident and Citizen of India.
- b) The average annual turnover of the interested partner during the last three years shall be at least INR 100 Cr. Audited Annual Financial Statements in support of the same shall be furnished. The long-term credit rating by ICRA/CRISIL or equivalent as on date of submission of EOI shall be "A" or above.
- c) QMS Certifications AS9100D is mandatory, and the valid Certification shall be submitted along with EOI.
- d) SAMAR Level 3 Certification / CIS/ equivalent Certification is mandatory, and the valid Certification shall be submitted along with EOI.

- e) The firm shall have the following minimum infrastructure/ machinery.
- i. Filament winding machine with capacity of 4 Tons (Min) and Size \varnothing 700mm x 3m (min)
 - ii. Vacuum Assisted Resin Transfer Molding equipment consisting of tank with provision for heating upto 90°C, stirring mechanism, provision for pressurization up to 30 bar with multi-outlet port hose connection.
 - iii. Vacuum pumps for generation of vacuum upto 100 mm of Hg or better at outlet of the mould during VARTM
 - iv. Oven of large size (Min size 3 x 3 x 3 m) for curing of composite parts upto temperature of 400°C.
 - v. CNC lathe for machining of composite parts of size (min) Dia 700mm X length 3 m and weight 4 ton (min). with provision for dust extraction.
 - vi. Ultrasonic test equipment for defect identification by through transmission in composite parts.
 - vii. High pressure pneumatic test facility up to 35 bar and armored rooms for strength testing of manufactured parts.
 - viii. Leak check facility with helium Leak Detector and Evacuation leak test setup with Turbopumps.
 - ix. Facility for testing of physical and chemical properties of composite parts like Resin content, Density, Degree of cure, Bending strength etc.
 - x. CMM of size(min) 1.2m x 1.2 m x2.5m
 - xi. Universal Testing Machine (UTM) with variable load cell attachment.
 - xii. Cold storage for storage of resins, prepreg and towpregs.
 - xiii. Shall establish machinery for coating of Aluminum thin film on Composite part of internal diameter 500mm and length 1.2m.
 - xiv. SPM / etalons for carrying out drilling of approximately 10000 holes of \varnothing 1mm on the surface of components
- a) The firm shall have experience in
- i. Manufacture of Vacuum Assisted Resin Transfer Molding (VARTM) parts.
 - ii. Sourcing of import raw materials like high strength glass fabrics, rovings (of global make including Russia), from suppliers/ traders and Benzoxazine resin (Import license preferred).
 - iii. Procurement of different grades of commercial/ aerospace grade resins from Indian manufacturers.
 - iv. Design of tooling like molds, jigs & fixtures required for manufacturing of composite parts, metallic parts and assembly.
 - v. Design of fixtures for strength & leak test of components and assemblies.
 - vi. Testing of physical and chemical properties of composite parts like Resin content, Density, Degree of cure, mechanical properties testing like 3-point bend test, tensile, compression test etc.
 - vii. Machining & inspection of Composite parts.

- viii. Carrying out heat treatment on metallic raw materials as per required mechanical properties
 - ix. Machining & Inspection of metallic parts as per the required geometrical tolerances.
 - x. Handling/ Testing of Radio technical parameters (Insertion loss, Angular error, Side lobes) of radome and composite bodies.
 - xi. Experience in Aluminum thin film coating on composite parts.
 - xii. Carrying out surface treatments of metallic parts as per requirement of drawing and normative documents.
 - xiii. Assembly of composite part with metallic parts meeting all critical dimensions & tolerances as per drawing.
 - xiv. Leak testing by sniffer, accumulation, evacuation using Helium leak detectors and Turbopump setups.
 - xv. Preparation of Quality control documents like Quality Assurance Plan, In process route cards / process sheets, test procedures in-line with design documents.
 - xvi. Documentation control
 - xvii. Compilation of all test reports, dimensional inspection reports and all necessary documents required for manufacturing.
 - xviii. In process Quality control of composite parts manufacturing, assembly and testing.
- a. Experienced technical manpower availability – skilled manpower for manufacture and testing of filament & tape winding, composite layup, composite properties testing, inspection of metallic components, ASNT/ ISNT Level-II operator for ultrasonic testing and approval by ASNT/ISNT- Level-III personnel.
 - b. Experience on working with inspection agencies viz., MSQAA, R&QA, RCMA etc. is mandatory.
 - c. Data and Cyber Security Certification is mandatory.
 - d. Minimum experience of 10 years in manufacturing and Supply of composite products like pressure vessels, rocket motor casings, airframe sections, aircraft wings & blades, fuel tanks for Defense/Aerospace industry, particulate composites and VARTM parts. Shall be supported with contract references.
 - e. Shall have access to well established facilities such as machine shop with CNC machines including VMCs, heat treatment, welding shop (TIG) and surface treatment. In case if any of the process is sub-contracted, requirements of this EOI shall apply and responsibility to ensure them lies with Tier-1 Manufacturing Industries. Subcontracted process shall be accessible to BAPL for audit/assessment.
 - f. Cleanroom environments of class 100000/ dust free enclosure shall be maintained for winding/ layup of composite parts.

