

भारत सरकार
अंतरिक्ष विभाग
सतीश धवन अंतरिक्ष केंद्र शार
श्रीहरिकोटा रेंज डा.घ. 524 124
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भारत सरकार GOVERNMENT OF INDIA :: अंतरिक्ष विभाग DEPARTMENT OF SPACE
सतीश धवन अंतरिक्ष केंद्र शार SATISH DHAWAN SPACE CENTER SHAR
श्रीहरिकोटा SRIHARIKOTA :: तिरुपति जिला (आ.प्र.) TIRUPATI DISTRICT (A.P)- 524 124

निविदा सूचना सं. TENDER NOTICE NO. SDSC SHAR/Sr.HPS/PT/RO-LSSF/36/2023-2024

भारत के राष्ट्रपति की ओर से वरि. प्रधान क्रय एवं भंडार, सतीश धवन अंतरिक्ष केंद्र श्रीहरिकोटा निम्नलिखित वस्तुओं के लिए ऑनलाइन निविदाएं आमंत्रित करते हैं:- On behalf of President of India, Sr. Head Purchase and Stores, SDSC SHAR, SRIHARIKOTA invites on line quotations for the following.

क्र.सं. SI No	संदर्भ सं. Ref. No.	विवरण Description	मात्रा Qty.
01.	SDSC SHAR /LSSF PURCHASE /LSSF/ 2023001241 [Global Tender - Two Part]	Supply of Liquid Helium in refrigerated ISO containers	60,000 ltrs

निविदा दस्तावेजों को डाउनलोड करने की अंतिम तिथि Last Date for downloading of tender documents : 02.02.2024 at 16:00 hrs.
ऑनलाइन निविदा जमा करने की अंतिम तिथि Due Date for submission of bids online : 02.02.2024 at 16:00 hrs.
निविदाएं खोलने की नियत तिथि Due Date for opening of tenders : 02.02.2024 at 16:30 hrs.

निविदाकार के लिए निर्देश Instructions to Tenderers:

निविदाएं ईजीपीएस के माध्यम से ही भेजी जाएं तथा कोई निविदा शुल्क लागू नहीं होगा।
Bids shall be submitted on line through EGPS only and No tender fee shall be applicable.

- कार्य के सम्पूर्ण विवरण/जानकारी तथा नियम व शर्तों इत्यादि के लिए संलग्न अनुलग्नक को देखें। / For full details/scope of work and terms and conditions etc., please see the enclosed annexures.
- इच्छुक निविदाकार इसरो की ई-खरीद वेबसाइट इसरो न्यू ई-प्रोकुरमेंट www.eproc.vssc.gov.in से ई-निविदा डाउनलोड और अपनी निविदा ई-खरीद पोर्टल पर ऑनलाइन जमा कर सकते हैं। डाक / वाहक / स्वयं द्वारा प्राप्त निविदाओं पर विचार नहीं किया जाएगा। / Interested tenderers can download the e-tender from ISRO e-procurement website ISRO NEW E-PROCUREMENT www.eproc.vssc.gov.in and submit the offer on line in the e-procurement portal. Offers sent physically by post/courier/in person will not be considered.
- निविदा दस्तावेज इसरो की वेबसाइट www.isro.gov.in इसरो न्यू ई-प्रोकुरमेंट वेबसाइट www.eproc.vssc.gov.in तथा सतीश धवन अंतरिक्ष केंद्र शार की वेबसाइट www.shar.gov.in पर भी उपलब्ध हैं। इन्हें केवल ई-खरीद पोर्टल से डाउनलोड और निविदा ऑनलाइन जमा कर सकते हैं। / Tender documents are also available on ISRO website www.isro.gov.in ISRO New e-procurement website www.eproc.vssc.gov.in and SDSC SHAR, Sriharikota website www.shar.gov.in. The same can be down loaded and offer submitted on line in the new e-procurement portal only.
- निर्धारित तिथि/समय के पश्चात प्राप्त बोलियों पर विचार नहीं किया जाएगा। / Quotations received after the due date/time will not be considered.
- निविदा दस्तावेज दिनांक 02.02.2024 को 16 00 बजे तक डाउनलोड करने के लिए उपलब्ध रहेंगे तथा निविदा ऑनलाइन जमा करने की अंतिम तिथि 02.02.2024 को 16:00 बजे तक है। निविदाएं दिनांक 02.02.2024 को 16:30 बजे खोली जाएंगी। / The tender documents are available for download upto 02.02.2024 at 16 00 hrs. and last date for submission of tenders on line 02.02.2024 at 16 00 hrs. and Tender Opening on 02.02.2024 at 16:30 hrs.
- इच्छुक विक्रेता विवरण जानने के लिए निविदा खोले जाने वाले सत्र में शामिल हो सकते हैं। निविदा के मूल्यांकन पर विचार करने के लिए उनकी उपस्थिति अनिवार्य नहीं है। / Interested vendors can attend the Bid opening sessions to know the details. Presence not mandatory to consider the quote for evaluation.
- वरि. प्रधान क्रय एवं भंडार, सतीश धवन अंतरिक्ष केंद्र श्रीहरिकोटा के पास किसी भी या सभी निविदाओं को स्वीकार / अस्वीकार करने का अधिकार है। / Sr. Head, Purchase and Stores, SDSC-SHAR, Sriharikota reserves the right to accept or reject any/or all the quotations.
- GeM ARPTS Report ID: GEM/GARPTS /01092023/K37NS6ZBKHRG

