

भारत सरकार/GOVERNMENT OF INDIA
अंतरिक्ष विभाग/DEPARTMENT OF SPACE
क्रय यूनिट-III/PURCHASE UNIT-III
विक्रम साराभाई अंतरिक्ष केंद्र/VIKRAM SARABHAI SPACE CENTRE
तिरुवनंतपुरम/THIRUVANANTHAPURAM – 695 022
Tel: (0471) 2563676/3775/3609
email: spso_prso_pur@vssc.gov.in, pso2_prso_pur@vssc.gov.in

EXPRESSION OF INTEREST

No. VSSC/SPRE-PUR/EOI-02/CPT/2021-22

Date: 20/08/2021

दो वर्षों के लिए सरकार स्वामित्व कंपनी प्रचालित (गोको) पर वीएसएससी द्वारा स्थापित सुविधाओं का उपयोग करते हुए विक्रम साराभाई अंतरिक्ष केंद्र (वीएसएससी), तिरुवनंतपुरम में सम्मिश्र पेपर ट्यूबों के प्रक्रमण, योग्यताप्राप्ति एवं आपूर्ति के लिए अभिरुचि की अभिव्यक्ति

EXPRESSION-OF-INTEREST FOR “Processing, Qualification and Supply of Composite Paper Tubes (CPTs) at VSSC, Thiruvananthapuram using VSSC established facilities on "Government Owned Company Operated (GOCO) mode”

इच्छुक प्रत्याशित निर्माता हमारे संदर्भ सं. VSSC/SPRE_PUR/EOI-02/CPT/2021-22 का उद्धरण करते हुए 21/09/2021 [16:00 Hrs.] को या उससे पहले निम्नलिखित पते पर अपनी अभिरुचि की अभिव्यक्ति दे सकते हैं।

VSSC invites, EOI from prospective bidders for “Processing, Qualification and Supply of Composite Paper Tubes (CPTs) at VSSC, Thiruvananthapuram using VSSC established facilities on "Government Owned Company Operated (GOCO) mode". Interested parties may furnish their Expression of Interest in Sealed Envelope quoting our Reference No. VSSC/SPRE-PUR/EOI-02/CPT/2021-22 on or before 21/09/2021 [16:00 Hrs] to the following address:

Note:- Only Class-I and Class-II Local suppliers as per Make in India policy are eligible to participate in the bid

वरि. क्रय एवं भंडार अधिकारी / Sr. Purchase & Stores Officer,
क्रय यूनिट III /Purchase Unit- III,
आरएफएफ क्षेत्र, इसरो पीओ/ RFF Area, ISRO. PO,
तिरुवनंतपुरम/Thiruvananthapuram- 695022.
फोन/Ph: 0471-256 3775/3609

EOI documents are available at our website www.isro.gov.in and www.vssc.gov.in.

हस्ताक्षरित/Sd/-

वरि.प्रधान, क्रय एवं भंडार/ Sr.Head, Purchase & Stores



Government of India
Department of Space
Vikram Sarabhai Space Centre
Indian Space Research Organisation
Thiruvananthapuram-695022, Kerala

No. VSSC/SPRE-PUR/EOI-02/CPT/2021-22

Date: 20/08/2021

INVITATION FOR EXPRESSION-OF-INTEREST

Vikram Sarabhai Space Centre (VSSC) proposes to invite **Expression-Of-Interest (EOI)** for “**Processing, Qualification and Supply of Composite Paper Tubes (CPTs) at VSSC, Thiruvananthapuram using VSSC established facilities on "Government Owned Company Operated (GOCO) mode"**". It is proposed to entrust the scope of processing and supply of different types of Composite Paper Tubes to VENDORS on Government Owned Company Operated mode at an **annual rate of about 250 nos.** approximately.

The processing of CPTs which include handling of Resins & chemicals, mixing & winding on a mandrel. Safety and quality are of utmost importance while working in this environment. It is necessary to operate equipment like weighing balances, hot air oven, dehumidification dryer, winding machine, extraction fixture etc. Overall management of the production also needs to be taken care and all issues and concerns must be addressed on a timely manner adhering to the stipulated production schedule.

Interested VENDORS having adequate know-how, ISO certification, qualified and skilled technical personnel, experience in Composite / Chemical material processing and having sound financial background, commitment and desirous of long-term partnership with ISRO are invited to participate in the Expression-Of-Interest. On receipt of EOI, VSSC shall evaluate and assess the suitability prior to short-listing of Vendors. This call for EOI does not carry with it any guarantee for allotment of contract.

