



SO 9001:2000  
&14001:2004  
MAHARATNA  
COMPANY

**MATERIAL MANAGEMENT (PURCHASE)**  
**CENTRAL FOUNDRY FORGE PLANT, BHEL HARDWAR**  
**RANIPUR, HARIDWAR (INDIA) – 249403**  
Phone No.01334-281277/285635, FAX No. 01334-225892  
e-mail :ranjank@bhelhwr.co.in, svn@bhelhwr.co.in

**Sub: Tender Enquiry No: 3401P/360/2/1037F1**

Dear Sir,

We are pleased to invite offer as per enclosed specification with terms and conditions in sealed envelop for the under mentioned material.

Sl No	Tender No	Description of Material	Qty	Date & Time of Tender Opening
01	3401P/360/2/1037F1	Reverse Osmosis (R O) plant of capacity 10 KL per/Hr.	01 set	29-07-2013 at 2.00 PM (IST)

Kindly read terms and conditions carefully. Offer not submitted in accordance with the instructions is liable to be disqualified or ignored.

Please visit [www.bhel.com](http://www.bhel.com) or [www.bhelhwr.co.in](http://www.bhelhwr.co.in) for more details and tender documents.

Please also download Supplier Registration Form and submit same dully filled.

Thanking You,

Yours Faithfully,  
For & On behalf of CFFP BHEL Hardwar

(Ranjank Kumar)  
Sr.DGM (Purchase)

**Note: Corrigendum if any shall not be published, kindly visit web-site for any changes.**

Enclosures:

1. Tender enquiry.
2. Annexure – C General terms and conditions
3. Annexure-I Commercial term and conditions
4. Annexure-II proforma for Bank Guarantee
5. Annexure-III List of Consortium Bank
6. Annexure-IV Terms and conditions and regarding Indian agent of foreign suppliers:
7. Annexure- A & B Guidelines for Indian agents of foreign suppliers
8. Annexure-D E-payment Format
9. Specification no. CFF/M&S/PSX/Boiler/2012-13/01 Rev 00 dt 29.03.2013 and Annexure 1 & 2.



निविदा सूचना  
**TENDER ENQUIRY**

भारत हैवी इलैक्ट्रिकल्स लिमिटेड  
**Bharat Heavy Electricals Ltd**  
सेन्ट्रल फाउन्ड्री फॉर्ज प्लांट- हरिद्वार - २४६४०३ (भारत)  
**Central Foundry Forge Plant, Haridwar-249403 (INDIA)**

Phone : (0091) 01334- 281639,281385,285336 Fax : 01334 225892 / 226458

TIN NO. 05001763485  
C S T NO. HR-5018287 Dt. 16-03-1995

निविदा सूचना सं. ENQUIRY NO.★	3401 P/ 360/2/1037F1	दिनांक Date	02-07-2013
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

Office Copy

DUE DATE

29-07-2013

09285 M/s : : :  
: : INDIA

Item Description	Quantity	Unit	Lot	Quantity	Lot	Date
1 FF8351260690 RO(REVERSE OSMOSIS) PLANT OF CAPACITY 10KL/HR FOR BOILER FEED WATER TREATMENT AS PER SPECIFICATION NO CFF/M&S/PSX/B OILER/2012-13/01.	1	ST	1	1	31/10/13	

\*\* IMPORTANT: This enquiry is 2 part tender. Techno-Commercial bid (Part-1) & Price Bids (Part-2) should be submitted in separate envelopes. These two envelopes should be submitted in a common sealed envelope. Techno-Commercial Bid shall contain detailed Technical Specification, Drawings Technical documents, Catalogues, taxes & duties, payment terms, delivery period, Validity of offer, Replica of Price Bid (Copy of price bid without price part) etc. The confirmation to the special terms & conditions must be submitted alongwith Techno-Commercial bid.

Standard Instructions:

GUARANTEE CERTIFICATE REQUIRED.  
BASIC RATES, TAXES DUTIES SEPERATELY  
CENVATABL DUPLICATE COPY OF INVOICE.  
INSP AFTER RECPT AT CFFP.

Special Instructions:

- (1) SPECIFICATION NO.CFF/M & S /PSX/BOILER/12-13 FOR RO (REVERSE OSMOSIS) PLANT FOR BOILER WATER WITH ANNEXURE-1 & 2.
- (2) PARTY MAY QUOTE OFFER IN TWO PART BID IN SEPERATE SEALED ENVELOPE.
- (3) FINAL INSPECTION WILL BE DONE AT CFFP STORE.
- (4) VALIDITY OF OFFER SHOULD BE MIN 180 DAYS FROM DATE OF OPENING.
- (5) OFFER MUST BE SUBMITTED STRICTELY IN LINE WITH SPECIFICATION, TERMS & CONDITIONS OF ENQUIRY ELSE OFFER MAY LIKELY BE IGNORED.
- (6) ALL TAXES/DUTIES/LEVIES ETC. MUST BE SPECIFIED SEPERATELY IN AMOUNT OR IN PERCENTAGE. INCOMPLETE OFFER SHALL NOT BE ACCEPTABLE.
- (7) PLEASE QUOTE ON F.O.R. DESTINATION (CFFP/BHEL), FREIGHT PRE PAID BASIS ONLY.
- (8) IN CASE VENDOR DO NOT ACCEPT CFFP,S PAYMENT TERMS AS PER ENQUIRY PROPER LOADING SHALL BE DONE.
- (9) DULY FILLED & SIGNED WITH COMPANY SEAL"ANNEXURE- I TO BE SUBMITTED ALONGWITH OFFER.
- (10) GENERAL TERMS AND CONDITIONS OF T.E. ANNEXURE-C ARE ENCLOSED.



