

Request for Quotation (RFQ) for the supply of a de-binding and sintering furnace to the CSIR

RFQ No 9385/18/08/2022

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| Date of issue | Thursday, 04 August 2022 |
| Closing Date and Time | Thursday, 18, August 2022 at 16:30 |
| Contact details | For submission of quotations or any other enquiries: tender@csir.co.za Mail size is limited to 25MB, if the document exceeds this limit please send multiple mails. Cloud submissions will not be accepted |

1 INVITATION FOR QUOTATION

Quotations are hereby invited for the supply of a de-binding and sintering furnace to the CSIR.

2 QUOTATION REQUIREMENTS

De-binding and sintering furnace technical specifications:

Quotes that partially fulfil the requirements will still be considered based on the specific functions or specifications provided.

| Technical Specifications | User Requirements |
|-------------------------------------|---|
| Process | De-binding and sintering |
| Furnace type | Horizontal front feeding – De-binding and Sintering |
| Retort size | Min. 200 x 200 x 400 mm ((HxWxD) (with Load trays); |
| Retort material | Molybdenum |
| Retort operation | De-binding and Sintering |
| Maximum working temperature | 1500 °C |
| Binders | Should work with any binder; |
| Binder content | <10 wt.% thermal de-binding |
| Binder management | Binder trap system |
| Heating elements | Molybdenum or tungsten |
| Heating time to maximum temperature | <60 minutes (from room temperature |

| | |
|---------------------------------------|--|
| Atmosphere | Partial pressures (de-binding); Vacuum (sintering) |
| Atmosphere | Argon, Nitrogen; In-built safety systems to allow for the different gases |
| Gas system | Integrated gas management system: <ul style="list-style-type: none"> - Controlled gas flow - Gas-tight |
| De-binding pump | 100% oil free |
| Ultimate vacuum level | $<10^{-2}$ mbar |
| Pumping time to ultimate vacuum level | <30 minutes |
| Temperature sensitivity | ± 1 °C |
| Temperature uniformity | ± 10 °C |
| Cooling method | Controlled cooling |
| Charging mass | Min. 50 kg |
| Processed metals | Ferrous and Non-ferrous metals (including titanium and its alloys) |
| Furnace operation | Automatic control |
| Manufacturing period | <9 months |
| Track record | Demonstrable track record in manufacturing of MIM de-binding and sintering furnaces |
| Safety measures | <ul style="list-style-type: none"> - Binder resistance vacuum pump - Gas purifier - Proper control and management of the extracted process gas and binder products from the process chamber - Nitrogen anti-explosion system - Communications (Ethernet connection) - 12 months warranty - Maintenance contract |
| Service | In built counter to remind users when maintenance of furnace components is due |
| Extras/Options | |
| Atmosphere | Two (2) gas inlets – Argon + Nitrogen |
| Vacuum leak rate | $<5E-2$ mbar/s |
| Cooling method | Water cooling systems (own Chiller) |
| Safety measures | <ul style="list-style-type: none"> - Gas pre-heater - Removable retort rack - Gas purifier with oxygen analyzer |

3 EVALUATION CRITERIA

- 3.1 Selection of suppliers will be based on the 80/20 preference point system.
- 3.2 Provide valid original or certified copy of the B-BBEE Certificate issued by an accredited verification agency and bearing a SANAS logo; or
- Valid sworn affidavits made on DTIC designed templates; or
 - DTIC issued sworn affidavit; or
 - CIPC issued B-BBEE certificate.

The above requirement is applicable to South African service providers/bidders only.

- 3.3 No order will be issued or no contract will be signed without a valid CSD number.

4 ELIMINATION CRITERIA

- Submission after the deadline;
- Proposals submitted at the incorrect email address
- Bidders that are registered on the National Treasury Register of Tender Defaulters
- Incomplete proposal submission
- National Treasury Restricted suppliers
- Failure to submit fully completed and signed SBD 4 and SBD 1.
- Failure to adhere to furnace technical specifications (Section 2)
- Failure to indicate lead times
- Failure to provide track record – at least 3 contactable references of delivered de-binding and sintering furnaces to clients

5 PRICING QUOTATION

- 5.1 Price needs to be provided in South African Rand (excl. VAT), with details on price elements that are subject to escalation and exchange rate fluctuations clearly indicated.
- 5.2 Price should include additional cost elements such as freight, insurance until acceptance, taxes, and duties where applicable, etc.
- 5.3 Payment will be according to the CSIR Payment Terms and Conditions.

6 OTHER TERMS AND CONDITIONS

- 6.1 The supplier shall under no circumstances offer, promise, or make any gift, payment, loan, reward, inducement, benefit or other advantage, which may be construed as

being made to solicit any favour, to any CSIR employee or its representatives. Such an act shall constitute a material breach of the Agreement and the CSIR shall be entitled to terminate the Agreement forthwith, without prejudice to any of its rights.

- 6.2 The supplier shall deliver, installation, and commission
- 6.3 The supplier shall provide necessary training to CSIR personnel
- 6.4 The supplier shall provide aftersales support
- 6.5 The supplier shall offer warranty and guarantee terms and conditions
- 6.6 The supplier shall make available safety provisions, standards and certifications
- 6.7 The supplier shall provide an operating manual in English
- 6.8 A minimum validity period of 90 days will apply to all quotations except where indicated differently on the quote.

7 CSIR RESERVES THE RIGHT TO

- 7.1 Extend the closing date;
- 7.2 Verify any information contained in a submission;
- 7.3 Request documentary proof regarding any tendering issue;
- 7.4 Give preference to locally manufactured goods;
- 7.5 Appoint one or more service providers, separately or jointly (whether or not they submitted a joint proposal);
- 7.6 Award this RFQ as a whole or in part;
- 7.7 Cancel or withdraw this RFQ as a whole or in part.

8 No goods and/or services should be delivered to the CSIR without an official CSIR Purchase order. CSIR purchase order number must be quoted on the invoice. Invoices without CSIR purchase order numbers will be returned to supplier.

9 Note: This is not a Purchase Order.

DECLARATION BY TENDERER

Only tenderers who completed the declaration below will be considered for evaluation.

RFQ No: 9385/18/08/2022

I hereby undertake to render services described in the attached tendering documents to CSIR in accordance with the requirements and task directives / quotation specifications stipulated in RFQ 9385/18/08/2022 at the price/s quoted. My offer/s remains binding upon me and open for acceptance by the CSIR during the validity period indicated and calculated from the closing date of the quotation.

I confirm that I am satisfied with regards to the correctness and validity of my quotation; that the price(s) and rate(s) quoted cover all the services specified in the quotation documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this quotation as the principal liable for the due fulfilment of this quotation.

I declare that I have no participation in any collusive practices with any tenderer or any other person regarding this or any other quotation.

I accept that the CSIR may take appropriate actions, deemed necessary, should there be a conflict of interest or if this declaration proves to be false.

I confirm that I am duly authorised to sign this quotation.

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

| WITNESSES | |
|-------------|-------|
| 1 | |
| 2 | |
| DATE: | |