Government of India
Bhabha Atomic Research Centre
Accelerator Control Division

Ref No: ACnD/EMAS/2018/229040 Date: 03.12.2018

----------TO WHOM SO EVER IT MAY CONCERN----------

Sub: Design, development, testing and installation of lifting mechanism of cryocooler based vertical superconducting magnet test setup conforming to technical specification: ACnD/EMAS/18/14 dated 27.11.2018

Dear Sir/Madam,

1. Quotations are invited for design, development, testing and installation of lifting mechanism of cryocooler based vertical superconducting magnet test setup conforming to technical specification: ACnD/EMAS/18/14 dated 27.11.2018.
2. Bidder shall quote for purchase of raw materials, man power for welding and assembly inside BARC premises conforming to tender technical specification.
3. Taxes and Excise Duties shall be quoted separately. Form AF / H whichever is applicable shall be provided, if required.

The quotation must reach The Head, Accelerator Control Division by 14.12.2018 (12:00 PM) and must be sent in a sealed envelope super scribed with the reference number & the due date given above only through India Ordinary Post/Speed Post.

4. The address on the envelop should read: The Head,
   Electromagnetic Applications Section
   Accelerator Control Division,
   RCnD Bldg., North Site
   BARC, Trombay,
   Mumbai - 400 085.
   (Kind Attn: S.Sundar Rajan, SO/F)
5. The bidder shall complete the job within 2 months from the date of firm work order issued to the bidder.
6. Head, Accelerator Control Division reserves the rights to accept / reject any or all quotations without assigning any reason.
7. Quotation must also indicate the validity of offer. Quotation must also indicate the VAT no and PAN no of the party.
8. Drawings / Sketches, technical specification must be returned along with the offer.
9. The quotation has to be signed by authorized person with company seal.
10. Payment will be made by cheque only after satisfactory completion of work on production of bill, delivery challan and advance stamped receipt. It may be noted that IT @ 2% shall be deducted from your bills.
11. In case of any technical clarifications, the supplier may kindly contact the following: S.Sundar Rajan , SO/F , EMAS, ACnD (Email ID :sundara@barc.gov.in, Tel No : 25591851)

Encl.: Technical Specification Sheet no: ACnD/EMAS/EM/18/14 dated 27.11.2018

S.Sundar Rajan
Scientific Officer-F
Indenting Officer

Work Order Enquiry No: ACnD/EMAS/2018/229040

Technical specification

Document no.	Revision no.	Date of Issue	No of pages
ACnD/EMAS/EM/18/14	0	27.11.2018	03

Design, development, testing and installation of lifting mechanism of cryocooler based vertical superconducting magnet test setup

1.0 SCOPE

Tender is invited for design, development, testing and installation of lifting mechanism of cryocooler based vertical superconducting magnet test setup. The complete job shall be carried out strictly as per requirements, specifications and its compliance standards as detailed in this document. In this specification the supplier shall be referred to as the "supplier" and Bhabha Atomic research Centre shall be referred to as the "buyer".

Supplier shall provide complete raw material and man power support to carry out the above jobs. The supplier shall be qualified as per Para 5.0 of this document. The brief description of contents of the tender specification document is as described below.

Para 2.0 gives the detailed job description and technical requirements.

Para 3.0 gives the general requirements.

Para 4.0 gives the requirements for raw material procurement.

Para 5.0 gives the requirements of supplier qualifications.

Para 6.0 gives the requirements of pre dispatch inspection.

Para 7.0 gives the requirements of packaging and safe delivery.

Para 8.0 gives the confidentiality clause.

2.0 DETAILED JOB DESCRIPTION AND TECHNICAL REQUIREMENTS

2.1 A suitable lifting mechanism shall be designed, developed, tested and installed inside BARC to carry out assembly of the cold mass in a cryocooler based vertical superconducting magnet test setup.

2.2 The lifting mechanism shall be designed to move the cold mass, which weighs around 2000 Kg with a stroke length of 1500mm. The height of the lifting mechanism holder shall be minimum 1000 mm height from the base ground level.

2.3 The total height of the lifting mechanism shall be less than 2400 mm from the base ground level. Suitable capacity of induction motor along with gear assembly shall be integrated with the lifting mechanism to lift the cold mass up to a height of 2200mm from the ground level.

2.4 The width of the lifting mechanism shall be minimum 1000mm so that it is easier to integrate/insert the cold mass mounted on the vacuum vessel flange inside the vacuum vessel in vertical position itself.

2.5 The cold mass shall be moved by the lifting mechanism slowly at a rate not exceeding 10mm/sec. Suitable lead screw mechanism shall be provided for precise movement (up and down). The lead screw shall have accuracy of +/- 1mm and shall be of reputed manufacturer.