EOI document can be downloaded from website www.isro.gov.in/ www.vssc.gov.in and the same also shall be submitted within the due date and time. "**Expression of Interest**" with all essential information shall reach the Senior Purchase and Stores Officer, Purchase Unit III, Vikram Sarabhai Space Centre, ISRO Post, Thiruvananthapuram 695022, Kerala, on or before **21/09/2021 16:00 HRS.** This EOI is issued as a "Pre-Bid Qualification". Inadequate or incomplete information will result in rejection of the offer. VSSC reserves the right to accept or reject all or any of the EOI. Mere compliance to the EOI terms does not guarantee further consideration for qualification.

Addendum, if any, to this EOI shall be hosted in our website www.isro.gov.in/ www.vssc.gov.in

**Senior Purchase and Stores Officer,
Purchase Unit III,SPRE PURCHASE
Vikram Sarabhai Space Centre; ISRO P.O.
Thiruvananthapuram - 695 022, Kerala State
Government of India**



Government of India
Department of Space
Vikram Sarabhai Space Centre
Indian Space Research Organisation
Thiruvananthapuram-695022, Kerala

No. VSSC/SPRE_PUR/EOI-02/CPT/2021-22

Date: 20/08/2021

INVITATION FOR EXPRESSION-OF-INTEREST

"Expression-Of-Interest for processing, qualification and supply of Composite Paper Tubes at Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram using VSSC established facilities on Government Owned Company Operated (GOCO) mode".

1. Preamble

Vikram Sarabhai Space Centre (VSSC) is the lead Center of Indian Space Research Organization (ISRO) that specializes in the design and realization of satellite launch vehicles. To meet the increasing demand of launches, ISRO has decided to look forward to participation of private industries for the production and supply of launch vehicle systems and sub-systems. Among other technologies, Ignition system is one of the key areas in which VSSC has been working since its inception and in this area also, production through external parties/industries (VENDORS) is being explored. Composite Paper Tube (CPT) is one of the products being offered for production under the Government Owned Company Operated (GOCO) mode.

Objective is to carry out the processing, in process quality checks, specimen preparation for the resin system & Kraft paper and evaluation of raw materials and finished products at VSSC and supply finished CPTs by the VENDOR as per the schedule finalized by VSSC. All the necessary facilities, equipments, fixtures and raw materials shall be provided by VSSC.

2. Scope of work

Composite Paper Tube is a paper- resin Composite product made by winding process. There are different types of CPTs varying in length & diameter. These are used for casting free standing propellant grains. The major activities include Qualification of raw materials which includes sampling, specimen preparation and testing etc, sizing & drying of kraft paper, preparation of winding machine, winding of tube using kraft paper & resin system, post-winding operations, extraction of wound CPT after curing, sizing & finishing operations, Inspection, Support for Non-destructive Testing, and packing. The maintenance of process facility and upkeep of process logs, facility logs and quality control function also form part of the processing activity. Quality assurance will be taken care by VSSC. The VENDOR should be conversant with safety practices

relevant to composite / chemical material processing and carry out all the activities with utmost safety. VSSC will conduct overall safety surveillance for all the process activities.

It is envisaged that the GOCO CONTRACT shall be operated for an initial period of 2 years. The first one month of the CONTRACT will be a trial phase wherein VSSC will provide all the necessary training to the VENDOR in the processing aspects of Composite Paper Tubes.

3. Facilities and Process equipment provided by VSSC

The processing, qualification and testing facilities for processing, qualification of Composite Paper Tubes available at VSSC, Thiruvananthapuram will be provided to the VENDOR. Sharing of facility/equipment with VSSC, if required, will be done by proper process scheduling jointly by VSSC & VENDOR. The major equipment required for processing of CPTs are weighing balances, hot air oven, dehumidification dryer, winding machine, extraction fixture etc.

VSSC may provide logistic support like canteen facility, internal transportation etc for the VENDOR as per existing norms. VENDOR shall provide company identity card and Uniform to the personnel deployed for execution of work at VSSC.

4. Major operations during processing

	Operation	Activities involved
4.1.	Raw material Qualification	Resin system and kraft paper are the raw materials. The raw materials are to be tested as per the standard test procedures of VSSC. Raw material Sample collection & delivery for testing, specimen preparation and necessary testing in process facility.
4.2.	Kraft paper sizing & Drying	Sizing of kraft paper manually and load in the oven for drying.
4.3.	Preparation of winding machine	Cleaning of winding machine. Greasing of product mandrel. Lining film lay up on product mandrel. Loading product mandrel on winding machine. Gap setting between product mandrel & doctoring roll.
4.4.	Winding of CPT	Loading the kraft paper in the winding machine. Preparing the resin mix. Smearing, Wetting & winding the kraft paper using the resin mix. Completing the winding process using winding machine.
4.5.	Post winding operations	Disengaging doctoring roll. Tube OD covering & Knife edge finishing. Cleaning the excess resin from the winding machine. Gel time inspection. Curing at Room Temperature.