निविदा सूचना  
**TENDER ENQUIRY**

AA-17001

भारत हैवी इलैक्ट्रिकल्स लिमिटेड  
**Bharat Heavy Electricals Ltd**

सेन्ट्रल फाउन्ड्री फॉर्ज प्लांट- हरिद्वार - २४६४०३ (भारत)

**Central Foundry Forge Plant, Haridwar-249403 (INDIA)**

Phone : (0091) 01334- 281639,281385,285336

Fax : 01334 225892 / 226458

TIN NO. 05001763485

C S T NO. HR-5018287 Dt. 16-03-1995

निविदा सूचना सं. ENQUIRY NO.*	3401 P/ 360/2/1037F1	दिनांक Date	02-07-2013
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

Office Copy

SL	MATERIAL CODE	QUANTITY	UNIT	LOTNO	LOT DELIVERY QTY SCHEDULE
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- (11) POINT WISE CONFIRMATION OF SPECIFICATION ARE REQUIRED.  
(12) EARLY DELIVERY SHALL BE ACCEPTABLE.

## General Instructions:

1. Please submit authorization letter (format enclosed) for facilitating e-payment/electronic transfer of funds
  2. 100% payment within 30 days after receipt & acceptance of material at CFFP/BHEL, Haridwar through e-payment.
  3. CFFP/BHEL RESERVES THE RIGHT TO PRE-INSPECT THE MATERIAL AT VENDOR'S WORKS / GODOWN/ PREMISES BEFORE DESPATCH.
  4. ORIGINAL MANUFACTURER'S TEST CERTIFICATE IS REQUIRED ALONG WITH DESPATCH DOCUMENTS. IN CASE SUPPLIES ARE FROM TRADERS, IT SHALL BE THE RESPONSIBILITY OF THE TRADER TO PROVIDE ORIGINAL MANUFACTURER'S TEST CERTIFICATE WITH LINKAGE TO TRADER'S INVOICE STATING BATCH NO.
  5. CFFP/BHEL Reserves the right to procure from more than one vendor.
  6. Please quote prices in figures & words both. In case the prices quoted in words and figures are different, the values indicated in words will be considered for evaluation & establishing L1 status.
- \* The offers of the bidders who are on the banned list as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on web site [www.bhel.com](http://www.bhel.com)

  
D S RAWAT  
ENGINEER ( PUR.)



G T C C - dt.05.01.2012.

## **GENERAL TERMS AND CONDITIONS OF TENDER ENQUIRY**

### **ANNEXURE- C**

1. Submit the tender in two parts i.e.

**Part-I Techno-Commercial Bid**

**Part-II Price Bid**

Techno-Commercial (part one) & Price Bid (part two) should be put in separate sealed envelopes. Both envelopes should be super scribed with **Tender Number, Date of Opening & Technical / Commercial Bid** and **Price Bid** respectively along with name of firm.

Both the envelopes i.e. containing Techno-Commercial Bid and Price Bid should again be kept in one envelope super scribed again with Tender No. and Date of Opening and the name of firm submitting the tender. to **AGM (MM),Purchase Department ,CFFP ,BHEL Hardwar,Ranipur ,Hardwar 249403.Uttarakhand ,India** .It is responsibility of vendors to submit their offer in time. Late offer will not be considered.

Part-I Envelopes super scribed with **Techno-Commercial Bid** must contain all information especially:-

(a) Specification of the material offered should be strictly as per CFFP/BHEL specifications of Enquired material in tender documents. **Deviations if any must be indicated clearly in the offer. Rates to be quoted on FOR destination basis.**

(b) All commercial terms i.e. packing, forwarding, Custom Duty ,Additional Duty ,ST/STT/VAT/CST, Excise duty/CVD , Bank Charges, payment terms & Insurance etc as applicable should be clearly mentioned **except Price** .Also mention present rate of applicable taxes & duties even if inclusive in rates.

(c) Confirm to submit all required commercial documents (tax invoice, cenvatable duplicate copy of invoice, packing list, transit sale agreement etc.)& technical documents (TC/GC/QP etc.)

(d) Registration Numbers of SSI, Central Excise, Sales tax, Income tax, DGS & D, ECC etc.

(e) **Un-priced copy of Price Bid.**

Part-II Envelopes super scribed with **Price Bid** should contain **priced copy of Price Bid**. The price should be mentioned both **in figures and words**.

