

Tender Notification for the procurement of a pulse tube refrigerator

(Last Date for submission of tenders: 17 January 2017)

REF: PPH/AMG/456/2016-17

- 1) Send your best quotation for the following item on C.I.P. Bangalore basis. IISc will help with customs clearance at Bangalore Airport. Please include your payment option.
- 2) Your quotation should clearly indicate the terms of delivery, delivery schedule, E.D., payment terms etc.
- 3) The tender should be submitted in **two separate sealed envelopes** - one containing the technical bid and the other containing the commercial bid, both of which should reach us, duly signed on or before 1700 hours 17 January 2017.
- 4) Address to send to:
Prof. Ambarish Ghosh
Centre for Nano Science and Engineering
Indian Institute of Science, Bangalore 560012
- 5) Please enclose a **compliance certificate** along with the technical bid. This certificate should have a table that should describe your compliance in a “Yes” or “No” response against each of the items in the table listed in this RFQ. If “No” the second column should state the extent of deviation. The “third” column should state the reasons for the deviation if any. The fourth column can be used to compare your tool with that of your competitors or provide details as requested in the technical requirements table below.
- 6) Items in addition to that listed in the technical table that you would like to bring to the attention of the committee can be listed at the end of the compliance table.
- 7) Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors.

Yours Sincerely,

Chairman

Department of Physics

Direct all questions concerning this tender to Prof. Ambarish Ghosh (email: ambarish@ece.iisc.ernet.in)

Specifications of the product – Remote mount Pulse Tube and Compressor system with the following components and minimum specification:

1. Minimum two stages in the pulse tube
2. The line frequency should be taken as 50 Hz.
3. Power consumption of the compressor should be less than 11 kW. Specify electrical (voltage) requirements clearly.
4. The valve unit should be mounted remotely (at least 15 m) from the pulse tube (provide drawings and images for the proposed model)
5. At least 0.85 W cooling at second stage with minimum base temperature 4 K (provide data for the proposed model) with no load
6. At least 30 W cooling power at first stage with minimum base temperature 50 K (provide data for the proposed model) with no load
7. Cool down time to base temperatures in the absence of any load must be less than 90 minutes (provide data for the proposed model)
8. Vibration at second stage should be less than 15 microns in the vertical direction (provide data for the proposed model)
9. Cooling water/air requirement must be specified with flow rate and temperature.

10. Maintenance details needs to be specified with accurate schedule. Minimum maintenance interval should be 20000 hours.
11. Specify which part of the maintenance will be done at the user cite and which part at the vendor cite. The cost of the scheduled maintenance should be specified as an “optional” cost in the commercial bid.
12. Please list a set of acceptance tests for on-site (vendor) inspection and after installation at IISc.

Terms and conditions:

1. The vendor should have a track record of having previously supplied at least three similar equipment in India / USA / UK / France/ Germany / Sweden / Finland / Italy / Czech Republic (please furnish the contact details of the customers).
2. The vendor should have qualified technical service personnel for the equipment based in India (preferably in Bangalore).
3. The clauses of onsite installation and training needs to be specified clearly, and ideally provided free of cost.
4. The quotation will be in foreign currency.
5. The payment will be through confirmed irrevocable Letter of Credit.
6. Alternate modes of payment can be suggested with suitable justification.
7. Basic tool kit for installation of the pulse tube system should be provided free cost.
8. The lead time for the delivery of the equipment should not be more than four months from the date of receipt of our purchase order.
9. The instrument must carry a comprehensive warranty of 18 months from the date of installation, or 24 months from day of receipt by the vendor, whichever one is earlier. Please provide ample justification if this is not possible.

Yours sincerely,

Prof. Ambarish Ghosh
Associate Professor
Department of Physics (associate faculty)
Indian Institute of Science
Bangalore - 560012, India