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|---|---|
| **Kimden:** | Commercial |
| **Kime:** | ŞENOL KESKİN; |
| **Bilgi:** | dcm@indembassy.org.tr; fspi@indembassy.org.tr; warlu62@ncaor.gov.in |
| **Konu:** | TENDER ON SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM |
| **Tarih:** | 27 Şubat 2015 Cuma 14:12:43 |
| **Ekler:** | LAB-2223.pdf |

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**From: Embassy of India, Ankara**

**Subject: TENDER ON SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM**

This is to announce the Tender Notice by National Centre for Antarctic & Ocean Research (NCAOR) for "The Procurement of Supply, Installation, Comissioning & Training of Laser Ablation – Inductively Coupled Plasma – Optical Emission Spectometer (LA-ICP-OES) System.

Tender documents and detailed information are available through the attachment.

Interested suppliers may also visit the below-mentioned websites to download the tender documents and submit quotations.

www.ncaor.gov.in

http://eprocure.gov.in

Best regards,

Mr. Aras Güven
Commercial Assistant
Embassy of India
Ankara, Turkey.
Tel: +90-312-4382195-96
Fax: +90-312-4403429

# *TENDER DOCUMENT FOR*

# *SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM*


*NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH*
*(Ministry of Earth Sciences, Govt. Of India)*
*Headland Sada, Vasco-da-Gama*
*GOA -403 804, INDIA.*
*Tel: 91- (0) 832 2525571 Telefax: 91- (0) 832 2525573*
*Email: warlu62@ncaor.gov.in*
*Website: www.ncaor.gov.in*

**NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH**
**(*Ministry of Earth Sciences, Govt. Of India*),**
**HEADLAND SADA, VASCO-DA-GAMA,**
**GOA - 403 804**

**TENDER NO. NCAOR/LAB-2223/1/PT-50**
**Supply, Installation & Commissioning of Laser Ablation - Inductively Coupled Plasma - Optical Emission Spectrometer (LA-ICP-OES) System**

| | | |
|---|---|---|
| 1. | **Supply, Installation & Commissioning of Laser Ablation - Inductively Coupled Plasma - Optical Emission Spectrometer (LA-ICP-OES) System.**<br>**Specifications**<br>**Quantity** | <br><br>As per Annexure-I<br>01 No. |
| 2. | General Terms and Conditions | As per Annexure II |
| 3. | Cost of Tender Documents (In Person) | US $ 50.00 Rs. 2000.00 |
| 4. | Cost of Tender Documents (By Post) | US $ 65.00 Rs. 2050.00 |
| 5. | EMD | **Tender documents can be downloaded by tenderers from NCAOR website. In case a tenderer is using the documents and forms downloaded from the website, the cost of tender documents shall be sent in the form of Bank Draft in a separate envelope along with the tender.**<br><br>**A) Foreign Bidders** shall submit **EMD** along with their tender, **in the form of a bank guarantee only** for a sum of US $ 1,750.00 (US$ One Thousand Seven Hundred Fifty only)<br><br>**B) Indian Bidders** shall submit **EMD** along with their tender, either by DD drawn in favor of NCAOR, for a sum of Rs. 1,00,000/-(Rupees One Lakh only) payable at Vasco-da-Gama only.<br>**Or**<br>**In the form of a bank guarantee** for a sum of Rs. 1,00,000/-(Rupees One Lakh only) |
| 6. | Last Date and time for issue of tender documents | **MONDAY**<br>**02.03.2015**<br>1600Hrs (IST) |
| 7. | Last Date and time for submission of sealed quotations | **TUESDAY**<br>**03.03.2015**<br>1700Hrs (IST) |
| 8. | Date and time of tender opening | **WEDNESDAY**<br>**04.03.2015**<br>1000Hrs (IST) |

# Technical Specifications for the Laser Ablation - Inductively Coupled Plasma - Optical Emission Spectrometer (LA-ICP-OES) System

**GENERAL SPECIFICATIONS:**

**1. Basic Design:**

i. The LA-ICP-OES system should be a space saving, compact bench-top model that can fit into allocated space of 10'x 6' lab-space with all the sub-systems and accessories.
ii. The LA-ICP-OES should be true simultaneous in all aspects of measurements including simultaneous measurements of all analyte wavelengths, internal standard and background.
iii. Corrosion-resistant exteriors.
iv. Open architecture design for sample introduction system for ease of operation in switching between Laser Ablation Microprobe (LAM).

**2. Sample Introduction System:**

i. Sample Introduction System should be capable of easy switching between Liquid system and Laser Ablation Microprobe with the following additional capabilities
ii. **Nebulizers:**
    a. Standard quartz glass nebulizer. It must also include a PFA nebulizer and spray chamber kit as standard having high resistance to HF acid.
    b. Additional supply of Ultrasonic nebulizer
iii. **Spray Chambers:** Standard quartz glass type cyclonic type suitable for different kinds of samples.
iv. **Peristaltic Pump:** At least 3 Channels with precise computer controlled pumping of the sample, internal standards and spray chamber drain.
v. **Injectors:** Quartz and PFA injectors suitable for HF medium and other sample environments.