2. Authorized Signatory should authenticate all tender documents.

3. **Techno-commercial bid (Part-I)** will be opened on the due date at 2.00 PM. In the presence of participating vendors or authorized representatives, who may wish to be present. Representative deputed to witness tender opening must produce an authority letter from the signatory of offer. After evaluation of technical bids & finalization of technical, commercial terms & condition, price bid of only successful vendors will be opened. Priced bid opening date will be intimated separately.

4. The material offered must conform to the required BHEL specifications and drawings as well as instructions and details made available.

5. **Original Test Certificate & other related Documents** from the original Manufacturer's test certificate is to be confirmed in the offer itself which is to be submitted along with dispatch document.

06. CFFP/BHEL Hardwar reserves the right to accept or reject any or all tenders without assigning any reason there of.

07. Tenders not submitted in the prescribed manner are likely to be ignored/ rejected.

08. **Agent /Agency Commission:** Payment of any kind at any stage will not be made to Agent on account of agent commission or otherwise by CFFP BHEL Hardwar.

09. **Inspection:** CFFP BHEL Hardwar inspection after receipt shall be final and binding. BHEL reserve the right to pre-inspect at Vendor's works or BHEL may nominate any testing house for inspection..

10. Dispatching port & Country to be mentioned.

11. Vendor must submit the annual report giving the audited profit or loss account and balance sheet for last three financial years including current year ending.

The vendors who are registered with any unit of BHEL, India, in related category shall give the details also.

12. CFFP may assess the company profile before placement of purchase order as per BHEL practice and / or procedures wherever felt necessary.

Commercial Terms

Item - Reverse Osmosis (R O) plant of capacity 10 KL per/Hr.

Qty - 01 Set.

Confirmation/comments on the conditions given below are mandatory. Please confirm the following or else your offer is liable to be rejected.

	Description	Vendor comment /Confirmation
1	Material shall be supplied as per enquiry no 3401P/360/2/1037F1 in all respects without deviation. Point wise reply/confirmation of attached specification no. CFF/M&S/PSX/Boiler/2012-13/01 Rev 00 dt 29.03.2013 is required to be submitted along with offer.	
2	Guarantee for equipment for 12 months from date of commissioning.	
3	Inspection of material will be done after receipt at CFFP / BHEL Haridwar.	
4	Delivery shall be made on FOR Destination basis, destination being Stores/CFFP/BHEL Haridwar, Freight & Insurance charges to vendor's account.	
5	<p><b><u>Payment Terms:</u></b></p> <p><b>5.1. Indigenous Suppliers:</b> 80% payment of Supply value shall be made within 45 days from the date of receipt of material at BHEL. Balance 20% of Supply value plus 100% of the E&amp;C portion of PO value will be paid against E&amp;C certificate issued by BHEL and submission of Performance Bank Guarantee (PBG) valid for 30 days beyond the warranty period by Supplier from any of the Consortium Banks of BHEL for 10% of total PO Value in the prescribed Format. The PBG confirmation charges shall be borne by vendor.</p> <p><b>5.2. For foreign supplier:</b> Payment of Supply value shall be 80% on dispatch through through USANCE LC on 70th day of bill of lading date and 20% on issue of E&amp;C Certificate by trunk transfer ( TT). All bank charges shall be to vendor's account.</p> <p>5.2.1 Third party inspection (before dispatch) from one of the following five inspection agencies i.e. LLOYD/TUV/DNV/BVIS/ ALFRED H.KNIGHT shall be arranged by foreign vendor at their cost.</p> <p>* Format and list of consortium bank is attached. * In case vendor does not agree, proper loading shall be done.</p>	
6	Validity of offer: Minimum 180 days from tender opening date.	
7	Prices shall be firm till execution of Order.	
8	Provide name of contact person, mobile no. & email address.	
9	LATE DELIVERY PENALTY CLAUSE (LD): Penalty for late delivery shall be applicable @ 0.5% per week and part thereof subject to a maximum of 10% of total P.O. value (Total material cost + packing and forwarding + freight + E&C) from the date of scheduled delivery of Purchase Order.	
10.	Replica of price bid ( <b>without price part</b> ) required along with technical offer.	

11.	Disputes: In event of any dispute arising out of contractual obligation, the order being finalized at Haridwar, India will be subject to Indian laws and falls under jurisdiction of the court of Law at Haridwar, India. The overseas supplier hereafter referred to as "Vendor" shall therefore abide by the verdict of court of Law at Haridwar, India.	
12.	Delivery period - Vendor is requested to quote earliest possible delivery period from date of Purchase order.	
13.	For new vendors who are not registered with CFFP BHEL Haridwar, duly filled "Supplier Registration Form" (available at <a href="http://www.bhel.com">www.bhel.com</a> ) with all the supporting documents has to be submitted along-with techno-commercial bid of offer. Please confirm that SRF is being submitted with your offer, if applicable. Please note that, if in any case duly filled up SRF along-with all the supporting documents is not received <b>within 15 days of tender opening, offer will liable to be ignored.</b>	
14.	BHEL will prefer to deal directly with foreign vendor/ original manufacturer. In case, vendor engages any Indian agent or take service of any Indian agent, copy of agent agreement required along with offer in line with Annexure-IV attached.	
15.	CFFP BHEL reserves the right to obtained price bid through reverse auction. Please confirm your acceptance.	
16.	<ul style="list-style-type: none"> <li>- In case any column is left blank, it shall be deemed to be accepted by vendor.</li> <li>- If any difference is found for any term and condition in the offer and this annexure "I", the terms quoted in this annexure 'I' shall be deemed as final and binding on vendor.</li> <li>- Evaluation shall be on the basis of delivered cost (i.e.) "total cost to BHEL".</li> </ul>	

Date:

Signature with Seal of the Company.

