Tender Invitation

Sub: Repair of Argon gas leak, refurbishment of water-cooling system, calibration of high-pressure measuring instruments and in-situ servicing of the Hot Isostatic press unit and its subsystems at PMD, BARC, Vashi Complex - 01 Job

Dear Sir,

For & On behalf of the President of India, quotation is invited by the undersigned for following fabrication / repair work to be carried out at Powder Metallurgy Division, Vashi Complex, Navi Mumbai-400 703. The scope of work is detailed below.

Repair of Argon gas leak, refurbishment of water-cooling system, calibration of high-pressure measuring instruments and in-situ servicing of the Hot Isostatic press unit and its subsystems at PMD, BARC, Vashi Complex. As per enclosed annexure - 01 Job

The quotation in sealed cover should be supercribed as "Repair and servicing of Hot Isostatic press unit and its subsystems at PMD, BARC, Vashi Complex “ with Tender Number and should be addressed to the following person and should reach him/her by Speed Post/Registered Post through Indian Postal Service only on or before the date and time mentioned below.

Trupti Mohanty, SO(F)/PMD
Powder Metallurgy Division, BARC, Vashi Complex,
Navi Mumbai 400 703

On or before 31st August, 2020 at 15.00 hrs.
Instructions to the tenderer:

The tenderer should submit signed quotation and write in words as well as figures, the rate(s) quoted by him. and PAN No, GST No mentioned on the tender. All corrections must be attested by the dated initials of the tenderer.

The tenderer may note that in case the work is awarded to him, he has to produce police verification certificate for the employees to be deputed for the work inside the BARC/BRIT complex, Navi Mumbai.

Income-Tax and surcharge on income-tax as applicable shall be deducted from the bill. The payment for the work done shall be paid by our Accounts Division only on satisfactory completion of the work within one month.

The time allowed for completion of the job is 90 days. The same shall be reckoned from the date of issue of the work order.

The acceptance of the tender rests upon the undersigned with a right to reject the tender without assigning any reason.

Thanking you,

Yours Faithfully

Trupti Mohanty
SO/F, PMD, BARC

[Signature]
Annexure

Repair of Argon gas leak, refurbishment of water-cooling system, calibration of high-pressure measuring instruments and in-situ servicing of the Hot Isostatic press unit and its subsystems at PMD, BARC, Vashi Complex. - 01 Job

Description and scope of work

Hot Isostatic Process available at PMD, BARC has maximum working Pressure: 200 MPa (2000 bar), hot zone working Dimensions: 150 mm ID x 300 mm Ht., Maximum Working Temperature: 1450 deg C with Molybdenum Furnace and 2000 deg C with Graphite Furnace.

Scope of work

1. Identification and repair of Argon Gas leak from the main Pressure vessel. Supply of suitable grades different sizes high-pressure seals required for all feedthroughs present at the top and bottom flanges of the pressure vessel. Replacing the seals across all feedthroughs such as coolant curtains, Thermocouple feedthroughs, Power cable feedthroughs, Vacuum and Argon Gas supply feedthroughs. Replacing top and bottom flange ring seals. Suitable modification in the system if required and ensure no gas leak from the system and maintain required vacuum.

2. Refurbishment of HIP unit water cooling system: Supply of suitable size flexible hoses and substituting the cooling jacket inlet outlet water pipelines. Replacing aged hose of bottom flange coolant line with flexible hoses. Supply and installation of suitable size pressure gauges and flow sensors. Carrying out necessary changes in the overhead Emergency water cooling system to ensure sufficient water pressure and flow during power supply failure condition. Cleaning and painting of water coolant lines.

3. Supply and Replacement of Pneumatic connectors and faulty FRL (Filter Regulator Lubricator) unit and solenoid valve installed at pneumatic circuit required for operation of electro-pneumatic high-pressure operating valves.

4. Calibration of High-pressure Transmitter (01 No) and Pressure Relief Valve (01 No) and pressure gauge (01 No) operating at 2000 bar. Calibration of medium pressure transmitters (02 Nos), relief valves (02 Nos) and gauges (02 Nos) operating at 200 bar and a vacuum Gauge (01 No) operating at 300 microbar. Calibration Certificate must be submitted.

5. Complete Servicing of HIP unit and its entire subsystems such as Pneumatic system, Vacuum system, Hydraulic system, High Pressure Compressor unit, Water cooling System, Argon gas delivery system, Electrical power supply system consisting of Transformer units, Control panel, PLC, Relay Modules, Thyristor controllers, SCADA unit and UPS System as per the manufacturer’s manual. Materials required for the servicing has to be arranged by the supplier.
6. Testing of the entire system operation and complete hot iso-static pressing cycle (02 nos) at 1600 bar and 1600 degC with holding time 3 hrs using graphite furnace.

Important Notes:

1. The vendor must have prior experience (at least 05 years) on design, development and servicing of high temperature and high-pressure Hot Isostatic pressing systems and should submit work experience and related work completion certificates on demand.
2. Acceptance Criteria: The firm has to successfully demonstrate 02 complete HIP cycle operation at 1600 bar and 1600 Deg C and simulate the power failure condition during high temperature operation.
3. All fittings related materials and materials required for servicing have to be arranged by the supplier.
4. All the fitting related works will be carried out at PMD, Vashi complex.
5. Party may also note that the staff which will be employed for execution of work at site should have valid police verification certificate (PVC).
6. A warrantee certificate for a period of one year should be submitted on completion of the work.
7. Party must submit a declaration that none of the workers engaged by him is from containment zone or has the symptoms of COVID-19.
8. Payment shall be made only on satisfactorily completion of work and on submission of bills (in triplicate) addressed to Accounts Officer, BARC, Trombay sent to the undersigned
9. The work shall be completed within 90 days after issue of Work order.
10. No free issue material will be provided.
11. For any query party may contact Trupti Mohanty (off. 022-27887163, Email-tmohanty@barc.gov.in) or Dr Tarasankar Mahata (off.022-27887162, Email-tsmahata@barc.gov.in)