**3. Plasma Ion Source:**

i. **Torch:** One glass/quartz torch with small diameter for efficient matrix decomposition and sample ionization.
ii. **Plasma Gas Control:** Should have a minimum of **four Active Mass Flow Controllers** (AMFC) for Control Plasma, Auxiliary, Nebulizer and Carrier Gases, which will be coupled to the Laser Ablation Microprobe.
iii. **Computer control of the torch:**
(a) Torch movement should allow for complete computer-control and auto tunable in x-y-z directions with independent movements in the three directions.

(b) Provision for Auto-alignment of the torch after routine maintenance with a reproducibility better than 0.1 mm in x-y-z directions.

(c) Option of "Manual override" provision for the above mentioned movements should also be available.

**4. Plasma Radio Frequency Generator:**

i. RF Generator Frequency: All solid state, digitally driven 27 MHz or 40 MHz

ii. RF Power: 750 to 1300 Watts or greater.

**5. Torch Configuration:** Dual View (both Axial and Radial)

**6. Detection Limit:**

i. < 0.015 μg/l for the elements Mg, Ca, Sr, Be, Li

ii. < 0.15 μg/l for the elements Mn, Al, Zn, Ti

iii. ≤ 1 μg/l the elements Mo, Fe, V, Ni, Co, Cu, U

**7. Ion Detector Assembly**

i. **Type:** Charge Injection Device or Charge Coupled Device

ii. **Spectral Resolution:** 0.007 nm at 200 nm or lesser

iii. **Spectral Range:** 166 nm to 782 nm or greater

iv. **Polychromator:** Echelle-based

**8. Laser Ablation Microprobe:**

i. **Laser Source: Nd:YAG.** Internally homogenized for a flat top beam profile, optically attenuated 213 nm laser source having short nanosecond pulse length (<4 ns) to ensure a high irradiance at the sample surface. The frequency should be between 1 and 20 Hz.

ii. **Beam Delivery System:** Aperture Imaged beam delivery system yielding in excess of 25 J $cm^{-2}$ of energy density at the sample surface. Internal energy monitor displaying energy and energy density at the sample surface. Optical attenuation to yield energy stability of <2% RSD.

iii. **Autoswitching** such that true aperture imaging to enable spot sizes between 4 and 110 micron without change in fluence and in general up to 300 microns.

iv. **Viewing System:** High resolution video microscope with secondary large field of view camera navigation system; this should allow <1 micron optical resolution.

v. **Lighting System:** High intensity, LED based, transmitted, ring and coaxial light source (independently operated). Software controlled polarizers.

vi. **Ablation Chamber and Stages:** Must be a two-volume cell. 100mm high performance sample chamber for analysis and accommodation of large and small sample types. Featuring larger format 100mm high accuracy, high speed computer controlled movement of stage.

vii. **Gas Handling:** Internal gas control including integrated Mass Flow Controller, and capability to add an extra MFC for Helium addition.

viii. **PC and Software:** Integrated control PC and software featuring autofocus, sample image import and bidirectional triggering capability.

ix. Installation and Training to be included

**9. Computer System and Software for System Control, Data Acquisition and Analysis.**

(i) Branded computer (DELL/HP/Samsung) with at least Intel Core i5 Processor with a minimum of 3.2 GHz Processor speed, 8 GB RAM, 500 GB HDD, CD/DVD RW with a separate graphics card that can support multiple displays with preloaded Windows OS.

(ii) Another identical Notebook PC and a Colour LaserJet Printer for off-line data processing and printing analytical data sheets/results should be supplied.

(iii) The instrument system software shall be based on the Windows operating system. The software shall provide full control of all instrument functions including plasma ignition, gas flows, viewing position, and monitoring of safety interlocks.

**10. Operational Requirements:**

i. System should be capable of working with the following power and environmental requirements:

a. Single Phase, 220-240 V, 50 $\pm$ 5 Hz power supply.

b. Temperatures in the range of 18 to 30 degrees Centigrade.

c. Operational Humidity (non-condensing) of up to 80%.

ii. Separate quote for a **20 KVA Uninterrupted Power Supply (UPS)** system with 60 min backup, of a standard make with sealed batteries, may be given, as it is part of operational requirement.

**11. Accessories**

i. **Autosampler** with a capacity of at least 150 vials

ii. Sample Introduction system to enhance the sensitivity by 6-10 times

iii. Small volume spray chamber

iv. Tuning solution 125 ml (10 Nos.)

v. Multi-element standards

a. 23 multi-element standard of 1000 ppm (2 nos.)

b. PGE multi-element standard of 100 ppm (2 nos.)

c. REE standard of 1000 ppm (2 nos.)

vi. NIST SRM 915a, NIST SRM 987, and Mg metal rod (99.99 %) standard (2 nos. each)

vii. NIST610 and NIST612 glass Standard Reference Materials (2 nos. each) should be quoted as standard.

**ADDITIONAL REQUIREMENTS**

**12. Onsite testing and performance demonstration of the following upon installation:**

i. Demonstration of short term and long term stability for total wavelength range for two hour measurements in the standard operation mode of the instrument. Standard solutions should be supplied by the vendor towards this.

ii. Demonstration of analysis with laser ablation for total wavelength range in standard operation mode.

**13. Installation Utilities**: Vendor should supply factory fabricated **chiller re-circulator** of appropriate capacity along with the system. The vendor should also quote **Argon and Helium gas regulators, gas purifications system, two Argon gas cylinder manifold, four Argon gas cylinders, one Helium cylinder and exhaust ducting for plasma**.