**Terms and conditions regarding Indian agent of foreign suppliers:**

01. BHEL shall deal directly with foreign vendors, wherever required, for procurement of goods. However, if the foreign principal desires to avail of the services of an Indian agent, then the foreign principal should ensure compliance to regulatory guidelines- which require mandatory submission of an Agency agreement.
02. It shall be incumbent on the Indian agent and the foreign principal to adhere to the relevant guidelines of Government of India, issued from time to time.
03. The agency agreement should specify the precise relationship between the foreign OEM/Foreign principal and their Indian agent and their mutual interest in the business. All services to be rendered by agent/associate, whether of general nature or in relation to the particular contract, must be clearly stated by the foreign supplier / Indian agent. Any payment, which the agent or associate receives in India or aboard from the OEM, whether as commission or as a general retainer fee should be brought on record in the agreement and be made explicit in order to ensure compliance to laws of the country.
04. Any agency commission to be paid by BHEL to the Indian agent shall be in Indian currency only.
05. Tax deduction at source is applicable to the agency commission paid to the Indian agent as per the prevailing rules.
06. In the absence of any agency agreement, BHEL shall not deal with any Indian agent (authorized representatives/ associate/consultant, or by whatever name called) and shall deal directly with the foreign principal only for all correspondence and business purposes.
07. The "Guidelines for Indian Agents of Foreign Suppliers" enclosed at annexure- 'A' shall apply in all such cases.
08. The supply and execution of the Purchase Order (including indigenous suppliers/service) shall be in the scope of the OEM/ Foreign principal. The OEM/ Foreign principal should submit their offer inclusive of all indigenous suppliers/services and evaluation will be based on 'total cost to BHEL'. In case OEM/ foreign principal recommends placement of order(s) towards indigenous portion of supplies/services on Indian Supplier (s)/ agent on their behalf, the credentials/capacity/capability of the Indian Supplier (s)/ agent to make the supplies/Services shall be checked by BHEL as per the extant guidelines of Supplier Evaluation, Approval and Review Procedure (SEARP), before opening of price bids. In this regards, details may be checked as per Annexure- 'B' (copy enclosed). It will be the responsibility of the OEM/ Foreign Principal to get acquainted with the evaluation requirements of Indian supplier/agent as per SEARP available on [www.bhel.com](http://www.bhel.com).

The responsibility for successful execution of the contract (including indigenous supplies/services) lies with the OEM/ foreign principal. All bank guarantees to this effect shall be in the scope of the OEM/Foreign principal.

**Guidelines for Indian Agents of Foreign Suppliers**

- 1.0 There shall be compulsory registration of agents for all Global (Open) Tender and Limited Tender. An agent who is not registered with BHEL shall apply for registration in the registration form in line with SEARP.
  - 1.1 Registered agents will file an authenticated Photostat copy duly attested by a Notary Public/Original certificate of the Principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission/ remuneration/ salary/ retainership being paid by the principal to the agent before the placement of order by BHEL.
  - 1.2 Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.
- 2.0 Disclosure of particulars of agents/ representatives in India, if any.**
- 2.1 Tenderers of Foreign nationality shall furnish the following details in their offers:
    - 2.1.1 The Bidder(s)/ Contractor(s) of foreign origin shall disclose the name and address of the agents/ representatives in India if any and the extent of authorization and authority given to commit the Principals. In case the agent/ representative be a foreign Company, it shall be confirmed whether it is existing Company and details of the same shall be furnished.
    - 2.1.2 The amount of commission/ remuneration included in the quoted price(s) for such agents/ representatives in India.
    - 2.1.3 Confirmation of the Tenderer that the commission/ remuneration, if any, payable to his agents/ representatives in India, may be paid by BHEL in Indian Rupees only.
  - 2.2 Tenderers of Indian Nationality shall furnish the following details in their offers:
    - 2.2.1 The Bidder(s)/ Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any, indicating their nationality as well as their status, i.e. whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or through the agents/ representatives.
    - 2.2.2 The amount of commission/ remuneration included in the price (s) quoted by the Tenderer for himself.
    - 2.2.3 Confirmation of the foreign principals of the Tenderer that the commission/ remuneration, if any, reserved for the Tenderer in the quoted price(s), may be paid by BHEL in India in equivalent Indian Rupees on satisfactory completion of the Project or supplies of Stores and Spares in case of operation items.
  - 2.3 In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/ remuneration, if any payable to the agents/ representatives in India in Indian Rupees on expiry of 90 days after the discharge of the obligations under the contract.
  - 2.4 Failure to furnish correct and detailed information as called for in paragraph 2.0 above will render the concerned tender liable to rejection or in the event of a contract materializing, the same liable to termination by BHEL. Besides this there would be a penalty of banning business dealings with BHEL or damage or payment of a named sum.

