

Cryogenic Engineering Centre

Indian Institute of Technology, Kharagpur

INVITATION FOR TENDER

IIT/KGP/CRYO/ENQ/VA/HTSQUID/2018-19/33

Date: 07-02-2019

High Temperature Superconductor (HTS) based Josephson Junction and Quantum Interference Device (SQUID)

Sealed tenders are invited in Two-bid System in two separate sealed envelopes (one for Technical specifications with **Earnest Money Deposit of Rs. 16,000/-** and the other for Commercial offers) from eligible Indian manufacturers/suppliers or foreign manufacturers through their Direct Indian Agents for the supply of the following equipment.

If any Indian Agent quotes on behalf of Foreign Principal, in that case, as per GFR Rule, Vendor Registration Number from DGSD under Ministry of Commerce, Government of India, and copy of business agreement are to be submitted along with quotation (in the Envelope containing the Technical Bid) failing which the quotation would not be considered.

- Both the envelopes must be sealed and should clearly be marked on top of envelope about type of envelope (i.e., technical/price bid), tender reference no. and name of agency submitting the bid. The technical bid should not have any price indication.
- These two envelopes, mentioned above, must be in a larger envelope with tender reference number and name of the agency clearly written over it.
- Bids, those are not following two-bid system, will be cancelled.

Please send offers, along with descriptive catalogue/brochure. The validity of the bid should be at least 120 days from the last date of submission. Please ensure that your quotation reaches this office not later **05th MARCH, 2019 at 1500 hrs.** at the following address:

**Head of the Centre
Cryogenic Engineering Centre
Indian Institute of Technology Kharagpur
Kharagpur 721302, West Bengal, India.
Kind Attention: Dr. Venimadhav Adyam**

Last Date of Submission of Quotation: 05th March (Tuesday) 2019, 1500 hrs.

Validity: 120 days from the last date of submission

Last Date of Tender Opening: 05th March (Tuesday) 2019, 1600 hrs

Copy to:

- 1.) INSTITUTE WEBSITE
- 2.) CPPP
- 3.) Jt. REGISTRAR (S & P)
- 4.) CHAIRMAN PURCHAS COMMITTEE

Technical Specification of High Temperature Superconductor (HTS) based Josephson junction and Quantum Interference Device (SQUID)

SQUID based on HTS superconductor operational in Liquid Nitrogen. LN2 Dewar to be provided.

Josephson junction based on grain boundary built on Bicrystal substrate.

SQUID inductance ~ 100 pH Internal coil 2 (external coil 1)

Mutual inductance: ~28 (41) pH

SQUID critical current >5 μ A Voltage swing >2 μ V

SQUID field sensitivity of the order of 0.5 μ T/ Φ_0 .

Flux locked loop module and feed back circuit

Voltage Input with BN, ± 10 V

Flux-Locked Loop Output with BNC, ± 10 V, 50 Ω

Feedback Output with BNC, ± 10 V

Bandwidth ~10 kHz (for ~10 μ Vpp SQUID V- Φ)

Power Requirements ± 12 V DC

Electronics with 14-bit Data Acquisition Module and software.

A 44 GHz microwave oscillator along with SQUID for the Shapiro step experiment, In the SQUID voltage-current (V-I) characteristic experiment the microwave power can be turned on and the step positions on the V-I characteristic can then be recorded. Power Requirements ± 12 , +5 V DC.



Techno-commercial conditions

- a) Interested original equipment manufacturers or dealers or agents may submit their quotations in **two bid systems** (technical with EMD and commercial).
- b) **Earnest Deposit money of Rs 16,000/-** is to be deposited in the form of Account Payee Demand Draft in favour of IIT Kharagpur, payable at Kharagpur, India. Any bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.
- c) **Warranty - minimum 1 years from the date of installation and commissioning at the site.**
- d) Scope of supply should include **free installation, commissioning and training at site.**
- e) Please provide **list of such supplied systems in India and abroad** both in academics and industry.
- f) **Validity of the quotation should be 120 days from last date of submission**
- g) In the technical bid, vendors have to give a technical compliance certificate along with the technical literature.
- h) Compliance statement is to be submitted as per our technical specification. Claim for compliance should be traceable to your brochure. Please mention page number etc. of your brochure for easy traceability.
- i) Commercial bid is to be provided in clearly marked separate sealed envelope.
- j) If any Indian Agent quotes on behalf of Foreign Principal, in that case, as per GFR Rule, vendor registration number from DGSD under Ministry of Commerce, Government of India, and copy of business agreement is to be submitted along with quotation.
- k) **Last date of submission of sealed quotation is 05th March (Tuesday) 2019, 1500 hrs.**
- l) **Last date of Opening Tender is 05th March (Tuesday) 2019, 1600 hrs.**
- m) The envelope should have the following number on the top and submitted to the office of
- IIT/KGP/CRYO/ENQ/VA/HTSQUID/2018-19/33**
Head of the Centre
Cryogenic Engineering Centre, I.I.T. Kharagpur,
West Bengal-721302, INDIA
(Attn: Dr. Venimadhav Adyam)
- n) Regarding this purchase, **the decision of the Director would be final and binding.**
- o) Payment terms for foreign firms: **100% payment through irrevocable L/C.**
- p) Payment terms for **Indian firms**
- a. 100% payment against delivery through electronic transfer.
- b. Ensure mentioning: -
- i. Bank details of the beneficiary and PAN number.
- ii. Full name and address of the beneficiary on whom order has to be placed.