**14. Manuals and Diagnostic tools:** Full service manuals along with diagnostic tools including interface cards and software, plus any specialized & general mechanical tools (Allen keys, wrenches etc.) required for instrument servicing or repair. **The quotation should include a clear statement of all site requirements for installation and operation of the equipment specified.**

**15. Spares and consumables:** Quotation for spares and consumables for 3 years for each instrument and preparation device should be included i.e., the supplier should separately quote for all essential spares and consumable kits which are not covered under warranty for the basic instrument and peripherals, essential for trouble-free performance for at least 3 years. The quotation should include an indication of **all consumables required per full batch of samples**.

**16. Warranty:** A 2 year (from the commissioning of the instrument) comprehensive warranty shall be provided and shall include replacement of parts and maintenance calls and the Engineer's visit to NCAOR during emergency.

**17. Training:** During the installation of the LA-ICP-OES, appropriate training in handling of the instrument shall be provided to the users. After the installation, training to be provided on the operation & maintenance of the instrument to a group of NCAOR personnel by the factory engineer for about two weeks.

# Technical Compliance Statement for the Laser Ablation - Inductively Coupled Plasma - Optical Emission Spectrometer (LA-ICP-OES) System

| SR. NO. | TECHNICAL COMPLIANCE STATEMENT FOR SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM | COMPLIED/ NOT COMPLIED | EXTRA FEATURES |
|---|---|---|---|
| | **1. Basic Design:**<br>i. The LA-ICP-OES system should be a space saving, compact bench-top model that can fit into allocated space of 10'x 6' lab-space with all the sub-systems and accessories.<br>ii. The LA-ICP-OES should be true simultaneous in all aspects of measurements including simultaneous measurements of all analyte wavelengths, internal standard and background.<br>iii. Corrosion-resistant exteriors.<br>iv. Open architecture design for sample introduction system for ease of operation in switching between Laser Ablation Microprobe (LAM). | | |
| | **2. Sample Introduction System:**<br>i. Sample Introduction System should be capable of easy switching between Liquid system and Laser Ablation Microprobe with the following additional capabilities<br>ii. **Nebulizers:**<br>a. Standard quartz glass nebulizer. It must also include a PFA nebulizer and spray chamber kit as standard having high resistance to HF acid.<br>b. Additional supply of Ultrasonic nebulizer<br>iii. **Spray Chambers:** Standard quartz glass type cyclonic type suitable for different kinds of samples.<br>iv. **Peristaltic Pump:** At least 3 Channels with precise computer controlled pumping of the sample, internal standards and spray chamber drain.<br>v. **Injectors:** Quartz and PFA injectors suitable for HF medium and other sample environments. | | |

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|---|---|---|---|
| | **3. Plasma Ion Source:**<br>i. **Torch:** One glass/quartz torch with small diameter for efficient matrix decomposition and sample ionization.<br>ii. **Plasma Gas Control:** Should have a minimum of **four Active Mass Flow Controllers** (AMFC) for Control Plasma, Auxiliary, Nebulizer and Carrier Gases, which will be coupled to the Laser Ablation Microprobe.<br>iii. **Computer control of the torch:**<br>(a) Torch movement should allow for complete computer-control and auto tunable in x-y-z directions with independent movements in the three directions.<br>(b) Provision for Auto-alignment of the torch after routine maintenance with a reproducibility better than 0.1 mm in x-y-z directions.<br>(c) Option of "Manual override" provision for the above mentioned movements should also be available. | | |
| | **4. Plasma Radio Frequency Generator:**<br>i. RF Generator Frequency: All solid state, digitally driven 27 MHz or 40 MHz<br>ii. RF Power: 750 to 1300 Watts or greater. | | |
| | **5. Torch Configuration:** Dual View (both Axial and Radial) | | |
| | **6. Detection Limit:**<br>i. < 0.015 μg/l for the elements Mg, Ca, Sr, Be, Li<br>ii. < 0.15 μg/l for the elements Mn, Al, Zn, Ti<br>iii. ≤ 1 μg/l the elements Mo, Fe, V, Ni, Co, Cu, U | | |
| | **7. Ion Detector Assembly**<br>**i. Type:** Charge Injection Device or Charge Coupled Device<br>**ii. Spectral Resolution:** 0.007 nm at 200 nm or lesser<br>**iii. Spectral Range:** 166 nm to 782 nm or greater<br>**iv. Polychromator:** Echelle-based | | |

