



वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्
Council of Scientific & Industrial Research
राष्ट्रीय वांतरिक्ष प्रयोगशालाएं
National Aerospace Laboratories

INVITATION FOR TENDERS

Tender No. NAL/PUR/STTD/288/22-Y

Dated: 21/12/2022

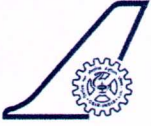
CSIR - National Aerospace Laboratories (NAL), Bengaluru, Republic of India, is one of the premier research laboratories under aegis of Council of Scientific and Industrial Research (CSIR), an autonomous body under the Department of Scientific and Industrial Research, Government of India, New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organisation. It is internationally known for its excellence in Scientific Research in Aerospace Engineering.

The Director, CSIR-NAL invites online quotation for procurement of the following item(s) for day to day research work.

Sl. No.	Description of Item(s)	Unit	Quantity
1	AMC for Computer Controlled Vibration Test Facility Duration of AMC: 3 years. (Please Refer Annexure for detailed specifications)	No	01

Single / Double Bid Only	Single	Tender Type	Open
Bid Security (EMD) (in INR)	Bid Security Declaration should be enclosed with quotation	Bid submission end date	12-Jan-2023 10.00 Hrs
Performance Security	Nil	Bid opening date	13-Jan-2023 11.00 Hrs

01. Tender Documents may be downloaded from Central Public Procurement Portal <https://www.etenders.gov.in>. Aspiring Bidders' who have not registered in e-procurement can register free of cost before participating through the website <https://www.etenders.gov.in>. Bidders are advised to go through instructions provided at 'Instructions for Online Bid Submission'.
02. Tenderers can access tender documents on the website (for searching in the NIC site <https://www.etenders.gov.in>, kindly go to Tender Search option, select tender type and select 'Council of Scientific and Industrial Research', in organisation tab and select NAL-Bengaluru-CSIR in department type. Thereafter, Click on "Search" button to view all CSIR-NAL, Bengaluru tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://www.etenders.gov.in> as per the schedule given in the next page.
03. a. Global Tender Enquiry: Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but **not** both. However, the offer of the Indian Agent should also accompany the authorisation letter from their principal. To maintain sanctity of tendering system, one Indian Agent **cannot** represent two different Foreign principals in one tender



CSIR-National Aerospace Laboratories, Bengaluru-560 017, INDIA

- b. Open Tender enquiry: Only Local suppliers with prescribed local content as detailed in DIPPT Order No. P-45021/2/2017-PP (BE-II) dated 16th Sep, 2020 and subsequent orders issued by Ministry of Finance (GoI) from time to time, are eligible for bidding. Bidders must enclose the certificate declaring the local content of supplies as per our standard form.

Note: Kindly refer to the first page (NIT) for tender type (i.e. Open Tender Enquiry / Global Tender Enquiry) and submit your bid accordingly.

04. Unsolicited / conditional / unsigned Quotations/Quotations received after the due date and time shall be summarily rejected. The Bidder shall comply the terms and conditions of the tender, failing which, the offer shall be liable for rejection.
05. The bids' failing to comply with the following clauses will be summarily rejected.
- a. The Bidders' proposing to supply finished products directly/indirectly from vendors' of countries sharing the land border with India should submit a copy of registration done with DPIIT.
- b. If the products supplied are not from vendors of countries sharing land border with India, the Bidders' have to enclose a declaration to that effect.
06. As per Govt. of India procurement policies,
- a. The purchaser intends to give purchase preference to local supplies (Preference to Make in India) in case the cost of procurement is up to Rs. 50.00 lakhs.
- b. The procuring entity intends to give purchase preference to products/goods manufactured by micro, small and medium enterprises.
07. Bidders' are requested to refer to the instructions regarding Procurement Policies for "Make in India", issued by Ministry of Commerce and Industry, Department of Industrial Policy and Promotion dated. 28-May-2018, and 4-Jun-2020 and guidelines as and when issued.
08. Kindly, note CSIR-NAL GST No. **29AAATC2716R1ZB**. And the bidders' are requested to furnish their GST No. in their invoice failing which we will *not* be able to make timely payment.
09. Printed conditions, if any, submitted along with your quotation shall not be binding on us.
10. The prospective bidders' are requested to refer to the Standard Terms and Conditions available on NAL Internet (www.nal.res.in) under the icon Tender-Purchase before formulating and submitting their bids'.
11. The Director, CSIR- National Aerospace Laboratories, Bengaluru reserves the right to accept any or all the tenders either in part or in full or to split the order without assigning any reasons there for.

