ENQUIRY

(INDIGENOUS)

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
HIGH PRESSURE BOILER PLANT
PURCHASE DEPARTMENT - FOSSIL BOILERS
THIRUCHIRAPALLI - 620014
TAMILNADU (INDIA)

PHONE: 2577629 GRAMS: BHARATELEC FAX NO: 2520719 E-mail: tsraj@bheltry.co.in Page 1/2

Web:

Enquiry No	Enquiry Date	Due Date for Quotation
2610800111	14.07.2008	09.09.2008

Please quote Enquiry No, Date and due date in all correspondences.

This is only a request for quotation and not an order

ltem	Description	Unit	Quantity		Delivery Quantity	Schedule Date
10	54233171DNP ERNiCr3 Inconel strip, size 60X0.5 mm for SAW claddinng as per Specification WCPS 805.Batch testing at Supplier's works.	KG	18000.000	18,000	.00	30.09.08
20	54253100DNP Inconel flux for SAW Cladding as per Specification WCPS-805.Batch testing at Supplier's works.	KG	27000.000	27,000	.00	30.09.08

General Note:

- I) Test Certificate, Guarantee Certificate and Third Party Inspection Certificate as per WCPS-805 (copy enclosed) should be provided.
- II. COMMERCIAL TERMS AND CONDITIONS
- 1,,QUOTATIONS

The Bidders shall submit the offer in TWO INNER ENVELOPES as indicated below which shall be sealed in one outer envelope.

Envelope I This sealed envelope should contain all the copies of technical bid together with un-priced commercial bid. This envelope should be clearly marked "Part I - Technical and commercial bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder.

Envelope II This sealed envelope should contain price details. This envelope should be clearly marked "Part II - Price bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder.

Both the envelopes (Part I & II) shall be put in one cover, duly sealed, superscribing as Part I and Part II of Enquiry No., due date of opening and the address and reference of the Bidder.

The above offer should reach this office on or before the due date by 14.00 Hrs (IST). Late offers will not be considered.

The offers should reach us before the time of opening of tenders.

The offers will be opened at 14:30 hours on the due date in the presence of the tenderers who may like to be present.

Late tenders are liable to be rejected.

Yours faithfully,

FOR BHARAT HEAVY ELECTRICALS LIMITED

T. SELVARAJ Isputy General Manager

MANAGER VI PURCHASE (FOSSIL BOILERS)

Capital Purchase, BHEL, Timushirappalli-620 014.

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Web:

2610800111 / 14.07.2008

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- POINT TO POINT CONFIRMATION TO BHEL'S SPECIFICATION AND COMMERCIAL TERMS AND CONDITIONS SHOULD BE PROVIDED IN THE ENCLOSED SHEET.
- 3. DETAILED CATALOGUE AND DRAWINGS SHOULD BE SENT ALONG WITH YOUR TECHNICAL OFFER.

Enciosures:

"LD clause has to be confirmed without fail."

"Payment to vendors will be made only thro E-Payment mode"

The offers should reach us before the time of opening of tenders. The offers will be opened at 14:30 hours on the due date in the presence of the tenderers who may like to be present.

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Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

MANAGER / PURCHASE (FOSSIL BOILERS) Yours faithfully,



WCPS - 805

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1.0 SCOPE

1.1 This specification prescribes the requirements for inconel strip electrodes and flux for cladding by submerged arc welding process.

2.0 STRIP ELECTRODE

- 2.1 GENERAL REQUIREMENT
- 2.1.1 The proposed strip electrode shall have the TUV approval for use on 20 Mn Mo Ni 55 material.
- 2.1.2 The technical delivery conditions shall be as per DIN 1736, Part 1.
- 2.1.3 The electrode shall be manufactured and controlled according to VdTUV 1753 and ASME Section III NB Div I & ASME Sec II Part C.
- 2.1.4 The electrode shall be certified according to DIN 50049-3.1 B.
- 2.1.5 The entire quantity ordered shall be supplied in one melt only.