| | | | |
|---|---|---|---|
| | **8. Laser Ablation Microprobe:**<br>**i. Laser Source: Nd:YAG.** Internally homogenized for a flat top beam profile, optically attenuated 213 nm laser source having short nanosecond pulse length (<4 ns) to ensure a high irradiance at the sample surface. The frequency should be between 1 and 20 Hz.<br>**ii. Beam Delivery System:** Aperture Imaged beam delivery system yielding in excess of 25 J $cm^{-2}$ of energy density at the sample surface. Internal energy monitor displaying energy and energy density at the sample surface. Optical attenuation to yield energy stability of <2% RSD.<br>**iii. Autoswitching** such that true aperture imaging to enable spot sizes between 4 and 110 micron without change in fluence and in general up to 300 microns.<br>**iv. Viewing System:** High resolution video microscope with secondary large field of view camera navigation system; this should allow <1 micron optical resolution.<br>**v. Lighting System:** High intensity, LED based, transmitted, ring and coaxial light source (independently operated). Software controlled polarizers.<br>**vi. Ablation Chamber and Stages:** Must be a two-volume cell. 100mm high performance sample chamber for analysis and accommodation of large and small sample types. Featuring larger format 100mm high accuracy, high speed computer controlled movement of stage.<br>**vii. Gas Handling:** Internal gas control including integrated Mass Flow Controller, and capability to add an extra MFC for Helium addition.<br>**viii. PC and Software:** Integrated control PC and software featuring autofocus, sample image import and bidirectional triggering capability.<br>**ix.** Installation and Training to be included | | |
| | **9. Computer System and Software for System Control, Data Acquisition and Analysis.**<br>(i) Branded computer (DELL/HP/Samsung) with at least Intel Core i5 Processor with a minimum of 3.2 GHz Processor speed, 8 GB RAM, 500 GB HDD, CD/DVD RW with a separate graphics card that can support multiple displays with preloaded Windows OS.<br>(ii) Another identical Notebook PC and a Colour LaserJet Printer for off-line data processing and printing analytical data sheets/results should be supplied. | | |

| | | | |
|---|---|---|---|
| | (iii) The instrument system software shall be based on the Windows operating system. The software shall provide full control of all instrument functions including plasma ignition, gas flows, viewing position, and monitoring of safety interlocks. | | |
| | 10. **Operational Requirements:**<br>i. System should be capable of working with the following power and environmental requirements:<br>a. Single Phase, 220-240 V, 50 ± 5 Hz power supply.<br>b. Temperatures in the range of 18 to 30 degrees Centigrade.<br>c. Operational Humidity (non-condensing) of up to 80%.<br>ii. Separate quote for a **20 KVA Uninterrupted Power Supply (UPS)** system with 60 min backup, of a standard make with sealed batteries, may be given, as it is part of operational requirement. | | |
| | 11. **Accessories**<br>**i. Autosampler** with a capacity of at least 150 vials<br>**ii.** Sample Introduction system to enhance the sensitivity by 6-10 times<br>**iii.** Small volume spray chamber<br>**iv.** Tuning solution 125 ml (10 Nos.)<br>**v.** Multi-element standards<br>a. 23 multi-element standard of 1000 ppm (2 nos.)<br>b. PGE multi-element standard of 100 ppm (2 nos.)<br>c. REE standard of 1000 ppm (2 nos.)<br>**vi.** NIST SRM 915a, NIST SRM 987, and Mg metal rod (99.99 %) standard (2 nos. each)<br>**vii.** NIST610 and NIST612 glass Standard Reference Materials (2 nos. each) should be quoted as standard. | | |
| | **ADDITIONAL REQUIREMENTS** | | |

| | | | |
|---|---|---|---|
| | **12. Onsite testing and performance demonstration of the following upon installation:**<br>i. Demonstration of short term and long term stability for total wavelength range for two hour measurements in the standard operation mode of the instrument. Standard solutions should be supplied by the vendor towards this.<br>ii. Demonstration of analysis with laser ablation for total wavelength range in standard operation mode. | | |
| | 13. **Installation Utilities**: Vendor should supply factory fabricated **chiller re-circulator** of appropriate capacity along with the system. The vendor should also quote **Argon and Helium gas regulators, gas purifications system, two Argon gas cylinder manifold, four Argon gas cylinders, one Helium cylinder and exhaust ducting for plasma**. | | |
| | 14. **Manuals and Diagnostic tools:** Full service manuals along with diagnostic tools including interface cards and software, plus any specialized & general mechanical tools (Allen keys, wrenches etc.) required for instrument servicing or repair. **The quotation should include a clear statement of all site requirements for installation and operation of the equipment specified.** | | |
| | 15. **Spares and consumables:** Quotation for spares and consumables for 3 years for each instrument and preparation device should be included i.e., the supplier should separately quote for all essential spares and consumable kits which are not covered under warranty for the basic instrument and peripherals, essential for trouble-free performance for at least 3 years. The quotation should include an indication of **all consumables required per full batch of samples**. | | |
| | **16. Warranty:** A 2 year (from the commissioning of the instrument) comprehensive warranty shall be provided and shall include replacement of parts and maintenance calls and the Engineer's visit to NCAOR during emergency. | | |
| | 17. **Training:** During the installation of the LA-ICP-OES, appropriate training in handling of the instrument shall be provided to the users. After the installation, training to be provided on the operation & maintenance of the instrument to a group of NCAOR personnel by the factory engineer for about two weeks. | | |

## TERMS AND CONDITIONS FOR SUBMISSION OF QUOTATION

**1)** The National Centre for Antarctic and Ocean Research (NCAOR) invites sealed quotations in two-parts from the reputed firms for the "**SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM**" **as per the specifications given in Annexure-I.**

**2)** The technical and financial bids should be submitted in two separate sealed covers, super scribing "Part –I Technical Bid for "**SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM**", Tender No., due date and "Part-II Financial bid for "**SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM**", Tender No., due date. Both the bids should be kept in a single cover by super scribing tender for **"SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM", ** sealed and addressed to the **Director, National Centre for Antarctic & Ocean Research, Headland-Sada, Vasco-da-Gama, Goa – 403 804.** Offer sent through fax will not be accepted**.**

3) Overwriting and corrections should be attested properly. The bid should be complete in all respects and should be duly signed. **Incomplete and unsigned bids will not be considered at all.**

4) All relevant technical literature pertain to items quoted **with full specifications** (Drawing, if any), information about the products quoted, including brochures if any should accompany the quotation.