दिनांक DT:29.12.2023

भारतीय अंतरिक्ष अनुसंधान संगठन



वरि. प्रधान क्रय एवं भंडार
Sr. HEAD PURCHASE AND STORES
Indian Space Research Organisation

TECHNICAL SPECIFICATION FOR SUPPLY OF REFRIGERATED HELIUM LIQUID(LHe)

I. TECHNICAL SPECIFICATIONS:

- 1. Scope:** Refrigerated Liquid helium is to be supplied to SDSC-SHAR centre, Sriharikota which is about 100kms North of Chennai, India in supplier's Liquid helium container.
- 2. Quantity required:** 60,000 Ltrs (in two consignments)
- 3. Required Purity of Liquid Helium :** Purity shall be assured by gasifying the liquid & gaseous helium should have 99.995% purity (minimum) with maximum impurities for individual elements as given below:

(LHe Purity 4.5 grade as per MIL_P27407D -Grade-A).

Hydrogen	:	1 PPM
Nitrogen + Argon	:	14 PPM
Oxygen	:	3 PPM
Carbon Monoxide	:	1 PPM
Carbon dioxide	:	1 PPM
THC as Methane	:	0.5 PPM
Neon	:	23 PPM
Water (Dew Point)	:	9PPM (-61 deg.C)
Total impurities	:	Less than 50 PPM

4. General Conditions:

- a) Liquid helium shall be loaded to the final shipping container through a 10-micron stainless steel filter.
- b) Gaseous helium obtained from liquid helium shall be tested/analyzed as per MIL_P27407D (Grade-A).
- c) Liquid Helium shall be supplied in the supplier's container of nitrogen shielded liquid helium container of 11,000 US gallons capacity. *The container shall be with PBU/self pressurization coil of standard design in order to enable liquid helium transfer.***
- d) Liquid Helium fill & withdrawal interface on tanker shall be of 2" x 15" Cryenco bayonet joint, or otherwise interface then the supplier should send one number of SS flexible hose of minimum length of 5M for drawing the liquid helium along with the tanker. One end of the flexible hose shall be compatible to liquid helium tanker and other end shall be compatible to our ground circuit of flange size 40NB-150 lbs class rating raised face ANSI B 16.5.

