



जवाहरलाल नेहरू एल्युमिनियम अनुसंधान विकास एवं अभिकल्प केन्द्र, नागपुर  
(स्वायत संस्थान, खान मंत्रालय, भारत सरकार के अधीन), अमरावती रोड, वाडी, नागपुर - ४४० ०२३ (भारत)

**Jawaharlal Nehru Aluminium Research Development and Design Centre**

(Autonomous Body Under Ministry of Mines, Government of India)

Amravati Road, Wadi, Nagpur - 440 023 (India)

दुरभाष / Phone : 07104-220017 / 220701 फॅक्स / Fax : 07104 - 220942

ई-मेल / Email : aao@jnarddc.gov.in & jnardc@gmail.com वेबसाईट / Website : www.jnarddc.gov.in

Date: 01.08.2017

Ref: 29/JNARDDC/S&P/2017/ P-5

As superscribed on the envelope.

विषय : Invitation of Quotation for "Potentiometric Titrator" for JNARDDC – in 2 bid system.

Dear Sir,

The Centre is interested in procuring "Potentiometric Titrator" for JNARDDC – in 2 bid system.  
As per details specification is given in Annexure-A.

Sr. No.	Description	Qty.
1.	"Potentiometric Titrator" for JNARDDC – in 2 bid system. As per detail specification given in Annexure – A & details Terms and Conditions given in Annexure –B.	One

You are therefore requested to send your competitive offer for above in a sealed envelope duly superscribed on top of the envelope as "Quotation for "Potentiometric Titrator" for JNARDDC- in 2 bid system with Tender No. & Date. to the undersigned latest by 24<sup>th</sup> August, 2017 (15 Hrs.).

Refundable EMD : Rs 65,000/- only should be paid in favour of JNARDDC by way of D.D.  
Tender Fee : Rs. 5000/- (Non refundable)

Bids should be contain 3 separate envelope

1. Technical Bid
2. Price Bid
3. EMD & tender Fees (if applicable)

Visit [www.jnarddc.gov.in](http://www.jnarddc.gov.in) for complete details

सधन्यवाद ,

आपका आभारी,

(आर. श्रीनिवासन)

सचिव एवं वरिष्ठ प्रशासनिक अधिकारी

आर श्रीनिवासन / R. Srinivasan  
सचिव एवं प्रशासकीय अधिकारी / Secretary cum Admin. Officer  
जवाहरलाल नेहरू एल्युमिनियम अनुसंधान विकास एवं अभिकल्प केन्द्र  
Jawaharlal Nehru Aluminium Research Development & Design Centre  
Autonomous Body (Ministry of Mines), Amravati Road, Wadi, Nagpur-440023

T.No. 29 / P.5

JAWAHARLAL NEHRU ALUMINIUM RESEARCH  
DEVELOPMENT AND DESIGN CENTRE  
WADI, AMRAYATI ROAD, NAGPUR - 440023

ANN - A

### Specifications of potentiometric titrator

The autotitrator should have the capability and dedicated modes to perform potentiometric titration like Acid/ base, redox, precipitation, Non aqueous, ion selective, back titration as well as possibility to do pH, mV and Temperature Measurements. The titrator should be used to determine pH

Sr. No.	Description	Specifications
1	Detection range	-2000.0 to 2000.0mV, -13 to +20 pH, -150 to +250°C temperature, ISE
2	Resolution	0.1mV, 0.001pH
3	Burette sizes	10 mL, 20 mL and 50 mL
4	Burette resolution	1/10,000
5	Display resolution	0.001 mL
7	Display	Touch screen
8	Storage	100 methods and 1000 results
9	Burette detection	Auto
10	Stirrer	Programmable variable speed
11	Flow rate	User-selectable from 0.1 mL/min to 2 x burette volumes/min
12	Temperature compensation	Auto
13	End point determination	Dynamic equivalence point
14	pH calibration	5 point, 8 buffer solutions
15	mV calibration	Single point offset
16	ISE calibration	3 standard solution
17	Potentiometric titration	Acid base, redox, precipitation, Non aqueous, ion selective, back titration
18	Measurement unit	User specified
19	Connectivity	USB port, PC, printer, RS 232C serial port
20	Software	Latest version of software, to run the instrument with preprogrammed - Should be quoted separately
21	Accessories	Electrode, Burette drive, burettes: 20 ml 2Nos, 50 ml 2 Nos- Should be quoted separately
22	Sampling	The instrument should have facility to connect auto sampler