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|-------|--------------------------|---|
| 4.6. | Extraction operations | Load the cured CPT along with product mandrel in extraction fixture. Extract the CPT using stopper plate. Clean the product mandrel & CPT. |
| 4.7 | Sizing & Finishing | Trim the ends of CPT manually to required length. Finish the edges without burrs. Mark the identification number & locations for inspection. Inner surface emerying of CPTs. |
| 4.8. | Visual & dim. inspection | Conduct final visual inspection of the CPT and dimensional inspection and record the observations. Co-ordination during dimensional inspection by VSSC inspection team. |
| 4.9. | UT | Ultrasonic testing (UT) request generation, assisting NDT and generation of trimming plan for casting. |
| 4.10. | Packing & Storage | Packing, sealing & storage in CPT store. |
| 4.11. | Property evaluation | Co-ordination for Physical, mechanical & thermal property evaluation for the CPTs and generation of reports. |
| 4.12. | Documentation | Generation of production document based on log sheet / log book information as well as product evaluation parameters from laboratory / NDT facility. |
| 4.13. | Quality Control | Quality control of all the process operations by qualified engineers/supervisors and recording all the parameters in separate log books.
Real-time alerting of quality lapses and corrective action. |
| 4.14. | Safety | Surveillance of all the activities and processing as per VSSC safety norms. Periodic reporting of safety lapses and corrective actions. |
| 4.15. | Other activities | Routine maintenance of process equipment of the facility.
Disposal of chemical waste. |

5. Human Resource and HR policy

The VENDOR shall provide the production team (technical and skilled) for processing of CPTs in VSSC. The screening of the proposed Production Team of VENDOR for their technical capability will be done by VSSC.

The Production Team should be qualified and experienced and should possess requisite skill-sets for operation of CPT processing facilities and to perform production work as specified.

Minimum Production Team of about **5 personnel**, comprising of 1 person holding Diploma (Chemical) qualification and 4 persons with ITI (Fitter) qualification will be required to be deployed by the VENDOR for the production and supply of CPTs in the GOCO mode in VSSC.

The VENDOR shall have an HR policy for retaining trained personnel. This is very essential since attrition would lead to derailment of production activities, affect safety, quality and delivery schedule.

6. Training of VENDOR personnel

VSSC will impart necessary training for the production team deployed by the VENDOR during the trial phase of initial 1 month.

7. Other requirements

Security : Production Team shall comply with the security regulation of VSSC.

Safety : Production Team shall follow all safety stipulations.

Secrecy : The VENDOR and their production team shall abide by the INDIAN OFFICIAL SECRETS ACT in vogue and shall provide information of awareness of the above in writing.

8. Criteria for scrutiny of EOI proposals

8.1 General

The EOI shall contain complete information of the VENDOR, its human resources, infrastructure, assets, financial standing, line of business and credentials.

8.2 Essential criteria for evaluation of EOI

8.2.1 VENDORS registered in India need only participate.

8.2.2 The Vendor should be a profit making Company during the last 3 financial years (FY - 2018-19, 2019-20 & 2020-21) ending 31st March of the corresponding year.

8.2.3 Certified copies from Chartered Accountant for the annual financial turnover and balance sheet showing profit/loss to be furnished.

8.2.4 In event of response from VENDORS already executing ISRO contracts, past performance will be considered.

8.2.5 The VENDOR should have an established management structure and shall possess human resources with adequate knowledge, skill and experience in the areas of processing of Composite/Chemical materials.

Note:

1. For Clause No.8, all information provided by the VENDOR shall be supported with documentary evidence. Brochure, if any detailing the VENDOR profile may be submitted. Copy of the previous similar purchase/work orders executed by the VENDOR also may be appended.
2. The final evaluation of the responses will be based on inputs furnished against our criteria, assessment based on facility visit, if required, feedback from customers and overall assessment.

VENDORS who are meeting the requirements as specified in clause 8 of the EOI and are interested in associating with ISRO for production of Composite Paper Tubes at VSSC, Thiruvananthapuram may submit their interest in writing along with copies of supporting documents for verification/evaluation at VSSC. Qualified VENDORS will be shortlisted and detailed proposals from such VENDORS will be solicited through a RFP.

A checklist (Annexure -1) for the supporting documents to be submitted by the VENDOR along with the EOI is enclosed.

Checklist for the supporting documents*(Filled checklist to be submitted by the Vendor along with the Expression of Interest)*

Sl.	Document / Proof	Attached or Not-attached with EOI	Remarks
1.	Company registration details		
2.	Certified copies from Chartered Accountant for balance sheet showing profit/loss for the last 3 years (FY - 2018-19, 2019-20 & 2020-21)		
3.	Copy of previous purchase orders executed with ISRO/ Defense/ Aerospace sectors, if any		
4.	Company profile, management structure and human resources and their experience		
5.	Company brochure		
6.	Copies of similar purchase/work orders executed by the Company, if any		