- e) Supplier shall provide a flatbed trailer with ISO locks for transporting liquid helium tanker from the port to Sriharikota and back. The trailer shall have *hydraulic jacks of self-actuating type* for positioning the container on Weigh Bridge as part of Weighment without prime mover. The prime mover needs to be disconnected and to be positioned aside during the weighment.
- f) The prime mover shall be positioned along with the trailer at SDSC SHAR for free period of 20 days and internal movement (if required) would be carried out by department HVD's, under the supervision of the supplier and purchaser.
- g) ***Certificate indicating purity of liquid helium shall be supplied along with the consignment. In addition to that analysis report covering all the elements as indicated under Sl.No. 3 shall be supplied.***
- h) Process and Instrumentation (P&I) diagram and operating instruction manual for liquid helium tanker shall be supplied along with consignment.
- i) Prices may be quoted for Liquid helium by liter basis. However, the quantity supplied will be certified by weight only. The net weight of liquid helium supplied will be computed based on difference between initial & final weights with filled LN2 shield. **The volume of liquid helium supplied will be calculated as per the standard conversion of 1 KG = 8.0062 liters.**
- j) Supply of Liquid Nitrogen, filling of Liquid nitrogen to LN2 shield before initial and final weighing (i.e prior to receiving and shipping the container back to supplier's site) and weighing at SDSC-SHAR is the responsibility of purchaser on free of cost. The supplier shall ensure LN2 fill interface shall be of 1" MNPT.
- k) The bidder shall indicate the source of Liquid Helium supply (country of origin) for our information.
- l) Gas analysis will be conducted by our gas chromatograph for helium gas at SDSC-SHAR prior to unloading of consignment. If it is not meeting the required specification as mentioned under sl.no.3, the consignment will be rejected.
- m) A representative from Supplier/agent shall be available during the following occasions, Transportation of tanker from Indian port to Sriharikota and back, filling of LN2, weighment of liquid helium tanker and gas analysis. Chennai is the nearest port to Sriharikota.
- n) The parties meeting the above required specification and having a satisfactory track record of making similar supplies for the last five years

alone are requested to participate in the tender by furnishing the copies of executed orders as a proof without which offer will not be considered for evaluation.

II. SCOPE OF APPROVALS, CLEARANCES & DOCUMENTATION:

The following are under the scope of Supplier:

- ❖ **Obtaining PESO** (Petroleum and Explosive Safety organization) **clearance** for Import and transportation of liquid helium from the source to SDSC SHAR Sriharikota **is the responsibility of the supplier**. If required SDSC SHAR will intervene to expedite the process with PESO, however responsibility lies with the supplier.
 - ISO container shall be identified and earmarked for SDSC SHAR at source itself. Identified container details like container ID, load sheet data, etc., shall be shared with ISRO SDSC SHAR **prior to shipment** of the ISO container from the source. Draft copy of Bill of lading also shall be shared.
 - License to be obtained for import and transportation of liquid helium (In ISO container) **directly from the port to SDSC SHAR Sriharikota**.
 - Vessel test and periodical inspection reports from the manufacturer shall be duly endorsed by the inspecting agency of the country of origin.
 - Obtaining transportation clearances for supplier's transport vehicle (ISO container and trailer) to SDSC-SHAR.

III.COMMERCIAL CONDITIONS:

1. 60,000 Ltrs of Liquid Helium will have to be supplied in two consignments depending upon the purchaser requirement within one year from the placement of purchase order. 1st consignment to be supplied within 6 months from the date of placement of PO and 2nd consignment shall be supplied between 7th month to 12th month from the date of PO.
2. The bidder shall confirm that quoted prices are fixed and firm till the execution of purchase order is completed, which is expected to be completed within 1 year from the placement of purchase order.
3. The supply of Liquid Helium Container shall be effected within 45 days from the date of request for supply by the purchaser. The contract will remain alive for the purpose of delivery of liquid helium requested for supply during the currency of the contract period of one year from the date of placement of purchase order until deliveries are completed.
4. The party shall submit its offer on door delivery basis. Transport of the tanker from the country of origin/port to SDSC-SHAR and back is full responsibility of the supplier/Indian agent. SDSC SHAR shall not be liable for any demurrages in

the course of handling and transportation of the container. The transportation pre-requisites shall be ensured by the supplier/Indian agent.