- Instrument should be able to determine Na<sub>2</sub>O<sub>c</sub>, Na<sub>2</sub>O<sub>t</sub> and alumina in single sample solution and single titrant
- The supplier should provide the list of aluminium refineries using the above instrument

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श्री. श्रीनिवासन/R. Srinivasan  
सचिव एवं प्रशासकीय अधिकारी / Secretary cum Admin. Officer  
जवाहरलाल नेहरू अल्युमिनियम अनुसंधान विकास एवं अभिकल्प केन्द्र  
Jawaharlal Nehru Aluminium Research Development & Design Centre  
Autonomous Body (Ministry of Mines), Amravati Road, Wadi, Nagpur-440023



## ANNEXURE – B (Potentiometric Titrator)

जवाहरलाल नेहरू एल्युमीनियम अनुसंधान विकास एवं अभिकल्प केन्द्र  
स्वायत संस्थान, खान मंत्रालय, वाडी नागपुर  
www.jnarddc.gov.in (07104-297014)

T.No. 29/P-5

### Standard Terms & Conditions of the Tender- 2017

1. **Technical bid, Price bid and (EMD & Tender fees) should be submitted in three (3) separate sealed envelopes failing which bid will be rejected.** The envelopes should be super-scribed with the Tender number, due date and name of the instrument and content.
2. **If the bidder is not a registered vendor of JNARDDC, then the bidder should have following documents while submitting the offer which is compulsory for vendor registration with JNARDDC.** (1) Shop & Establishment / Registration of company certificate / MSME-2006 (issuing certificate of registration for Micro / Macro / Small Scale Industries Certificates) / Certificate of Registration (2) PAN & GST No. (3) I/T Returns (4) Account No. of Firm
3. Basic Price **should be quoted in one currency** only (i.e either in foreign currency or in Indian Rupees). Price bid containing the basic price in multiple currencies will be rejected. Currency conversion rate on the date of opening of price bid will be considered for determining the L-1 party.
4. The Refundable Earnest Money Deposit (EMD) and non-refundable Tender fees should be submitted alongwith the technical bid in favour of "Jawaharlal Nehru Aluminium Research Development & Design Centre, Nagpur". Bids without EMD and tender fees (if applicable) will be summarily rejected. However, EMD is exempted for firms registered with Central Purchase Organization or with Ministry of Mines or Micro and Small Enterprises (MSEs). But the registration certificate should clearly include the name of the item they are offering which are manufactured by them and not for selling products manufactured by other firms. Foreign suppliers directly quoting and participating in the tender will also be exempted from EMD and Tender Fee. However, Indian agents / representative quoting on behalf of principals shall pay EMD & Tender Fee. ***One EMD will be accepted against one bid Ref. page-1 for EMD / Tender Fees.***
5. The Bid Security / EMD (as applicable) without interest will be returned to the unsuccessful bidder **within 30 days** of the award of the Contract / Job. The bid security/EMD of successful bidder will be treated as Performance security. The "**Performance Security Deposit**" will be released without interest after a period of **One year** beyond the date of completion of all contractual obligations of the supplier including warranty obligations and subject to certification of Indenter / Authorized representative of the Centre.

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6. Payment shall be released within 45 days after receipt of items in complete and good condition and complete installation & commissioning and certification of bill by Indenter / Authorized representative of our Centre for domestic supply. **For JNARDDC Excise duty was NIL. GST / Govt taxes as applicable shall be paid as notified by Govt. of India.**
7. Deviation table should be enclosed to outline the deviation (if any) from the tendered technical specification in comparison to the bid quoted. **Simply enclosing our spec sheet without providing any details may lead to rejection of the bid.**
8. **Validity of the Tender should be minimum upto to three months.**
9. **LD clause is @ 0.5% of PO value for each week of delay in execution of work as per Work Order.**
10. Warranty terms and delivery period should be clearly mentioned. Item should be **delivered upto JNARDDC, Nagpur.**
11. **Product leaflet of the item should be enclosed.**
12. Cost should be on **Door delivery basis upto JNARDDC, Nagpur.**
13. Disputes and Jurisdiction:- 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 Nagpur. Decision of Director will be final in all tenders. **For any further clarification the contract personnel shall be the AAO, JNARDDC.**



(आर श्रीनिवासन)

सचिव एवं प्रशासनिक अधिकारी