---X---

This format is applicable only to Indian Suppliers/ Agents supplying indigenous portion of Foreign Purchases.

\* In all other cases, extant guidelines of SEARP, 2010 are to be followed.

SEARP (SRF) Clause No	Detail
	<b>Name &amp; address of the firm</b>
<b>1.0</b>	<b>Products/ Systems / Services being considered for</b>
<b>2.0</b>	<b>General Information</b>
2.2	Name of Chief Executive
2.3	Details of authorized signatory
<b>3.0</b>	<b>Ownership Information</b>
3.1	Type of firm
3.2	Nature of Business <ul style="list-style-type: none"> <li>• <i>Attach <b>authorization letter</b> and <b>agency agreement</b> from Principal ( from whom capital equipment is procured)</i></li> <li>• <i>Attach copy of declaration from Foreign Principal for <b>total guarantee/ warranty of indigenous supplies</b></i></li> </ul>
3.3	Year of establishment
3.4	Year of commencement of business
<b>4.0</b>	<b>Registration particulars</b>
4.1	Permanent Account No.
4.2 / 4.3	Sales Tax / TIN no
4.6	Service tax no. (in case of E&C)
<b>5.0</b>	<b>Organisational strength</b>
<b>6.0</b>	<b>Other particulars</b>
6.1	If the company is already registered with other units
6.2	Directors/ Partners, if related to any BHEL Employee
6.9	If any Ex BHEL Personnel employed by the Company
6.12	Details of pending legal issues with BHEL
6.13	Bank Account information
<b>9.0</b>	<b>Financial information</b>
9.6	Sales/ Turnover details of last 3 years (or from the date of incorporation whichever is less )

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ANNEXURE-II

WAM-28

### Proforma for Bank Guarantee

In consideration of the Bharat Heavy Electrical Limited Siri fort N. Delhi through Division CFFP Hardwar (hereinafter called the Company') having agreed to exempt----- (hereinafter called 'the said Contractor' which term includes 'Suppliers' for the purpose of this Bond) from the demand under the terms and conditions of an Agreement no / PO no ----- date. ----- made between -----and ----- for (hereinafter called 'the said Agreement') of Security Deposit for the due fulfillment by the said Contractor of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs. ----- (Rupees-----only).

1. We, \_\_\_\_\_(Indicate the name of the Bank)\_\_\_\_\_  
(hereinafter referred to as 'the Bank') at the request \_\_\_\_\_  
\_\_\_\_\_(Contractor (s) do hereby undertake to pay to the Company an amount not exceeding Rs. \_\_\_\_\_  
\_\_\_\_\_ against any loss or damage caused to or suffered or would be caused to or suffered by the Company by reason of any breach by the said Contractor (s) of any of the terms and conditions contained in the said Agreement.
2. We, \_\_\_\_\_(indicate the name of the Bank)\_\_\_\_\_ do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said Contractor(s), of any of the terms of conditions contained in the said Agreement or by reason of the contractor(s), failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_.
3. We undertake to pay to the Company any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.

4. We, \_\_\_\_\_(indicate the name of the Bank)\_\_\_\_\_ further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall

continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till \_\_\_\_\_ Office / Department / Division of Bharat Heavy Electrical Limited certifies that the terms and conditions of the said Agreement have been fully and property carried out by the said contractor(s) and accordingly discharged this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the \_\_\_\_\_ we shall be discharged from all the liability under this guarantee thereafter.

5. We, \_\_\_\_\_(indicate the name of the Bank)\_\_\_\_\_ further agree with the Company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the power exercisable by the company against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the company or any indulgence by the company to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
7. We, \_\_\_\_\_(indicate the name of the bank)\_\_\_\_\_ lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Company in writing.

