



INDIAN INSTITUTE OF TECHNOLOGY MADRAS
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Prof Lakshman Neelakantan
Project Coordinator

Ref: MM/1920/487/POWER SUPPLY
Dated: 19.03.2020

Limited Tender No: MM/1920/487/POWER SUPPLY

Due Date: 08.04.2020, 3:00pm

Pre-Bid meeting: - Not required.

Technical Bid opening meeting on Due Date: 08.04.2020, 4:00pm

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of “50-500 V DC POWER SUPPLY” conforming to the specifications given in (Annexure-I).

Terms and Conditions of Limited Tender

1. **Preparation of Bids:** - The Limited tenders should be submitted under **Two bid system** (i.e.) Technical- and -Financial bid.
2. **Delivery of the tender:** - The tender shall be sent to the below-mentioned addresses either by post or by courier (duly sealed and super scribed on the envelope with the reference No and due date) so as to reach the following address before the due date and time specified in our Schedule:
Prof Lakshman Neelakantan,
Department of Metallurgical & Materials Engineering
IIT Madras
Chennai - 600 036
3. **Price:** - The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges to **Department of Metallurgical & Materials Engineering**.
 - a. The offer/bid should be exclusive of taxes and duties. The percentage of tax & duties should be clearly indicated separately. IIT Madras is eligible for concessional GST and relevant certificate will be issued.
 - b. In case of import supply, the price should be quoted without custom duty. IIT Madras is exempted from levy of IGST on Imports and eligible for concessional custom duty (not exceeding 5%) and the price should be quoted on EX-WORKS and CIP (stating the Cost, Insurance, Freight separately) and indicating the mode of shipment.
4. **Terms of Delivery:** - The item should be supplied to our Departments as per Purchase Order. In case of import supply, the item should be delivered at the cost of the supplier to our Institution. The Installation/Commissioning should be completed as specified in our important conditions.
5. **Catalogue:** Original catalogue (not any photocopy) of the quoted model duly signed must accompany the quotation in the Technical bid
6. **Late offer:** - The offers received after the due date and time will not be considered
7. **Payment:** - No Advance payment will be made for Indigenous purchase. However, 90% Payment against Delivery and 10% after installation are agreed to wherever the installation is involved. In

case of import supplies the payment will be made only through 100% Letter of Credit i.e. (90% payment will be released against shipping documents and 10% after successful installation wherever the installation is being done).

8. **Advance Payment:** - No advance payment is generally admissible. In case of specific percentage of advance payment is required, the Vendor has to submit a Bank Guarantee from a Nationalized Bank of India equal to the amount of advance payment.
9. **On-site Installation:** - The equipment or machinery has to be installed or commissioned by the successful bidder within number of days (as prescribed by PI's) from the date of receipt of the item at site of IIT Madras.
10. **Warranty/Guarantee:** - The offer should clearly specify the warranty or guarantee period for the machinery/equipment.
11. **Validity:** Validity of Quotation not less than 60 days from the due date of tender
12. **Technical Bid Opening:** The technical bid will be opened on **08.04.2020 4:00pm at the Department of Metallurgical & Materials Engineering, IIT Madras** and the **financial bids** of those tenders who are technically qualified will be opened at a **later date under intimation to them**.
13. **Performance Security:-**The successful bidder should submit Performance Security for an amount of 5% of the value of the contract/supply within 21 days from the issue of work/purchase order. The Performance Security should be furnished in the form of an Account Payee DD / FD Receipt from the commercial bank (or) Bank Guarantee from any nationalized bank in India.
14. **Accept /Reject:** IIT Madras reserves the full right to accept / reject any tender at stage without assigning any reason.
15. **Settlement of Disputes:** Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Chennai in Tamil Nadu.
16. **Risk Purchase Clause:** - In the event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from other sources on the total risk of the supplier under risk purchase clause.
17. **Unsolicited offers:** "This notice is being published **for information only** and is not an open invitation to quote in this limited tender. Participation in this tender is by invitation only and is limited to the selected registered suppliers. Unsolicited offers are liable to be ignored. However, suppliers who desire to participate in such tenders in future may apply for registration as per procedure." The Website for Registration of vendors is <http://web.iitm.ac.in/supplier/> and the mail address for queries is "workflow@rt.iitm.ac.in".

Yours sincerely,

**Prof Lakshman Neelakantan,
Department of Metallurgical & Materials Engineering
IIT Madras,
Chennai - 600 036**

Specifications for 50-500 V DC power supply

The system should supply a voltage of 50-500V DC, 60A. The scope should include designing, manufacturing, testing at manufacturer's work, packing, transport and delivery to IIT Madras and installation. Power supply unit is to be used for electrochemical trials and its auxiliary systems. The system should be accurate and stable. It should be based on 6 pulse controlled SCR. The power unit shall be galvanically isolated from input power by a transformer. The power supply unit shall incorporate a soft start to increase the voltage gradually to set voltage.

It should have following specifications:

Input Voltage Range	:415 V \pm 10 % AC 3 Phase, 4 wire
Input Frequency	:50 Hz \pm 3 %
Output Voltage	:50-500 V DC Variable
Output Voltage Current	:60 A Max
Output Power	:30 kW Max at 500V
Operating conditions	:Upto 45 °C
Humidity	:20 to 90 % non-condensing
Enclosure	:IP 20 Corrosion resistant
Inrush current Limiting	:<10 % of full load over 15 sec
Input power factor	:>0.85 at full load
Line Regulation	: \pm 1 % over 415 \pm 5% V
Load Regulation	: \pm 1 % over no load to full load
Residual Ripple	: \pm 1 % rms of rated OP Voltage
Surge Current withstanding capacity	:300 % peak current for 200ms
Indications DC Overload and Overheat	:Mains ON, DC ON, Phase Fail, Maind Under voltage,
Protection	:Mains under U/V O/V, Phase fail/ Reversal, DC OV/UV, Temperature, Short circuit protection

Cooling	:Force air cooling
Environmental Requirement	:Power supply to work in coastal area condition
Display	:Digital read out of current and voltage

Conditions:

1. Quotes are requested by two-bid system Technical bid separate cover & Financial bid separate cover combined in single big cover.
2. A separate compliance certificate/sheet should be attached indicating whether or not proposed system meets above said specifications.
3. This system or system with similar or better specification should have been supplied to at least 10 customers in India (including CFTI's and National Research Labs) and supported by service at least for 10 years. Demo should be arranged, if required.
4. Submit the list of places (in India) to which the system is supplied along with PO of such supply.
5. Minimum of 1.5 years warranty.
6. Tenderer, shall take up and provide support including supply of spares at least for 10 years after warranty.
7. Supplier shall take up commissioning and installation at IIT Madras.
8. Schematic drawings to be provided along with detailed instruction manual and technical write up for preventive and scheduled maintenance.