Thanking you,

Yours faithfully

Stores & Purchase Officer
For and on behalf of CSIR-NAL

SCOPE OF ANNUAL MAINTENANCE CONTRACT FOR COMPUTER CONTROLLED VIBRATION TEST FACILITY

Annual maintenance contract of the Computer Controlled Vibration Test Facility (CCTVF) (LDS Shaker V875-440 HBT 750) includes the following for a year:

- I. Preventive Maintenance – Once in a year
- II. Regular Maintenance – Two times in a year
- III. Break-down Maintenance – As and when the system fails
- IV. System Calibration – Once in a year

The details of the technical work to be carried out for each item are as follows:

I. PREVENTIVE MAINTENANCE

Overhaul of Vibration Shaker:

Servicing of shakers involves *complete stripping down* to component level, complete fault diagnosis if any, inspection and LDS quality test check as per the following:

- ◆ Complete strip down of the shaker including Lin-E-Air support system.
- ◆ Inspection of all the components for any damages /defects.
- ◆ Repair and replacement of components wherever possible.
- ◆ Inspection of major components like armature, field coils, bearings etc. as per LDS quality inspection document before replacement.
- ◆ Replacement of all damaged components which are beyond repair.
- ◆ Assembly of the shaker as per approved LDS Assembly procedure document.
- ◆ Verification of bearing alignment after assembly as per approved LDS quality standard.
- ◆ Inspection of leak check for the armature hose assembly before final assembly of shaker.
- ◆ Assembly of armature over travel switch.
- ◆ Cleaning and reassembly of oil filter in the shaker bulk head.
- ◆ Check the oil pressure drop in the shaker bearings and correct if necessary.

Overhaul of Slip Table:

Servicing of LDS HBT combo type slip table involves complete stripping down to component level, complete fault diagnosis, Inspection and LDS quality check as per the following.

- ◆ Dismantling of magnesium slip plate.
- ◆ Cleaning of all oil holes in the magnesium slip plate.
- ◆ Checking the oil flow through all the oil holes.
- ◆ Inspection of all the bearings for free movement from end to end for the full travel.
- ◆ Inspection of all the bearing for alignment with respect to each other and w.r.t the slip plate as per approved LDS quality inspection document.
- ◆ In case of mis-alignment, correction of the same as per approved inspection document.

- ◆ Cleaning of bearing wells and oil sump around the slip plate.
- ◆ Removal of sump cover around the slip plate and cleaning.
- ◆ Assembly of slip plate with Bearing.
- ◆ Checking of oil pressure drop and flow across the bearings as per approved inspection document.
- ◆ Checking the free movement of bare slip table to the full length of travel.

Spak Amplifiers:

- ◆ Inspect the air intake grills, Brush off or wash with warm soapy water any dust accumulated. Ensure dust filters are clean and replace the damaged filters.
- ◆ Inspect all the cooling fans, clean the blades.
- ◆ Check all the power connections to the amplifier (Field supply, armature supply and 3-phase supply) are secure.
- ◆ Check for worn and damaged components
- ◆ Check all the system interlocks are operating correctly.
- ◆ Run the amplifier, press the Emergency Stop control, check the amplifier shuts down.
- ◆ Repeat the above step and check action of RCP's Emergency Stop control
- ◆ Check the Individual Power module current sharing if necessary recalibrate the same after service the module
- ◆ Check over current of amplifier.
- ◆ Check and calibrate if necessary Bay control Board.
- ◆ Check all the interlocks enabled
- ◆ Check the system over all noise level as per the LDS Standard.
- ◆ Check and record Output DC offset. If it is above the recommended value please corrected back as per the LDS procedure.
- ◆ Inspect the Linear power supply regulators and supply.

II. REGULAR MAINTENANCE

Vibration shaker:

- Check all the system cables (including interlock) are correctly connected.
- Check the oil/vibrator cooling system flow rate.
- Check all the cooling interlocks.
- Check that the vibrator over travel switch operates by manually moving the armature up and down until the over travel interlock trips.
- Remove the top cover and inspect suspension for worn/damaged components.
- Ensure cooling circuit is free and cooling hoses are intact.

SPAK Amplifiers

- Inspect the air intake grills, Brush off or wash with warm soapy water any dust accumulated. Ensure dust filters are clean and replace the damaged filters.
- Inspect all the cooling fans, clean the blades.

- Check all the power connections to the amplifier (Field supply, armature supply and 3-phase supply) are secure.
- Check for the wear conditions.
- Check all the system interlocks are operating correctly.
- Run the amplifier, press the Emergency Stop control, and check the amplifier shuts down.
- Repeat the above step and check action of RCP's Emergency Stop control.

Combo Slip Table

Carry out the maintenance as per the LDS procedure.

III. BREAK-DOWN MAINTENANCE

Break down maintenance of the system including the software to be performed in case of system failure or break down as and when required.

IV. SYSTEM CALIBRATION

CCTVF shall be calibrated every year before the due date using master equipment. A calibration certificate shall be issued with traceability details.