5) A list of **reputed clients** to whom the firm has supplied similar items to be furnished along-with the quotation.

In the TECHNICAL BID, the Bidder should furnish the Name and address of the Purchasers placed orders on similar equipment with order No, date, Description and quantity, Date of Supply alongwith Contact person Telephone No, Fax No, and e mail address of Purchaser.

The Bidder should enclose copies of Purchase Orders only in the FINANCIAL BID.

6) Quotation should be **valid for a period of 120 days** from the date of tender opening and the period of delivery required should also be clearly indicated. If the supplier fails to deliver the

goods within the time to be agreed upon, for delayed deliveries and for delays in installation (wherever applicable). NCAOR reserves the right to **levy liquidated damages** at the rate of 0.5% per week or part their of up to maximum of 5%.

7) The **warranty period** and the kind of **post-warranty support** should be indicated. Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the Purchase Order / Contract.

8) **Technical bid should contain EMD.**

**A) Foreign Bidders** shall submit **EMD** along with their tender **in the form of a bank guarantee** for a sum of US $ 1,750.00 (US$ One Thousand Seven Hundred Fifty only) from any reputed bank (scheduled bank in India or foreign bank having operational Branch in India) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only.

B) **Indian Bidders** shall submit **EMD** along with their tender, **either By DD** drawn in favor of NCAOR, on any nationalized bank for a sum of Rs. 1,00,000/- (Rupees One Lakh only) payable at Vasco-da-Gama only **or in the form of a bank guarantee** for a sum of Rs. 1,00,000/- (Rupees One Lakh only) from any reputed bank (scheduled bank) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only.

**Tender without EMD in the envelope containing technical bid shall be summarily rejected**. The EMD of unsuccessful bidders shall be returned within 30 days of the award of contract.

The earnest money will be liable to be forfeited, if the tenderer withdraws or amends, impairs or derogates from the tender if any respect within the period of validity of his tender.

9) Please **specify the Make/Brand** and Name of the Manufacturer with address, country of origin and currency in which rates are quoted.

10) The Purchaser requires that the bidders suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:

“Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution:

"fradulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of contract;

"collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of purchaser, designed to establish bid prices at artificial, noncompetitive levels; and

"coercive practice: means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of contract;

The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the contract in question; The Decision of Director, NCAOR shall be final and binding.

11) Bidders that doesn't manufacture the goods it offers to supply shall submit Manufacturer's Authorization form on the letterhead of the Manufacturer duly signed and stamped by a person with the proper authority to sign documents that are binding on the Manufacturer as per the following format should be submitted failing which the quotation will not be considered.

To
The Director
NCAOR
GOA

Sub: Manufacturers' Authorization form against Tender No:_____

We_____(Name of the Manufacturer) who are official manufacturers of _____(Type of goods manufactured) having factories at _____(full address of Manufacturer's factories) do hereby authorize _____( Name of the Bidder) to submit a bid against your Tender No._____for the _____Goods manufactured by us and to subsequently negotiate and sign the contract.

We hereby extend our full guarantee and warranty with respect to the Goods offered by the above firm

Manufacturer's Name:

Signature of Authorized
representative of the Manufacturer:

Duly authorized to sign this Authorization on behalf of : _____(Name of the Bidder)
Date:

In case the bidder not doing business within India, shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc., during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc., during the warranty and post- warranty period.

**12) The order acknowledgement** should be from the principals and if the Indian Agent is empowered to quote and to furnish order acknowledgement, a copy of agreement entered by you with the Indian Agent to be furnished.

13) **Compliance Statement:** Equipments point-by-point comparison/compliance statement with **technical specification** indicated in the tender, should be enclosed along with your tender as well as any other extra features of the equipment be shown separately therein and also **compliance statement for all commercial terms** of the tender document.

14) NCAOR is not entitled to issue form **"C/D**". No Sales Tax or any other Tax shall be payable by us unless payment of the same is specifically mentioned by the suppliers in their bids and same is legally leviable.

15) To avail duty concessions i.e. **Excise Duty** as per Govt. notification 10/97 & **Custom Duty** as per Govt. notification 51/96, NCAOR will provide exemption certificates. Hence, the rates should be split into basic cost and Excise Duty if any.

16) **Technical Bid should contain** all details and specifications of the equipment offered, delivery schedule, warranty, payment term, installation, training, post-warranty, user-list, service support **WITHOUT PRICE** and **Financial bid should contain** details of the price(s) of the item(s) quoted in the technical bid. The Technical bid should not contain any references to the pricing.

**In case the technical bid contains any direct or indirect reference to quoted price the bid is liable to be rejected.**

The Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely convertible foreign currency in case of offers received for supply from foreign countries.

For Goods manufactured in India:
F.O.R GOA price should be indicated. However tender should contain item-wise prices including total ex-works price, Excise Duty, VAT/Taxes, Charges for Inland Transportation, Insurance and other local services required for the delivering the goods on F.O.R GOA.