Dated the \_\_\_\_\_ day of \_\_\_\_\_

For \_\_\_\_\_(indicate the name of the bank)\_\_\_\_\_

<b>LIST OF BHEL CONSORTIUM BANK</b>	
<b>1</b>	<b>State Bank of India</b>
<b>2</b>	<b>Canara Bank</b>
<b>3</b>	<b>Bank of Baroda</b>
<b>4</b>	<b>Punjab National Bank</b>
<b>5</b>	<b>State Bank of Hyderabad</b>
<b>6</b>	<b>State Bank of Travancore</b>
<b>7</b>	<b>Corporation bank</b>
<b>8</b>	<b>Syndicate Bank</b>
<b>9</b>	<b>Indian Bank</b>
<b>10</b>	<b>Oriental Bank of Commerce</b>
<b>11</b>	<b>UCO bank</b>
<b>12</b>	<b>Central bank of India</b>
<b>13</b>	<b>IDBI Ltd.</b>
<b>14</b>	<b>HDFC Bank Ltd.</b>
<b>15</b>	<b>ICICI Bank Ltd.</b>
<b>16</b>	<b>Kotak Mahindra Bank ltd</b>
<b>17</b>	<b>The Federal bank Limited</b>
<b>18</b>	<b>Abn-Amro Bank</b>
<b>19</b>	<b>Citi Bank</b>
<b>20</b>	<b>HSBC</b>
<b>21</b>	<b>Deutsche Bank</b>
<b>22</b>	<b>Standard Chartered Bank</b>
<b>23</b>	<b>United bank of India</b>
<b>24</b>	<b>Vijaya Bank</b>
<b>25</b>	<b>Union Bank of India</b>
<b>26</b>	<b>Bank of India</b>
<b>27</b>	<b>Andhra Bank</b>
<b>28</b>	<b>Punjab &amp; Sind Bank</b>
<b>29</b>	<b>Axis Bank</b>

AUTHORISATION LETTER  
FOR E-PAYMENT/ELECTRONIC FUNDS TRANSFER (EFT/RTGS)  
PLEASE FILL UP THE FORM IN CAPITAL LETTERS ONLY

ANNEXURE-D  
Page 1 of 1

TYPE OF REQUEST (Tick One)	<input type="checkbox"/>	CREATE	<input type="checkbox"/>	CHANGE
<u>BHEL Vendor/ Supplier Code</u>	<input type="text"/>			
Company's Name	<input type="text"/>			
Address	<input type="text"/>			
City	<input type="text"/>			
Pincode	<input type="text"/>			
State	<input type="text"/>			
Contact Person(S)	<input type="text"/>			
Telephone NO.	<input type="text"/>			
FAX. No.	<input type="text"/>			
e-mail id	<input type="text"/>			
1. Bank Name	<input type="text"/>			
2. Bank Address	<input type="text"/>			
3. Bank Telephone No.	<input type="text"/>			
4. Bank Account No.	<input type="text"/>			
5. Account Type.	<input type="text"/>			
6. Bank's Branch Code	<input type="text"/>			
7. Bank Swift Code	<input type="text"/>			
(aplicable to EFT only)				
8. Enclose blank cancelled cheque	<input type="checkbox"/>	<input type="checkbox"/>		

DECLARATION


1. I as representative/Owner of the above named company, hereby authorize BHEL CFFP, Ranipur, Haridwar to electronically make payments to the designated bank account. I hereby certify that the particulars given above are true, complete and correct.  
(2) If the transsation is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold BHEL/transfereing Bank responsible.
3. This authority remains in full force untill BHEL, CFFP, Ranipur, Haridwar receives & acknowledge written notification requesting a change or cancellation.
4. I have read the contents of the covering letter and agree to discharge the responsibilty expected of me as a participant under E-payment/EFT/RTGS.

Date:

Authorized Signatory  
Designation

Company Seal

Verification By Bank

	<b>BHARAT HEAVY ELECTRICALS LIMITED</b>	CFF/M&S/PSX/ Boiler/2012-13/01
	<b>CENTRAL FOUNDRY FORGE PLANT</b>	
	<b>RANIPUR, HARDWAR (UTTRAKHAND)-249403</b>	Rev : 00
	<b>MAINTENANCE &amp; SERVICES DEPTT.</b>	Dt : 29.03.13

### Specification for RO (Reverse Osmosis) Plant for Boiler Water

This specification governs RO plant suitable for Boiler feed Water as per IS:10392 for Boiler working pressure upto 20 Kg/cm<sup>2</sup>. Vendor has to confirm pointwise as given below-

