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सत्यमेव जयते

भारत सरकार

**Government of India**  
भाभा परमाणु अनुसंधान केन्द्र  
**Bhabha Atomic Research Centre**  
रिएक्टर इंजीनियरी प्रभाग  
**Reactor Engineering Division**

हाल - 7,  
टॉम्बे,  
मुंबई - 400 085,  
HALL No. 7,  
TROMBAY,  
MUMBAI - 400 085

Ref. No.: RED/HTRS/KKP/ 329 /2FE/MF/ 80346 /2017

Date: 12-05-2017

Dear Sir(s),

Sub: **Procurement of raw materials, preparation, supply and guarantee of Nickel nano powder & LiAlH<sub>4</sub>, meeting the technical requirements as mentioned in specification HTRS/KKP/2017/06.**

Sealed quotations are invited by Head, HTRS, RED, on behalf of the President of India for the execution of the following job:

**Procurement of raw materials, preparation, supply and guarantee of Nickel nano powder & LiAlH<sub>4</sub>, meeting the technical requirements as mentioned in specification HTRS/KKP/2017/06.**

**General Notes:**

- 1) The bidder shall take all the necessary safety precautions during work and they shall be responsible for any damage or accidents. No compensation in any case will be paid by the Department to the bidder.
- 2) The work shall be subject to inspection by the purchaser or his authorised representative. Work shall be conducted under their supervision and to the full extent of satisfaction.
- 3) **The work shall be completed within two calendar months from the receipt of work order.**
- 4) The quotations must reach Head, HTRS, RED, Engg. Hall-7 latest by 23/05/2017. Quotations will be opened on 24/05/2017.
- 5) The above mentioned **REFERENCE NUMBER** and **DATE AND TIME OF OPENING OF BIDS MUST BE CLEARLY MENTIONED ON THE SEALED ENVELOPE** containing the quotation. Offers should be sent by **Speed Post only**.
- 6) Payment will be made as per rules, after the completion of the work to purchaser's satisfaction against submission of original bill in triplicate and advance stamped receipt.
- 7) Income tax @2% and Educational cess as applicable will be deducted from the bill.
- 8) Any delay which is attributable to the contractor is liable for penalty @ ½ % per week (Max 5%).
- 9) Bidder shall mention their PAN and VAT Nos. in the quotation.
- 10) The offer shall be kept open for acceptance for a minimum period of 45 days from the date of opening of the quotation.

- 11) Head, HTRS, RED reserves the right to accept/reject any or all the quotations received without assigning any reason whatsoever.
- 12) The bidder shall furnish the detailed information regarding whether an ex-employee of BARC is working in their organisation or whether any of their relative is working in DAE/BARC or whether he/she is an ex-employee of DAE/BARC. In case of absence of such information, or wrong information the quotation or contract is likely to be rejected or cancelled.
- 13) Guarantee period of at least one year must be provided for material quality and workmanship.

CONFIDENTIALITY CLAUSES:

I. Confidentiality:

No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as "Proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party.

This clause shall apply to the sub-bidders, consultants, advisers or the employees engaged by the party with equal force.

II. "Restricted information" categories under Section 18 of the Atomic Energy Act, 1962 and "Official Secrets" under Section 5 of the Official Secrets Act, 1923:-


Any contravention of the above-mentioned provisions by any bidder, sub-bidder, consultant, adviser or the employees of a bidder will invite penal consequences under the aforesaid legislation.

III. Prohibition against use of BARC's name without permission for publicity purposes:-

The bidder or sub-bidder, consultant, adviser or the employees engaged by the bidder shall not use BARC's name for any publicity purpose through any public media like Press, Radio, T.V. or Internet without the prior written approval of BARC.

Thanking you,

Yours Sincerely,



(I.V. Dulera) 12/5/12  
Head, HTRS

For and on behalf of the President of India  
(The Purchaser)

Enclosures:  
Specification (2 pages)

## Specification for Nickel nano powder & LiAlH<sub>4</sub>

### 1.0 SCOPE

Procurement of raw materials, preparation, supply and guarantee of Nickel nano powder & LiAlH<sub>4</sub>, meeting the technical requirements as mentioned herewith.

Sl. No.	Item description	Quantity
1)	Nickel nano powder, <100 nm avg. part. size, ≥99% trace metals basis	20 gm
2)	Lithium aluminum hydride, powder, reagent grade, 95% (LiAlH <sub>4</sub> )	10 gm

### 2.0 TECHNICAL REQUIREMENTS

#### 2.1 Nickel nano powder, <100 nm avg. part. Size, ≥99% trace metals basis:

2.1.1 It should have following properties.

Properties	Description
Assay	≥99% trace metals basis
Form	Nano Powder
Resistivity	6.97 μΩ-cm, 20°C
Avg. part. size	<100 nm
B.P.	2732 °C (lit.)
M.P.	1453 °C (lit.)
Density	8.9 g/mL at 25 °C (lit.)