- g. Obsolescence Management: Shall have a documented procedure to monitor and manage obsolescence of components/sub-systems.
- h. Counterfeit Detection: Shall procure raw materials only from OEM or OEM Authorized traders. For purchase of reinforcements from non-authorized dealer Manufacturing Industries shall conduct rigorous testing to detect counterfeit components and ensure quality of inward good.
- i. Capability to carry out comprehensive testing (Inhouse/ NABL labs) for part and assembly level testing, calibration of test and measuring equipment.
- j. The manufacturer shall ensure minimum service life of 20 years (min) for assemblies manufactured for BAPL.
- k. Failure rate of last three financial year shall be declared; zero rejection is preferred.
- l. Availability of In-house research & development facility and reverse engineering capability is preferred.

4 EOI Submission

Interested Manufacturing Industries are requested to submit their response as per Format enclosed in **Annexure-A as per Demand Notification**.

5 Evaluation Criteria

The evaluation of responses will be based on the Evaluation of BAPL w.r.t the following criteria:

- Technical capabilities and experience in defence applications.
- Production capacity and lead time for high-reliability products.
- Quality management system and compliance with defence/military standards.
- Financial stability and references in the defense sector.
- Infrastructure/Facility evaluation.
- Security Certifications and its compliance.

6 Confidentiality

All information provided in response to this EOI will be treated as confidential and may be subject to non-disclosure agreements.

7 Disclaimer

This EOI does not constitute a commitment for placement of contract/ P.O and BAPL reserves the right to accept or reject any or all the responses.

8 Contact Information

For any inquiries, please contact: **Refer demand notification**

Expression of Interest

Demand Notification Ref.: _____

Demand Notification Date: _____

S.No.	Particulars	Details to be filled up by FIRM	Supporting Document
1)	Name Of the Firm & Address		Company Registration Document with State/Central Government
2)	Firm's Contact Person & Details		
3)	Category of Industry (Raw Material /Conversion/Standard Items/Ready to use Components/Other) *		
4)	Nature of the Company (Pvt. Ltd. / Ltd./PSU/DPSU etc.)		
5)	Organizational structure		Self-attested document
6)	The average annual turnover of previous three (3) financial year.		Annual Financial Statements
7)	What is the core competence of the company?		-
8)	What are principal products(s)?		-
9)	How long has company been in business as presently organized?		-
10)	List of principal Subcontractors, along with processes subcontracted		-
11)	List of principal customers to whom the vendor supplied stores in the past two (2) years.		-
12)	List of principal companies and /or Government agencies which have surveyed and approved the firm with scope of approval.		Copy of attestation document
13)	Contract /S.O. No. from Defence/Missile complex Labs along with status of order. (Completed/Ongoing/Short closed)		-
14)	Certification - Quality (ISO/AS/SAMAR)		Copy of latest certificate
15)	Employee Strength (Design, Quality, Production, (Skilled / Semi- Skilled/Casual) Other)		-
16)	Certification of skilled manpower (IPC 610/620 Class-3)		Copy of latest certificate
17)	Attrition rate of employee		-