S. No.	Description	Bidder to confirm														
1	<b>Scope</b> Scope covers Design, Manufacturing, Supply, Erection, commissioning of RO plant of Capacity <b>10M<sup>3</sup>/hr.</b> The input Water quality will be as per <b>Annexure-1.</b> The Outlet Water quality of RO plant should be as per IS : 10392 ( <b>Annexure-2</b> ), suitable for Boiler working Pressure upto 20Kg/cm <sup>2</sup> . The Equipment will be used for treatment of Boiler feed Water of Boilers of capacities 15 & 18 Ton/Hr. The Equipment should be complete in all respect. Any item which is not covered in the specification and required for proper functioning, safety of equipment etc, Vendor must include those in their offer. Proper functioning of equipments is vendor's responsibility.															
2	<b>Qualifying condition</b> Offer of only those bidders will be considered who have already supplied and commissioned atleast Ten No. of RO plants of capacity 10M <sup>3</sup> /hr or higher for Industrial use in the last five years as on tender opening date. Vendor has to submit Two Years satisfactory Performance Certificate from two customers separately and list of 10 customers details. BHEL Reserves the right to verify the information/Performance of equipment.															
3	<b>Specification</b> RO plant should be suitable for 20 working hours per day and should consists of Followings															
	<b>a</b> <b>NaOCl dosing system</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Quantity</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Flow rate</td> <td style="text-align: center;">0-1.08 LPH</td> </tr> <tr> <td>Capacity of dosing Tank</td> <td style="text-align: center;">200 Lt</td> </tr> <tr> <td>MOC of Dosing tank</td> <td style="text-align: center;">HDPE</td> </tr> </table>	Quantity	1	Flow rate	0-1.08 LPH	Capacity of dosing Tank	200 Lt	MOC of Dosing tank	HDPE							
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		Make of membrane	GE/ DOW filimtec/Equivalent
		Feed flow	13.5 M <sup>3</sup> /HR
		Product flow	10 M <sup>3</sup> /HR
		Recovery	74%
		Reject flow	3.5 M <sup>3</sup> /HR
		Quantity of HPP	Two
		Make of HPP	Grundfos/ Willo/Equivalent
		Make of pressure tubes	Pentair/ Global composites/ Equivalent
<b>g</b>		<b>Instrument of RO Unit for safe operation</b>	
		Flow Meter	For RO Permeate & Reject
		Quantity	Two No
		Pressure gauge	To measure feed & reject
		Digital Conductivity Meter	To measure Conductivity of Permeate Water
		Type	Online Panel Mounted
		Low & High Pressure Switch	To limit minimum and maximum Pressure
<b>h</b>		<b>PH correction dosing system:</b>	
		Quantity	One
		Flow rate	0 – 1.08 LPH
		MOC of pump	PP
		Capacity of dosing tank	200 Liters
		MOC of Dosing tank	HDPE
		Make	Milton Roy/Eqvt
<b>i</b>		<b>RO cleaning system:</b>	
		Quantity	One
		MOC of Pump	SS316
		Capacity of solution tank	500 Liters
<b>j</b>		<b>Skid &amp; Base frame of complete unit</b>	
		One No. SS skid with base frame for Mounting all components of RO unit, Post treatment, Control Panel for aesthetic look and easy maintenance of the system.	
<b>k</b>		<b>Electrical Control Panel</b>	
		All controls in the control panel should be of standard make to ensure synchronized operation of electrical motors for feed pump, dosing pumps, and control instruments. System should have Auto/ manual mode facility for above operation. The Panel should be mounted on skid for easy and efficient operation of system.	
<b>l</b>		All interconnecting Piping Valves, Bends etc will be in Vendor's scope. BHEL Will provide piping connections from Raw Water Tank to Inlet flange of equipment and from Outlet Flange of equipment to treated Water Tank.	
		Inlet water pipe detail	
		Outlet water pipe detail	
		Any Chemical required for operation of RO plant must be provided with R O plant. Chemical required for one year of Operation of such plant must be supplied with equipments.	
		Vendor has to provide power supply required and connected Load.	
		Complete supervision, erection and commissioning shall be carried out by Vendor.	
		BHEL reserves right to test the treated water from BHEL PCRI or any other Govt. Agency	
<b>4</b>	<b>Water consumption</b>	Daily Water consumption at Boiler House is 80-120 KL	
<b>5</b>	<b>BHEL Scope</b>	All civil Work shall be carried out by BHEL however related Drawings shall be provided by Vendor.	
		Electricity, Water, Oxygen etc.	
		Power Supply will be 415 V±5%, 50Hz	
		MS Water storage Tanks for Storage of Raw & Treated Water.	
<b>6</b>	<b>O&amp;M Manual</b>	Vendor must provide five sets of Operation and Maintenance Manual.	
<b>7</b>	<b>Training</b>	Vender must provide training to our plant operators for complete Operation & maintenance of Plant at free of cost.	
<b>8</b>	<b>Warrantee</b>	Warranty of entire equipments shall be 12 months from date of commissioning	

Annexure-1

No. PCRJI/180/236  
Dt. 19/5/11

10



प्रदूषण नियन्त्रण अनुसन्धान संस्थान  
भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार (उत्तरांचल) - 249 403

**POLLUTION CONTROL RESEARCH INSTITUTE**

(A Govt. of India-UNDP/UNIDO Project)

**BHARAT HEAVY ELECTRICALS LIMITED**

RANIPUR, HARIDWAR (UA) - 249 403

(Recognised under Environment (Protection) Act, 1986)

**TEST REPORT**

**Lab Reference No:** TL110112 **Date:** 07.05.2011  
**Indentor:** Mr. Arjun Singh, Sr. Engineer (M&S-PSX), QM, CFFP, BHEL,  
Hardwar  
**Customer's Ref. No.:** CFF/M&S-PSX/2011-12/01 dated 21.04.2011  
**Work Order No.:** 11-0015-F-211  
**Sample Collected by:** Indentor **Collection Date:** 25.04.2011  
**Sample/Job:** Water Sample

PARAMETER	UNIT	OBTAINED VALUE
Alkalinity	mg/L	260
Hardness (as CaCO <sub>3</sub> )	mg/L	280
Nitrate (as NO <sub>3</sub> )	mg/L	5.08
pH	-	8.0
Phosphate (as PO <sub>4</sub> )	mg/L	0.74
Silica (as SiO <sub>2</sub> )	mg/L	7.92
Sulphate (as SO <sub>4</sub> )	mg/L	23.4
Total Dissolved Solids	mg/L	386