17) In case of imported stores both **FOB and CIF prices upto Indian port of entry** namely Goa and for indigenous stores on F.O.R. destination basis should be indicated. However tender should contain item-wise prices including total ex-works price, overall weight & dimensions of the equipment and cost of packing forwarding, approx. cost of air-freight charges for delivery up to Goa, India.

18) A Committee constituted by the Director, NCAOR for the purpose reserves the right to open the bids. Only technical bids will be opened on the date and time mentioned in the tender document. The financial bids of those tenderers whose technical bids are found to be meeting our specifications only will be opened in their presence at date and time to be notified later.

19) The firm to the full satisfaction of the NCAOR should carry out the **installation and commissioning** at the NCAOR premises and the time-frame for the whole process should be specified in the technical bid.

20) A technical Committee constituted by the Director will assess the product supplied/installed for their quality and their conformity to the specifications provided by the firm in their quotations. Any item(s) identified by the Committee to be not as per the specifications or are found to be of inferior quality will be rejected, and the bills towards the supply will not be processed for payment till proper replacements are provided.

21) **No advance payment** will be made. Payment for indigenous stores shall be made within 30 days from the date of receipt, acceptance and satisfactory installation of equipment and incase of imported stores by **irrevocable letter of credit**. The payment will be authorized after submission of a Bank Guarantee for 10% value of the order towards warranty guarantee. The **performance Bank Guarantee** should be furnished within 15 days from the date of placement of order from a reputed bank (scheduled bank in India **or** foreign bank operating in India) valid till 60 days after the warranty period.

22) Suppliers should clearly define the mechanisms of **post-warranty** maintenance or support. Supplier should undertake to support the product for a minimum period of 5 years (post-

warranty). Post Warranty, AMC charges for a period of 3 years (annual bases) should also be quoted separately in the financial bid.

23) If the quoted item needs to be imported then the undertaking needs to be produced from the original supplier stating that Post Warranty support for a minimum period of 7 years will be provided from the original supplier to NCAOR on LC Terms of payment. If payment needs to be made and **spares will be supplied on the lowest rate quoted** than to any other customer with providing the sales price list to the NCAOR periodically as and when increase/decrease in prices.

**24)** Two sets of operational, service/troubleshooting manuals and diagrams to be supplied with **"SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM**".

25) **The submission of tender** shall be deemed to be an admission on the part of the tenderer, had fully acquainted with the specifications, drawings etc. and no claim other than what stated in the tender shall be paid in the event of award of Purchase Order.

26) Expenditure involved towards any extra materials required for labour involved for successful installation of the equipment, if not quoted for, would have to be borne by the tenderer.

27) **Acceptance of this tender** form and submission of the quote within the stipulated time would be treated as:

a) The tenderer has understood all requirements as described in our Tender document.

b) Acceptance to provide/establish all the facilities mentioned in our tender without any price escalation, if the tenderer finds it necessary to add any hardware or software or any other materials during implementation.

c) Agreeing to execute order to the satisfaction of NCAOR or its authorized representatives within the stipulated time.

**28) Training /Installation charges** should be clearly indicated including the scope of training.

29) Tender should clearly define the **infrastructure facilities required** for installation of the equipment.

30) NCAOR will not be liable for any obligation until such time NCAOR has communicated to the successful bidder of its decision to release the Purchase Order.

31) **NCAOR will not be responsible for any postal delays.**

32) Bidders shall note that NCAOR will not entertain any correspondence or queries on the status of the offers received against this Tender Invitation.

33) Tenders from Manufacturers/Suppliers/Tenderers whose performance was not satisfactory in respect of quality of supplies and delivery schedules in any organizations, are liable for rejection. The tenders that do not comply with the above criteria and other terms & conditions are liable for rejection.

34) The Director, NCAOR does not bind to accept the lowest quotation and reserves the right to himself, to reject or partly accept any or all the quotations received without assigning any reason.

35) All disputes arising in connection with executing the purchase order will be subject to the Jurisdiction of the Courts in Goa only.

**COMMERCIAL COMPLIANCE STATEMENT FOR SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM.**

| SR. NO. | COMMERCIAL SPECIFICATION FOR SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA -OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM | COMPLIED/ NOT COMPLIED | EXTRA FEATURES |
|---|---|---|---|
| **1** | A list of **reputed clients** to whom the firm has supplied similar items to be furnished along-with the quotation. | | |
| **2** | In the TECHNICAL BID, the Bidder should furnish the Name and address of the Purchasers placed orders on similar equipment with order No, date, Description and quantity, Date of Supply alongwith Contact person Telephone No, Fax No, and e mail address of Purchaser. | | |
| **3** | The Bidder should enclose copies of Purchase Orders only in the FINANCIAL BID. | | |
| **4** | Quotation should be **valid for a period of 120 days** from the date of tender opening and the period of delivery required should also be clearly indicated. | | |
| **5** | The **warranty period** and the kind of **post-warranty support** should be indicated. Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the Purchase Order / Contract. | | |
| **6** | **Foreign Bidders** shall submit **EMD** along with their tender **in the form of a bank guarantee** for a sum of US$ 1,750.00 (US $ One Thousand Seven Hundred Fifty only) from any reputed bank (scheduled bank in India or foreign bank having operational Branch in India) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only. | | |
| **7** | **Indian Bidders** shall submit **EMD** along with their tender, **either By DD** drawn in favor of NCAOR, on any nationalized bank for a sum of Rs. 1,00,000/- (Rupees One Lakhe only) payable at Vasco-da-Gama only **or in the form of a bank guarantee** for a sum of Rs. 1,00,000/-(Rupees One Lakhe only) from any reputed bank (scheduled bank) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only. | | |
| **8** | **Tender without EMD in the envelope containing technical bid shall be summarily rejected**. The EMD of unsuccessful bidders shall be returned within 30 days of the award of contract. | | |
| **9** | Please **specify the Make/Brand** and Name of the Manufacturer with address, country of origin and currency in which rates are quoted. | | |
| **10** | **The order acknowledgement** should be from the principals and if the Indian Agent is empowered to quote and to furnish order acknowledgement, a copy of agreement entered by you with the Indian Agent to be furnished. | | |
| **11** | **Compliance Statement:** Equipments point-by-point comparison/compliance statement with **technical specification** indicated in the tender, should be enclosed along with your tender as well as any other extra features of the equipment be shown separately therein and also **compliance statement for all commercial terms** of the tender document. | | |
| **12** | NCAOR is not entitled to issue form **"C/D"**. No Sales Tax or any other Tax shall be payable by us unless payment of the same is specifically mentioned by the suppliers in their bids and same is legally leviable. | | |
| **13** | To avail duty concessions i.e. **Excise Duty** as per Govt. | | |