2.1.2 The container of Nickel nano powder should be properly sealed and should meet the RIDADR standard as per UN3089 - class 4.1 - PG 2 - EHS - Metal powders, flammable, n.o.s., Hi:A,S.

2.1.3 The container will have hazard statements H317-H351-H372-H412, precautionary statements P273-P280-P314-P333 + P31 and safety symbol GHS07, GHS08.

2.1.4 Nickel nano powder should be equivalent to Sigma Aldrich: 577995.

2.1.5 Nickel powder will be properly sealed (5g each) in four bottle.

#### 2.2 Lithium aluminum hydride, powder, reagent grade, 95% (LiAlH<sub>4</sub>):

2.2.1 It should have following properties.

Properties	Description
Assay	≥95% trace metals basis
Form	Powder
M.P.	125 °C (dec.) (lit.)

2.2.2 The container of Lithium aluminum hydride, powder should be properly sealed and should meet the RIDADR standard as per UN 1410 4.3 / PGI.

2.2.3 The container will have hazard statements H260-H314, precautionary statements P223-P231 + P232-P280-P305 + P351 + P338-P370 + P378-P422 and safety symbol GHS02, GHS05.

2.2.4 Lithium aluminum hydride powder should be equivalent to Sigma Aldrich: 199877.

### 3.0 PRE DISPATCH INSPECTION REQUIREMENTS

3.1 For suppliers from India, pre dispatch inspection would be carried out at the supplier's premises in the presence of the purchaser's representative. Dispatch of the item shall be carried out only when inspection is successfully completed.

3.2 All items and supplies required for successful inspection is required to be provided by the supplier.

### 3.0 DELIVERY REQUIREMENTS

**3.1** Item should be delivered to BARC North Gate, Trombay, Mumbai within 30 days of WO. Delivery charges, if any, should be mentioned in the offer.

**3.2** All taxes, including VAT, excise duty (if applicable), octroi, etc should be clearly mentioned. If exemption certificates are required then it should be mentioned in the offer.

**3.3** At the time of delivery, the following documents must be sent along with the item:

**3.3.1** Warranty Certificate (for one year)

**3.3.2** Delivery challan

**3.3.3** Tax invoice

**3.3.4** Advance Stamped Receipt

**3.3.5** Particulars of bank account of supplier for ECS payment

**3.4 Packing and forwarding:** Packing and forwarding amount should not exceed 3% of the basic cost or else original proof for payment of entire charges needs to be furnished. All items will be packed such that the items don't get damaged during delivery. Any damaged item should be replaced by the supplier free of cost.

**3.5 Payment:** No payment will be made at the time of delivery, and no advance payment will be acceptable.

#### **3.6 Certificates from purchaser**

**3.6.1** Bidders may note that customs duty exemption will NOT be provided by the purchaser

**3.6.2** Bidders should also note that end use certificate and end user certificates will NOT be provided.

### 4.0 NOTE TO BIDDER

**4.1** The bidder shall provide item-wise quotation for the items mentioned in article 1.0. Prices on a per piece basis should also be included. If the bidder mentions aggregate price without mentioning the prices for individual pieces on a per piece basis, the bids will be rejected. The bids may also be rejected if the quotation does not mention the prices of all the items.

**4.2** All the taxes, duties and other government levies shall be clearly mentioned in the offer. The testing, inspection, packing-forwarding-freight and delivery charges if any should be mentioned in the offer.

**4.3 Proof of ability:** The bidder shall provide, along with the quotation, adequate proof of show their capability to execute the job such as copies of the previous purchases orders placed on the executed by the party for the reputed firms (Indian and international). Specific mention should be made of previous supplies made to BARC, along with names and contact details of indenting officers and the purchase order numbers.

**4.4** As a part of the offer, the bidder shall confirm point by point their acceptance of the various requirements and deviations if any from the specification.

**4.5 Delivery date:** Bidders must provide their earliest delivery date after placement of order on them. Offers with shorter delivery periods shall be preferred.

**4.6 Order quantity:** The purchaser reserves the right to increase or decrease the order quantity, at the time of placing the purchase order.

**4.7** Quotations found incomplete in any respect and also deficient in clarity about technical and commercial terms will be summarily rejected.