2.6 Suitable provision shall be made to hold the lifting mechanism at any height in its moving direction along with the load lifting capacity of 2 Tonne.

2.7 Suitable movable wheels with lock shall be mounted on the base of the lifting mechanism, so that the same can be moved to different locations.

2.8 All the components of the mechanism shall be of only nonmagnetic stainless steel. The lead screw shall be dry lubricated and no oil shall be used for lubrication as the setup is required to be installed in clean room facility for integration of vacuum components.

2.9 Testing of the system for the above mentioned specification will be verified at the supplier factory as part of predispatch inspection. Any component/system deviating from the above requirements will be rejected.

2.10 The system shall be installed inside BARC and training for operating the same shall be provided for 1 working days.

3.0 GENERAL REQUIREMENTS

3.1 The supplier shall workout a detailed design to meet fabrication requirements and work description, quantity and main fabrication material. They shall submit along with the offer dimensional drawing giving all the salient features, material details of individual items and assembly view of the fixtures.

3.2 The part number and the source of all the hardware's shall be cleared mentioned before purchase of the same from the market. They shall be purchased and installed only after prior approval from BARC. Any component of inferior quantity purchased without prior approval will be rejected strictly.

3.3 The Supplier shall indicate in detail the standards adopted for the materials and processes and the quality control procedures followed by them.

3.4 Supplier can suggest the color, aesthetics, and other details as suitable. Supplier must offer best quality/IS certified material only.

3.5 Supplier should have similar work experience and along with the offer, shall submit the details of past experience with documentary proof.

3.6 Materials, tools, manpower etc required for the above work will not be supplied by the user. Supplier has to arrange the above on his own (No free issue material).

3.7 The supplier shall incorporate minor changes in the design as required at the time of execution of work at no extra cost.

3.8 The above job shall be done strictly under the supervision of our engineers in test facility at BARC premises.

3.9 Working personnel shall observe all the safety precaution during working.

3.10 The working personnel shall behave well with other officers and workers inside BARC campus.

3.11 The contractor shall be solely responsible, in case of any casualty involving working personnel. However, first aid will be provided by BARC.

3.12 General BARC security rules shall apply to all the working personnel.

3.13 Entry permit will be issued on weekly basis and contractor shall have valid photo pass with valid Police Verification certificate (PVC) as per the norms of BARC security.

3.14 Prior permission will be taken from security if the persons are required to do the job on Saturday, Sunday, Holidays and beyond normal working hours (08:00 to 18:00 hrs).

4.0 RAW MATERIAL PROCUREMENT

4.1 The raw material, electrical components used by supplier for the manufacturing of these components shall be of brand new and shall not be used previously.

4.2 All the material shall strictly confirm to their corresponding IS standards and shall be purchased only after prior approval from the purchaser.

5.0 REQUIREMENTS OF SUPPLIER QUALIFICATIONS

5.1 The supplier shall be evaluated on the basis of the following criteria

5.1.1 The supplier shall have previous experience in carrying out similar such jobs inside BARC and copy /proof of the same shall be attached.

5.1.2 The supplier shall submit the details of the welder, fitter and other man power, facility available with the supplier to carry out the job successfully.

5.1.3 The supplier shall provide the list of their employees along with their valid PVC certificate, who are intended to work in this job.

5.1.4 The supplier shall provide 2D/3D model of the lifting mechanism along with its list of sub components for technical evaluation. Offers without the same will be rejected out rightly.

6.0 REQUIREMENTS OF PREDISPATCH INSPECTION

6.1 The complete system will be tested for its requirements as mentioned in Para 2.0. Any deviation of the components/sub systems from the technical requirement will be subjected to rejection of the same.

7.0 REQUIREMENTS OF PRICE AND DELIVERY SCHEDULE

7.1 The complete job is expected to the completed in a duration of 02 Months.

8.0 CONFIDENTIALITY CLAUSE

8.1 No party shall disclose any information to any third party concerning the matters under this Contract generally. In particular, any information identified as "Proprietary" in nature by disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to sub-contractors, consultants, advisors or the employees engaged by a party with equal force.

8.2 "Restricted information" categories under section 18 of the Atomic Energy Act, 1962 and "Official secrets" under section 5 of the Official Secrets Act, 1923: Any contravention of the above mentioned provisions by any contractor / sub-contractor, consultant, advisor or the employees of the contractor will invite penal consequences under the aforesaid legislation.

8.3 Prohibition against the use of BARC’s name without permission for publicity purpose. The contractor or sub-contractors, consultants, advisors or the employees engaged by a party shall not use BARC’s name for publicity purpose through any public media like: press, radio, TV or Internet without any prior approval of BARC (wide circular ref.: 2/Misc-9/Lgl/2001/92 date 30/04/2001).