

INVITATION FOR BIDS/NIT

Tender No. NAL/PUR/ACD/181/20-Y

Dated: 14-Sep-2020

CSIR- National Aerospace Laboratories (NAL), Bengaluru, India is one of the premier laboratories under Council of Scientific and Industrial Research (CSIR), an autonomous body under Department of Scientific and Industrial Research, Government of India, New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organization. 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 Items | Unit | Qty |
|--------|--|------|-----|
| 1 | Ultrasonic Flaw Detector Pulse echo A-scan equipment for testing and certification of composite components developed for Aerospace applications. Please refer Annexure for detailed specification. | No | 1 |

| | |
|-----------------------------|---------------------------------|
| Single / Double Bid | Single |
| Bid Security (EMD) (in INR) | 25000/- |
| Performance Security | 10% of the purchase order value |

01. Tender Documents may be downloaded from Central Public Procurement Portal <https://www.etenders.gov.in>. Aspiring Bidders who have not enrolled/ registered in e-procurement should enroll/ register before participating through the website <https://www.etenders.gov.in>. The portal enrolment is free of cost. 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 organization 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. 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 authorization letter from their principal. To maintain sanctity of tendering system, one Indian Agent cannot represent two different Foreign principals in one tender.
04. Unsolicited / conditional / unsigned tenders (Quotations) **shall not** be considered. Quotations received after the due date and time **shall be summarily rejected**.



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

05. The Bidder shall comply the terms and conditions of the tender, failing which, the offer shall be liable for rejection.
06. The prospective bidders are requested to refer to the Standard Tender Document available on NAL Internet (www.nal.res.in) under the icon Tender-Purchase before formulating and submitting their bids
07. 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.

Raman Kumar
Section Officer (S&P)

Annexure

TECHNICAL SPECIFICATIONS

| | | |
|-----|-------------------------------|---|
| 1) | Pulser Type | Spike or Square wave, Negative Pulse |
| 2) | Pulser- pulse voltage | 100v to 400v |
| 3) | Pulse width | Adjustable 50ns to 1000ns |
| 4) | PRF | 1Hz-1500Hz |
| 5) | Damping | 40Ω |
| 6) | Bandwidth | 0.5MHz to 20MHz |
| 7) | Pulser Type | Spike or Square wave, Negative Pulse |
| 8) | Pulser- pulse voltage | 100v to 400v |
| 9) | Pulse width | Adjustable 50ns to 1000ns |
| 10) | Receiver Gain range | 0 to 100dB |
| 11) | Receiver maximum voltage | 10Vpp (full screen height) |
| 12) | Receiver Mode | Pulse echo, Pitch catch, Through transmission |
| 13) | Rectifier | Full, positive half, negative half, RF |
| 14) | Receiver Gain range | 0 to 100dB |
| 15) | Receiver maximum voltage | 10Vpp (full screen height) |
| 16) | Display Type | LCD, TFT |
| 17) | Display Size | 6.5 inch |
| 18) | System Controls and operation | Touch Panel Operation |
| 19) | Operating Power | (100V-240VAC 50/60Hz) and on Battery |
| 20) | Standby Battery Operation | should work on battery for Minimum 6 Hours. |
| 21) | Battery unit | Rechargeable unit with charger and with optional External battery |
| 22) | System Weight with Battery | Not more than 2kgs |
| 23) | Probes with cables | <u>Normal Beam with delay line</u> a) 5MHz-6mm diameter - 02 Nos. b) 5MHz-12-13mm diameter - 02 Nos. c) 10MHz-6-10mm diameter - 01 No. d) 15MHz-6-10mm diameter - 01 No. <u>Dual Element</u> a) 4MHz or 5MHz-10mm diameter - 01 No. |

ULTRASONIC FLAW DETECTOR

General Note :

- 1) The equipment should be provided with a carry case.
- 2) The equipment should be provided with standard operation guide/ Manual.
- 3) The equipment should be provided with all the supporting accessories and necessary cables for data transfer.
- 4) All the probes to be provided with cables and delay Line.
- 5) All the probes to be used for inspecting composite components.
- 6) The specified frequency or nearest frequency of Transducers can be supplied.
- 7) Calibration certificate to be provided as per ASTM E (1065) for all the Single Element Probes.
- 8) The system should comply as per EN 12668.
- 9) Necessary certificates to be provided for the Transducers/probes and the equipment.
- 10) Necessary software should be provided for data transfer and data analysis.
- 11) The mentioned system specifications are the minimum instrumentation and software requirements.
- 12) The system should be provided with two years' warranty.