5. The bidder shall quote rental charges for tanker & trailer beyond the free period (i.e 20 days) as given in the price bid format on per day basis separately. However, these rental charges are indicative only and will not have any impact for arriving at lowest bidder.
6. Technically qualified offer alone will be considered for price bid opening.
7. We may retain the tank for 20 days as free period at Sriharikota. The free period will be counted from the day of reaching Liquid Helium tanker at SDSC-SHAR and till the empty tank is handed over to the supplier/Indian agent at SDSC-SHAR, Sriharikota. If the above time period exceeds 20 days, rental charges may be paid and the rental/hire charges may be indicated per day basis separately.
8. Purchaser is not responsible for any delay in ship berth at respective ports and when the consignment is rebooked /dispatched to supplier.
9. Weighment of Liquid Helium tanker at department weigh-bridge at SDSC- SHAR, Sriharikota shall be final.
10. Insurance: SDSC-SHAR will not insure your equipment / products. It is the responsibility of the supplier to safely deliver the item at SDSC Sriharikota.
11. Quantity variation clause: Upto \pm 3000 Ltrs of the total order quantity
12. Any deviations in the above specifications are to be clearly brought out in the offer. Point wise confirmations shall be furnished as part of quotation
13. **GST:** As per the GST notification No.7/2018-central Tax (Rate) Dtd:25.01.2018 A(ix) S.No.243 (A) as amended by Notification No.25/2018-Integrated Tax (Rate) Dt:31.12.2018 b (viii) S.No.243B issued by Ministry of Finance (Dept. of Revenue), SDSC SHAR is eligible to avail IGST @ 5%, the item (Helium) being a consumable used in Launch Vehicle systems. Hence you are requested to quote IGST @ 5% against the said notification.

14. Payment terms

100% Payment shall be made through RTGS within 30 days of receipt and acceptance of the item at our site

15. Liquidated Damages:

In all cases, delivery schedule indicated in the Purchase Order/Contract is the essence of the contract and if the party fails to deliver the material within the delivery schedule i.e., within 45 days from the date of request for supply by the purchaser, Liquidated Damages will be levied @ 0.5% per week or part thereof subject to a maximum of 10% of total order value

16. Security Deposit:

Security Deposit for 3% of the order value is mandatory, Party shall furnish the Security Deposit in the form of Bank Guarantee from nationalized/scheduled bank or by Demand Draft valid till completion of the contract period plus sixty days towards claim period for faithful execution of the contract.

17. Arbitration:

The Contract shall be interpreted, construed and governed by the Laws in India. In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the contract, such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Office of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30 days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Sole Arbitrator appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Act 1996 as amended from time to time. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre - Bengaluru (Domestic and International) as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be English only.

18. Offer Validity: Validity of the offers / tenders shall be 90 days from the date of opening of the tenders. Tenders with offer validity less than the period mentioned above, will not be considered for evaluation

IV. Bid/Offer Submission details:

Submission of bids shall be done online only through e-portal.

The Supplier shall present the bids on Two-part basis as highlighted below:

- **Part-I: Techno-Commercial bid**
- **Part-II: Price bid**

Part-I: Techno-Commercial bid:

The tenderer shall necessarily present the following in the techno-commercial bid:

1. The tenderer shall furnish point-wise confirmation (Technical Compliance sheet attached) for the technical specifications given in the enquiry. However, change of specifications/deviations (if any) shall be brought out clearly in the offer with detailed justification.
2. In case, the tenderer is not interested to participate in the tender, the tenderer shall submit regret letter stating the reasons for not participating in the tender.
3. Bidder shall indicate clearly the delivery/time period for supplying the items to SDSC SHAR.
4. **Bidder shall note that indication of price in the techno-commercial bid shall lead to dis-qualification of bid.**
5. Bid Evaluation criteria: The price bids will be opened only after evaluation and acceptance of the technical bid of the respective tenderer. Order will be placed on technically qualified lowest offer.
6. **Compliance by the party:**