| | | | |
|---|---|---|---|
| | notification 10/97 & **Custom Duty** as per Govt. notification 51/96, NCAOR will provide exemption certificates. Hence, the rates should be split into basic cost and Excise Duty if any. | | |
| **14** | **Technical Bid should contain** all details and specifications of the equipment offered, delivery schedule, warranty, payment term, installation, training, post-warranty, user-list, service support **WITHOUT PRICE** and **Financial bid should contain** details of the price(s) of the item(s) quoted in the technical bid. The Technical bid should not contain any references to the pricing. | | |
| **15** | **In case the technical bid contains any direct or indirect reference to quoted price the bid is liable to be rejected.** | | |
| **16** | The Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely convertible foreign currency in case of offers received for supply from foreign countries.<br>For Goods manufactured in India: | | |
| **17** | F.O.R GOA price should be indicated. However tender should contain item-wise prices including total ex-works price, Excise Duty, VAT/Taxes, Charges for Inland Transportation, Insurance and other local services required for the delivering the goods on F.O.R GOA. | | |
| **18** | In case of imported stores both **FOB and CIF prices upto Indian port of entry** namely Goa and for indigenous stores on F.O.R. destination basis should be indicated. However tender should contain item-wise prices including total ex-works price, overall weight & dimensions of the equipment and cost of packing forwarding, approx. cost of air-freight charges for delivery up to Goa, India. | | |
| **19** | A Committee constituted by the Director, NCAOR for the purpose reserves the right to open the bids. Only technical bids will be opened on the date and time mentioned in the tender document. The financial bids of those tenderers whose technical bids are found to be meeting our specifications only will be opened in their presence at date and time to be notified later. | | |
| **20** | The firm to the full satisfaction of the NCAOR should carry out the **installation and commissioning** at the NCAOR premises and the time-frame for the whole process should be specified in the technical bid. | | |
| **21** | A technical Committee constituted by the Director will assess the product supplied/installed for their quality and their conformity to the specifications provided by the firm in their quotations. Any item(s) identified by the Committee to be not as per the specifications or are found to be of inferior quality will be rejected, and the bills towards the supply will not be processed for payment till proper replacements are provided. | | |
| **22** | **No advance payment** will be made. Payment for indigenous stores shall be made within 30 days from the date of receipt, acceptance and satisfactory installation of equipment and incase of imported stores by **irrevocable letter of credit**. | | |
| **23** | Suppliers should clearly define the mechanisms of **post-warranty** maintenance or support. Supplier should undertake to support the product for a minimum period of 5 years (post-warranty). Post Warranty, AMC charges for a period of 3 years (annual bases) should also be quoted separately in the financial bid. | | |
| **24** | If the quoted item needs to be imported then the undertaking needs to be produced from the original supplier stating that Post Warranty support for a minimum period of 7 years will be provided from the original supplier to NCAOR on LC Terms of payment. If payment needs to be made and **spares will be supplied on the lowest rate quoted** than to any other customer with providing the sales price list to the NCAOR periodically as and when increase/decrease in prices. | | |
| **25** | Two sets of operational, service/troubleshooting manuals and diagrams to be supplied with **"SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY** | | |

| | | | |
|---|---|---|---|
| | **COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM"** | | |
| **26** | **The submission of tender** shall be deemed to be an admission on the part of the tenderer, had fully acquainted with the specifications, drawings etc. and no claim other than what stated in the tender shall be paid in the event of award of Purchase Order. | | |
| **27** | Expenditure involved towards any extra materials required for labour involved for successful installation of the equipment, if not quoted for, would have to be borne by the tenderer. | | |
| **28** | **Acceptance of this tender** form and submission of the quote within the stipulated time would be treated as:<br>• The tenderer has understood all requirements as described in our Tender document.<br>• Acceptance to provide/establish all the facilities mentioned in our tender without any price escalation, if the tenderer finds it necessary to add any hardware or software or any other materials during implementation.<br>• Agreeing to execute order to the satisfaction of NCAOR or its authorized representatives within the stipulated time. | | |
| **29** | **Training /Installation charges** should be clearly indicated including the scope of training. | | |
| **30** | Tender should clearly define the **infrastructure facilities required** for installation of the equipment. | | |

