

Sri Sivasubramaniya Nadar College of Engineering

(AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

Chennai -603 110

Rajiv Gandhi Salai, OMR Road, Kalavakkam – 603 110, Kanchipuram District, Tamilnadu, India.

Ref: Tender published in “Times of India (All Editions)” dated 09-01-2022 and “Dinamani (Tamilnadu Edition)” dated 09-01-2022

(Project Code: DST/TMD/CERI/RES/2020/7(G) dated 31/12/2020)

Under

“Design and development of 800 Kg multicrystalline silicon mc-Si directional solidification furnace and slicing machines for making commercial size mc-Si wafers”

DST, Govt of India

Notice Inviting Quotations

Sealed quotations are invited from *bonafide* suppliers for supply of the following items.

Items

- 1. Fixed abrasive wire saw – Components required to fabricate fixed abrasive wire saw**
- 2. DG Set**
- 3. UPS**
- 4. Silicon Feed stock**

Bidding documents may be downloaded from the website (www.ssn.edu.in) and bidders can submit quotations as per instructions in the document.

Last date of submission of bid is 21 days after publications. up to **3.00 pm**.

Dean (Research)

(A. Code)

SECTION-I: General Conditions and Important Instructions for Bidders

1. Bidders are to submit the original tender documents with technical specifications and price details in sealed envelope to **The Principal, Sri Sivasubramaniya Nadar College of Engineering (SSNCE), Kalavakkam – 603 110, Chennai, Tamilnadu.**

2. Bidders are to submit Technical Bid and Price Bid separately in two sealed envelopes.

(i) **PART I: TECHNICAL BID** - giving Detailed Specifications, International Standards, Catalogues, List of users & Technical Details / Operating Parameters, Pre- Installation, Requirements, payment terms, warranty, etc.

(ii) **PART II: PRICE BID** - giving full Prices in Indian Rupees (For items no 1,2,3) for

(a) Main Item/Equipment.

(b) Essential Accessories & Spares.

The contents of the envelope (Technical Bid / Price Bid) should be mentioned on its top. All the sealed envelopes should be placed in a common sealed envelope, superscripted with the Ref. Advertisement No. and date along with the bidder's name and address. Any deviation from the said process will result in disqualification of the particular bidder.

3. Bidders are to submit this tender document in original after accepting the terms and conditions.

4. Preference will be given to reputed indigenous manufacturers having proven track record with service and maintenance capability in Chennai/ India. Vendors are requested to visit the site to evaluate the appropriate costing.

5. Last date of receipt of tender by SSNCE is 21 working days after publications at 3.00 pm. Tenders received late will not be accepted under any circumstances. Tenders will be opened in the office of Dean (Research), SSNCE, Kalavakkam- 603 110, Tamilnadu on a date and time to be notified to the vendor. In case the college remains closed on the said date, tenders will be opened on next working day at 3.10 pm.

6. The Price Bid should clearly mention the price including the following:

- Ex Works Price Packing and Forwarding Charges, if any
- Freight and insurance, up to SSN College of Engineering, Tamilnadu. including loading and unloading charges
- All taxes, duties, levies applicable, in INR

7. The manufacturer selected shall provide Training in operation and application of the Instrument for the R&D work to user Scientists at SSNCE.

8. SSN will apply for GST Concession Certificate from Anna University.

9. The equipments/items are to be supplied at the SSNCE, Kalvakkam, Tamilnadu between 8.30 am and 3.30 pm from Monday to Friday except holidays. The bidders will be responsible for any breakage, damage or defect in the equipment detected subsequently.

10.

For Indian purchase (This clause is applicable only for Indian purchase and not applicable for foreign purchase):

All bills are to be accompanied by Order copies and Challan Receipt. The Order Number is to be noted on both the Challan and the Bill. Payment will be made on submission of Proper Bills, Challans etc, by A/C Payee Cheque and no cash payment will be made under any circumstances.

11. All payments are subjected to statutory deductions as and when applicable.

12. The Technical Bid must be accompanied by Earnest Money Deposition (EMD) of

- Rs. 25,000/- (Twenty Five Thousand only)

in one of the following forms:

- 1) Bank guarantee issued by a bank located in India, acceptable to SSNCE.
- 2) Demand Draft drawn in favour of “Principal, SSNCE, Kalavakkam, Tamilnadu”, payable at Chennai or through RTGS to Bank Account No. 158100050070022, IFSc Code: TMBL0000158, MICR Code600060010, in the Tamilnad Mercantile Bank Ltd., Thiruvanmiyur No.3, Thiruvalluvar Salai, Thiruvanmiyur, Chennai”

(a) EMD is not required to be submitted by those Bidders who are registered as Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Ministry of Micro, Small and Medium Enterprises (MSME). Registration copy of the same issued by MSME shall be provided along with the bid. Bidders who are exempted from submitting EMD have to provide Bid Security Declaration accepting that if they withdraw or modify their bids during period of validity etc., they will be suspended for the time specified in the tender document.

b) Tender has to be kept valid for acceptance for a period of 6 months without any modifications in its terms and conditions. Failure to comply with the same, the authority may forfeit the Earnest Money Deposit.

c) Earnest Money Deposit of the successful bidders will be converted to Security Deposit.

d) Earnest Money Deposit / Security Deposit will be refunded after successful completion of supply or after expiry of Guarantee period. No interest is payable on Earnest Money Deposit/Security Deposit. EMD will be refunded to the unsuccessful bidders with in 21 days from the bid opening.

e) Bidders shall submit self-addressed envelope affixing postal stamp of Rs.25/- for release of Earnest Money Deposit.