Sl.No	Description	Compliance by the party
1.	LHe Purity: (4.5 grade as per MIL_P27407D - Grade-A).	
a.	Hydrogen	<1 PPM
b.	Nitrogen + Argon	<14 PPM
c.	Oxygen	<3 PPM
d.	Carbon Monoxide	<1 PPM
e.	Carbon dioxide	<1 PPM
f.	THC as Methane	<0.5 PPM
g.	Neon	<23 PPM
h.	Water (Dew Point)	<9PPM (-61 deg.C)
i.	Total impurities	Less than 50 PPM

Sl.No	Description	Compliance by the party
2.	Liquid helium should be loaded to the final shipping container through a 10-micron stainless steel filter	
3.	Liquid Helium shall be supplied in the supplier's container of nitrogen shielded liquid helium container of 11,000 US gallons capacity. <i>The container shall be with PBU/self-pressurization coil of standard design</i>	
4.	Liquid Helium fill & withdrawal interface on tanker shall be of 2" x 15" Cryenco bayonet joint, or otherwise interface then the supplier should send one number of SS flexible hose of minimum length of 5M for drawing the liquid helium along with the tanker. One end of flexible hose shall be compatible to liquid helium tanker and other end shall be compatible to our ground circuit of flange size 40NB-150 lbs class rating RF ANSI B 16.5	
5.	Supplier shall provide a flatbed trailer with ISO locks for transporting liquid helium tanker from port to Sriharikota and back. Trailer shall have <i>hydraulic jacks of self-actuating type</i> to position the container on Weigh Bridge	
6.	Prime mover shall be positioned along with the trailer at SDSC SHAR for free period of 20 days and internal movement (if required) would be carried out by dept.	
7.	Certificate indicating purity of liquid helium covering all elements shall be supplied along with the consignment	
8.	Process and Instrumentation (P&I) diagram and operating instruction manual for liquid helium tanker shall be supplied along with consignment	
9.	Prices may be quoted for Liquid helium by liter basis. However, the quantity supplied will be certified by weight only. The net weight of liquid helium supplied will be computed based on difference between initial & final weights with filled LN2 shield. The volume of liquid helium supplied will be calculated as per the standard conversion of 1 KG = 8.0062 liters	
10.	Supply of Liquid Nitrogen, filling of Liquid nitrogen to LN2 shield before initial and final weighing (i.e prior to receiving and shipping the container back to supplier's site) and weighing at SDSC-SHAR is the responsibility of purchaser on free of cost. Supplier shall ensure LN2 fill interface shall be of 1" MNPT	
11.	The bidder shall indicate the source of Liquid Helium supply (country of origin) for our information	
12.	Gas analysis will be conducted by our gas chromatograph for helium gas at SDSC-SHAR prior to unloading of consignment. If it is not meeting the required specification as mentioned under sl.no.3, the	