## QUESTIONNAIRE

a. **Name of the Manufacturer / Tenderer.**

b. **Full postal address with Telephone, Telefax, Email.**

c. **Please specify whether Public Limited, Company, Private Organization or Partnership Firm.**

d. **Nature of the Business.**

e. **Date of Establishment.**

f. **Present Turnover.**

g. **Permanent Income Tax Ref. No.**

h. **C.S.T. / S.T. NO.**

i. **Address & Telephone Nos. Of your branch office in GOA (please specify whether Distributing/Servicing/Marketing the products).**

j. **Technical Compliance statement.**

k. **Commercial Compliance statement.**

l. **Reference of reputed Customers.**

m. **Details of the highest order executed and value thereof.**

n. **Authorization from Manufacturer/Supplier attached.**

o. **Tender fee submitted/enclosed.**

p. **E.M.D. attached with TECHNICAL BID.**

q. **Technical Specifications/Literature/Brochure attached.**

r. **Tender Acceptance.**

**TENDER ACCEPTANCE UNDERTAKING**

To

The Director,
NCAOR, Headland Sada,
Vasco – Goa.

Having examined the tender document **for** "**SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM"** we the undersigned hereby offer to supply the equipment in conformity with all specifications and conditions set out in the tender document.

We enclosed all the relevant documents as per the tender.

We understand that you are not bound to accept the lowest or any tender received.

**Date :**

**(Signature of Bidder)**

**Name :**

**Designation** :

Seal

**BANK GUARANTEE FORMAT FOR FURNISHING EMD**

**To**

**NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH**
**Headland Sada, Vasco-da-Gama, GOA 403 804, INDIA**

Whereas _____
(Hereinafter called the "tenderer"
has submitted their offer dated _____
for the supply of _____
(Herein after called the "tender"
WE_____ of having our registered office
At _____ are bound unto the NATIONAL
(Hereinafter called the Bank)
CENTRE FOR ANTARCTIC & OCEAN RESEARCH, Ministry of Earth Sciences, Govt. Of India having its office at Headland Sada, Vasco Goa 403 804, India (herein after called NCAOR which expression shall unless repugnant to the context or meaning thereof include all its successors, administrators, executors and assigns) in the sum of _____ for which payment will and truly to be made to. NCAOR, the Bank binds itself, its successors and assigns by these presents. Sealed with the common seal of the said Bank this _____day of _____2015.

THE CONDITIONS OF THIS OBLIGATION ARE:

1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.

2) If the tenderer having been notified of the acceptance of his tender by NCAOR during the period of its validity.

2.a) If the tenderer fails to furnish the Performance security for the due performance of the contract.

2.b) Fails or refuses to execute the contract

We undertake to pay NCAOR up to the above amount upon receipt of its first written demand, without NCAOR having to substantiate its demand, provided that in its demand the NCAOR will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee is valid until the _____ day of _____2015.

**Signature of the bank**

**NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH**
**(*Ministry of Earth Sciences, Govt. Of India*)**
**Headland Sada, Vasco-da-Gama GOA 403 804, INDIA**
**Tel: 91- (0) 832 2525571 Telefax: 91- (0) 832 2525573**
**Email: warlu62@ncaor.gov.in Website: www.ncaor.gov.in**

## GLOBAL TENDER

Director, National Centre for Antarctic & Ocean Research (NCAOR) invites sealed tenders in two-parts (part I – Technical bid & part II Financial bid) super scribing Tender No. Item and due date from well established/ reputed manufacturers / authorized and bonafide vendors for supply of the following:-

| Sl. No. | Tender No. | Item Description | Qty. | Cost of Tender Doc. | | EMD | |
|---|---|---|---|---|---|---|---|
| | | | | `` | US$ | `` | US$ |
| 1 | NCAOR/LAB-2223/1/PT-50 | SUPPLY, INSTALLATION & COMMISSIONING OF LASER ABLATION - INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROMETER (LA-ICP-OES) SYSTEM | 01 | 2000/- | 50.00 | 1,00,000/- | 1,750.00 |

Last date for issue of tender documents : **02.03.2015**
Last date for submission of quotation : **03.03.2015**
The details of tender documents are also available in our website http://www.ncaor.gov.in and Central Public Procurement Portal http://eprocure.gov.in. Interested suppliers may download the details and submit the quotation on or before the due date along with tender fee.
**The quotation without tender fee will not be considered.**
Tender forms can be obtained from the Procurement section of NCAOR on all working days either by post or in person between 1000 – 1600 hours on payment of tender fees in the form of crossed Demand Draft payable at Vasco-da-gama only, from a Nationalized bank drawn in favor of **NCAOR** along with separate requisition indicating tender number and item. Tender forms can be obtained by speed post by remitting Rs. 50.00 by Indian bidders and US$ 15.00 by Foreign bidders in addition to the cost of tender documents.
The Director, NCAOR is not responsible for any transitional/postal delays.
The quotations will be **opened on 04.03.2015** in the presence of tenderers or their authorized representatives.
The Director, NCAOR reserves the right to accept or reject any quotation in full or part thereof without assigning any reason.

**Sd/-**
**For & on behalf of NCAOR**