S.No.	Particulars	Details to be filled up by FIRM	Supporting Document
18	Failure incidence reported by customer in last three years in PPM and percentage		-
19	Average import percentage in products manufactured and delivered in last financial year		-
20	Security compliance certification (If any). Shall specify the road map and certification plan if not existing.		Copy of latest certificate/ Road Map
21	a) List of readily available machinery, ovens and VARTM equipment, etc.		Enclose List and Specifications of Equipment and Machinery available readily at Firm inhouse only.
	b) Availability of in- house Filament Winding Machines: suitable for component of size: Dia 680 X length 2.5m and weight 4 ton (min)		
	c) Availability of Vacuum Assisted Resin Transfer Moulding (VARTM) equipment		Attach specifications
	d) Details of components / experience in realization of components by VARTM with high injection pressures.		
	e) Availability of in-house CNC Lathe: suitable for component of size: Dia 700 mm X length 3m and weight 4 ton (min)		
	f) Availability of in-house Ovens with data logger: curing temperature up to 400 deg C. Size: 3mX3mX3.5m.		
	g) Moulds (Male and Female): Experience in design and manufacturing of suitable moulds, bonding fixtures and other tooling for manufacturing of Airframe sections.		Attach supporting documents
	h) Availability of in-house Special purpose Machines for machining and perforations, if available		Enclose List and Specifications of Equipment and Machinery available readily at Firm inhouse only

S.No.	Particulars	Details to be filled up by FIRM	Supporting Document
22	a) List of metrology equipment / instruments available in-house		Enclose List and Specifications of Equipment available readily at Firm inhouse only and NABL accreditation details, if available.
	b) CMM facility (Fixed/Gantry) suitable for measurement on component size 1.2 m x1.2m x 2.5 m.		Enclose List and Specifications of Equipment available readily at Firm inhouse only.
23	Composite Lab test facilities for measurement of Density, Resin Content, Degree of Cure by Soxhlet apparatus, DSC/DMA/TMA.UTM for mechanical Properties testing, etc.		Enclose List and Specifications of Equipment available readily at Firm inhouse only.
24	a) Special purpose machine for Aluminium thin film Coating by Thermal Evaporation/Sputtering methods.		Enclose List and Specifications of Equipment and Machinery available readily at Firm inhouse only.
	b) Experience in carrying out thin film coating on composite sections.		Attach supporting documents
25	a) Availability of in-house Hydraulic & Pneumatic Pressure test facilities.		Enclose List and Specifications of Test facilities available readily at Firm inhouse only
	b) Availability of in-house Leak check facility with helium Leak Detector and Evacuation leak test setup with Turbopumps.		
	c) Experience in design and manufacturing of suitable Fixture for pressure and Leak checks.		Attach supporting Documents
26	Details of Composite Airframe structures and Tubes manufactured by the firm and explain the complexity.		Attach supporting Documents
27	Availability of skilled manpower with specialization in composite mfg. process like prepegging, layup, finding and curing etc.		Enclose list of skilled manpower specialized in composite manufacturing.
28	Mechanism in place for upgrading the skill of existing manpower/ training of new recruits in composite filed		Attach supporting documents

S.No.	Particulars	Details to be filled up by FIRM	Supporting Document
29	Minimum experience of 10 years in manufacturing and Supply of composite products like pressure vessels, rocket motor casings, airframe sections, aircraft wings & blades, fuel tanks for Defense/Aerospace industry, particulate composites and VARTM parts. Shall be supported with contract references		Attach supporting documents
30	Experience in Procurement of Composite reinforcement and resins. (Indigenous & Import)		Attach supporting Documents
31	Experience in Bonding/Assembly of metallic and Composite parts with glue/Fasteners.		Attach supporting Documents
32	Failure / rejection rate of last three financial year shall be declared		Attach supporting Documents
33	Component acceptance and rejections policy		Attach supporting Documents
34	Composite Waste disposal policy		Attach supporting Documents
35	Experience in understanding of Russian drawings and standards for manufacturing and testing.		Attach supporting Documents
36	Production capacity - Lead time for prototype and production runs		Attach supporting Documents
37	Inventory Management System		Attach supporting Documents
38	Controlled Storage Facility		Attach supporting Documents
39	Cybersecurity and data security practices/Policy		Attach supporting Documents

Note: The firm shall enclose supporting documents as applicable

Declaration: The details provided above are true and it is understood that BAPL reserves the right to accept or reject the EOI filed herein.

Firm Authorized Signature with Name & Company Stamp