Sl.No	Description	Compliance by the party
	consignment will be rejected	
13.	A representative from Supplier/agent shall be available during Transportation of tanker from Chennai/Mumbai port to Sriharikota and back, filling of LN2, weighment of liquid helium tanker and gas analysis	
14.	Parties meeting the above required specification and having a satisfactory track record of making similar supplies for the last five years alone are requested to participate in the tender by furnishing the copies of executed orders as a proof without which offer will not be considered for evaluation	
15.	<p>Obtaining PESO (Petroleum and Explosive Safety organization) clearance for Import and transportation of liquid helium from the source to SDSC SHAR Sriharikota is the responsibility of the supplier. If required SDSC SHAR will intervene to expedite the process with PESO, however responsibility lies with the supplier.</p> <ul style="list-style-type: none"> ▪ ISO container shall be identified and earmarked for SDSC SHAR at source itself. Identified container details like container ID, load sheet data, etc., shall be shared with ISRO SDSC SHAR prior to shipment of the ISO container from the source. Draft copy of Bill of lading also shall be shared. ▪ License to be obtained for import and transportation of liquid helium (in ISO container) directly from the port to SDSC SHAR Sriharikota. ▪ Vessel test and periodical inspection reports from the manufacturer shall be duly endorsed by the inspecting agency of the country of origin. ▪ Obtaining transportation clearances for supplier's transport vehicle (ISO container and trailer) to SDSC 	
	Commercial Conditions:	
16.	60,000 Ltrs of Liquid Helium will have to be supplied in two consignments depending upon the purchaser requirement within one year from the placement of purchase order. 1 st consignment to be supplied within 6 months from the date of placement of PO and 2 nd consignment shall be supplied between 7 th month to 12 th month from the date of PO	
17.	Bidder has to confirm that quoted prices are fixed and firm till the execution of purchase order is completed, which is expected to be completed within 1 year from the	

Sl.No	Description	Compliance by the party
	placement of purchase order	
18.	Technically qualified offer alone will be considered for price bid opening	
19.	The supply of Liquid Helium shall be effected within 45 days from the date of request for supply by the purchaser. The contract will remain alive for the purpose of delivery of liquid helium requested for supply during the currency of the contract period of one year from the date of placement of purchase order until deliveries are completed	
20.	Party shall submit its offer on door delivery basis. Transport of the tanker from the country of origin/port to SDSC-SHAR and back is full responsibility of the supplier/Indian agent. SDSC SHAR shall not be liable for any demurrages in the course of handling and transportation of the container. Transportation prerequisites shall be ensured by the supplier/Indian agent.	
21.	We may retain the tank for 20 days as free period at Sriharikota. The free period will be counted from the day of reaching Liquid Helium tanker at SDSC-SHAR and till the empty tank is handed over to the supplier/Indian agent at SDSC- SHAR, Sriharikota. If the above time period exceeds 20 days, rental charges may be paid and charges may be indicated separately on per day basis	
22.	Purchaser is not responsible for any delay in ship berth at respective ports and when the consignment is rebooked /dispatched to supplier	
23.	Weighment of Liquid Helium tanker at department weigh-bridge at SDSC- SHAR, Sriharikota shall be final	
24.	Quantity variation clause: Upto \pm 3000 Ltrs of the total order quantity	
25.	Insurance: SDSC-SHAR will not insure your equipment / products. It is the responsibility of the supplier to safely deliver the item at SDSC Sriharikota	
26.	Any deviations in the above specifications are to be clearly brought out in the offer. Point wise confirmations shall be furnished as part of quotation	

7. BID QUALIFICATION CRITERIA:

Sl.No	Description	Compliance by the party
1.	Similar field of experience: Tenderer shall submit details of Liquid Helium/Gaseous Helium supplies made in the last 5 years. Details of purchase orders placed on the supplier shall be sent along with the offer during the last five years. Helium purity analysis certificate for the supplies made shall also be submitted. Offers submitted by the suppliers without these details will be rejected.	
2.	Party shall provide documentary evidence for similar orders executed earlier as per the following: One similar work not less than 800 lakhs Or Two similar works each not less than 400 lakhs	
3.	Average Annual Turnover: Bidder's average annual financial turnover shall be not less than ₹ 1000 Lakhs per year during last three Financial years ending with 31.03.2023	

Part 2: Price bid

1. Price for supply of Liquid Helium **to be submitted online only.**
2. Rental charges for tanker and trailer beyond the free period (20 days) may be indicated as given below **as a separate attachment in price bid only:**

Sl. No	Description	Price
1.	Rental charges (beyond free period of 20 days) for Liquid helium container and trailer	Per day basis