13. Documents to be submitted with the tender:

- Tender Documents, General Conditions and Important Instruction in original duly signed by the Proprietor/ Partner/ Director of the company as a token of acceptance of Terms and Conditions of Tender.
- Latest Income Tax, Sales Tax, Professional Tax clearance certificates and copy of valid Trade License.
- Technical Bid, Price Bid (Priced) separately in two sealed envelopes according to specifications.
- Demand Draft/ Pay Order/ Bank guarantee for Earnest Money Deposit.

14. For all items the warranty/ guarantee period should be at least 36 months from the date of commissioning. Warranty/ Guarantee for all the items supplied will be on 'all comprehensive' basis, i.e., including repairs, replacements, maintenance etc.

Calibration / Test Certificate must accompany along with the equipment.

Supply of equipment shall include installation, commissioning and demonstration.

15. The vendors quoting against this tender should have a proper track record internationally and should have supplied similar instruments to National institute of repute (Document to be attached)

16. SSN College of Engineering, Kalavakkam, Chennai, reserves the right to accept/reject all or any of the tenders without assigning any reason whatsoever.

I/We accept the above terms and conditions. Signature of the Bidders with date and seal

SECTION-II: Technical Specifications

Technical Specifications

1) Fixed abrasive wire saw – Components required to fabricate fixed abrasive wire saw

- Material to cut : Silicon ingot
- Capacity to hold the job work : 1500 Kg
- Accurate length index device, drive by servomotor, PLC and ball screw.
- Two nos. cutter table suitable for gluing the brick on the table.
- Suitable SS enclosure for servo system with water prevention bellows
- Cutter head feed system via servo motor and ball screw to accommodate 1200 mm × 1200 mm × 500 mm bricks.
- Water forced coolant system during cutting with filtering system.
- Infinitely variable speed controlled by inverter.
- Automatic loading table to suit the brick.
- Diamond wire: Spare wire sufficient for three times replacement
- Transmission belt × 1 set spare.
- Cutting mist oil 15 litres spare.
- One set of tools and tool box.
- Friendly and easy to operate touch screen.

2) DG set (or Diesel Generator)

- Genset Rating (KVA) : 500
- Genset Rating (Kw) : 400
- Phase/ Voltage (V) : 3/ 415
- Power factor : 0.8
- Frequency (Hz & RPM) : 50 & 1500
- Noise level : < 75 dBA
- Dry type air cleaner
- Exhaust silencer suitable for canopy
- Expansion bellow
- Lube oil cooler and filter
- Fuel Filters
- Radiator with pusher type fan and mounting
- In-line mono block fuel injection pump
- Electronic governor and fuel feed pump
- Flywheel with starter ring and bell housing suitable for close coupling
- 24 Volt electric starter motor
- Battery charging alternator
- Microprocessor based KG745 Controller mounted on the Controller Panel.
- Protection System for
 - Low lube oil pressure
 - High water temperature
- Alternator

3) UPS (or Uninterrupted Power supply)

- Rating : 400KVA
- Configuration : Standalone
- Backup time : 20 minutes
- UPS operating temperature : 0 to 40 ° C
- Relative Humidity : 90%
- Ambient Noise : <72 dB @ 1m
- Nominal input voltage : 380/400/415V (Selectable)
- Input voltage range : ± 20%
- Input voltage frequency : 50 Hz
- Wire Configuration : 3phase 4 wire + ground
- Inverter type : 3 Level IGBT
- Inverter output waveform : True Sine Wave
- Inverter voltage harmonic : <1% for linear loads, <2% for non-linear loads
- Inverter output P.F. : 0.9
- Inverter efficiency : >95%
- Battery Charger/Rectifier type : 3 Level IGBT
- Battery Charging Type/Method : Constant Current Constant Voltage (CCCV)
- Battery protection : Fuse / DC MCCB
- Battery Type : Sealed Maintenance Free (SMF)
- Battery cell voltage : 12 V
- Compatible battery type : VRLA, Ni-Cd, Tubular battery and Li-ion
- Static By-Pass Switch : SCR-based, Bi-Directional
- Inverter overload Capacity : 125% for 10 minutes
- Operation modes : Normal, By-Pass, Battery(or)Back-up
- Manual By-Pass : Required

4) Silicon Feed stock:

- PV Grade chunks and granules for multicrystalline silicon growth.
- Purity: > =99.9999999