*S. Bhatnagar*  
(Dr. S. Bhatnagar)

Sr. Manager (PCRI)

डा. एस. भटनागर

(Dr. S. Bhatnagar)

स. प्रबन्धक (Sr. Manager)

Pollution Control Research Institute

प्रदूषण नियन्त्रण अनुसन्धान संस्थान

PCRI, Ranipur, Haridwar

*Arjun Singh*  
29.03.13

*Arjun Singh*  
29.03.13  
Sr. Engg (M&S)

- Remarks -
- 1) This report refers only to the particular sample/job submitted for testing.
  - 2) This report is not to be reproduced wholly or partly and cannot be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.
  - 3) Samples will be disposed off after one month from the date of issue of test certificate.

**TABLE 1 CHEMICAL REQUIREMENTS OF FEED WATER AND BOILER WATER FOR LOW AND MEDIUM PRESSURE BOILERS**

( Clauses 2.1 and 4.1 )

SL No.	CHARACTERISTIC	REQUIREMENT FOR BOILER PRESSURE			METHOD OF TEST ( REF TO CL No. OF )	
		Up to 2.0 MN/m <sup>2</sup>	2.1 to 3.9 MN/m <sup>2</sup>	4.0 to 5.9 MN/m <sup>2</sup>	IS : 3350- 1965*	IS : 3025- 1964†
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i) Feed Water						
a)	Total hardness ( as CaCO <sub>3</sub> ), mg/l, Max	10	1.0	0.5	—	16.1
b)	pH value	8.5 to 9.5	8.5 to 9.5	8.5 to 9.5	—	8
c)	Dissolved oxygen, mg/l, Max	0.1	0.02	0.01	25	—
d)	Silica ( as SiO <sub>2</sub> ), mg/l, Max	—	5	0.5	16	—
ii) Boiler Water						
a)	Total hardness ( of filtered sample ) ( as Ca CO <sub>3</sub> ), mg l	←————Not detectable————→			—	16.1
b)	Total alkalinity‡ ( as Ca CO <sub>3</sub> ), mg/l, Max	700	500	300	—	13
c)	Caustic alkalinity ( as Ca CO <sub>3</sub> ), mg/l, Max	350	200	60	—	15
d)	pH value	11.0 to 12.0	11.0 to 12.0	10.5 to 11.0	—	8
e)	§Residual sodium sulphite ( as Na <sub>2</sub> SO <sub>3</sub> ), mg/l	30 to 50	20 to 30	—	—	21
f)	Residual hydrazine ( as N <sub>2</sub> H <sub>4</sub> ), mg/l	0.1 to 1 ( if added )	0.1 to 0.5 ( if added )	0.05 to 0.3	26	—
g)	Ratio Na <sub>2</sub> SO <sub>4</sub> / caustic alkalinity ( as Na OH )	←————above 2.5————→			—	20.2 and 15
	or					
	Ratio NaNO <sub>3</sub> / total alkalinity ( as Na OH )	←————above 0.4————→			—	48 and 13

( Continued )

W.D.S.  
22/01/2010

By upk  
5 ( 29.3.73 )  
S. Eyal ( me )

**TABLE 1 CHEMICAL REQUIREMENTS OF FEED WATER AND BOILER WATER FOR LOW AND MEDIUM PRESSURE BOILERS — Contd**

(1)	(2)	(3)	(4)	(5)	(6)	(7)
h)	Phosphates ( as $\text{PO}_4$ ), mg/l ( if added )	20 to 40	15 to 30	5 to 20	14	—
j)	Total dissolved solids † mg/l, Max	3 500 ††	2 500	1 500	9	12
k)	Silica ( as $\text{SiO}_2$ ), mg/l	Less than 0.4 of caustic alkalinity		15	16	30

NOTE 1 — *Recovery Boilers* — The boiler feed water used should be completely demineralized and also the boiler feed water and boiler water should be conditioned in accordance with high pressure boilers working at  $5.9 \text{ MN/m}^2$  ( $60 \text{ kg/cm}^2$ ) and above ( see IS : 4343-1967\*\* ).

NOTE 2 — When feed water heaters are of copper or copper alloy constructions, the pH of the feed water should be maintained between 8.5 and 9.2 while when feed water heaters are of iron construction, the pH of the feed may be maintained between 8.5 and 9.5.

NOTE 3 — *Silica in Boiler Water* — Lower concentration of silica may be advisable for steam of turbines, which generally require less than  $0.02 \text{ mg/l}$  silica in steam.

\*Methods of test for routine control for water used in industry.

†Methods of sampling and test ( physical and chemical ) for water used in industry.

‡Total alkalinity should preferably be about 20 percent of total dissolved solids.

§Shall not apply if reducing agents other than sodium sulphite are used.

¶For riveted boilers only.

¶¶For shell type boilers depending on parameters, the limits can be relaxed.

\*\*Code of practice for treatment of water for high pressure boilers ( under revision ).