0.025% max.

2.2 CHEMICAL COMPOSITION

The chemical composition of the strip electrode shall conform to DIN 1736 Part 1, S-Ni Cr 20 Nb material No.2.4806 with the following restrictions.

C	_	0.025701114.2.		
Cr	-	19.5% min.	co -	0.03% max.
Nb	-	2.5% min.	Co+Ta -	0.08% max.
Si	-	0.2% max.	N -	To be reported
Ti	- ,	0.4% max.	Al -	To be reported
P	-	0.015% max.	Fe -	1.0% max.

Note: Since it is contemplated to use this strip in conjunction with an all mineral type agglomerated flux, it is suggested that all necessary care be taken to maintain the minimum essential levels of intentionally added alloys like Cr & Nb and restrict to the extent possible the maximum levels of permitted impurities like Si, Ti & Fe.



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2.3 FINISH AND TEMPER

- 2.3.1 The electrode shall have a smooth finish, free from slivers, depressions, seams, laps, scratches, scale or other foreign matter that would adversely affect the welding characteristics, the operation of the welding equipment, or the properties of the deposited weld metal.
- 2.3.2 Electrodes shall be suitable for uniform uninterrupted feeding on automatic or semiautomatic welding equipment.

2.4 <u>WINDING REQUIREMENTS</u>

- 2.4.1 Liners used in coils with support are for the purpose of preventing damage or distortion during normal handling and use of electrodes upon them. Liners shall be of such material and design to accomplish this. Liners shall be sufficiently clean and dry to maintain the cleanliness of the electrode.
- 2.4.2 Each coil shall be of only one heat and be of continuous length of electrode.
- 2.4.3 A spooled electrode shall be closely wound in layers, with or without gap between layers and without kinks, waves, sharp bends, which would interfere with the free feeding of the electrode or easy unwinding of the spool. The free end of the spooled electrode shall be secured and identified to enable easy location.

2.5 PACKAGING

The electrodes shall be suitably packaged to insure against injuries during shipment or storage under normal conditions.

2.5.1 COIL SIZE

Inner diameter

300 mm

Width

60 mm

Approx. Weight

25 kg.

2.5.2 The coils shall be wrapped in corrosion shielding gas paper and sealed with plastic foil or any other moisture proof packing. Each of such packs shall be contained in cardboard boxes, several such boxes being crated in sea worthy wooden cases.



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2.5.3 An identification tag shall be attached to each coil in addition to the label put on every spool and cardboard box.

2.6 MARKING

- 2.6.1 Each spool and the outside of each package shall be legibly marked with the following information:
 - 1. Classification and specification numbers.
 - 2. Supplier's name and trade designation.
 - 3. Electrode size length and net weight.
 - 4. Lot, control or heat number.
- 3.0 FLUX
- 3.1 GENERAL REQUIREMENTS FOR FLUX
- 3.2 The flux shall be "Special Flux OK 10.16 or equivalent.
- 3.1.1 The proposed flux should have the TUV approval for use on 20 MnMoNi55 material with strip electrode mentioned in para 2.0.
- 3.1.2 The flux shall be manufactured and controlled according to VdTUV 1753 and ASME Section III NB Div I & ASME Sec II Part C.
- 3.1.3 The technical delivery conditions shall be as per DIN 1736, Part 1.
- 3.1.4 The flux shall be certified according to DIN 50049-3.1B.
- 3.1.5 The entire ordered quantity shall be from one batch only.



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3.2 MAIN CONSTITUENTS OF THE FLUX

3.2.1 Suggested constitution of the flux by weight percentage is as follows:

SiO₂ 6 - 8%

Al₂ O₂ 23 - 29%

each batch/lot of flux shall be subjected to check analysis and

values reported.

TiO₂ 6 - 9%

CaF₂ 43 - 57%

MnO 4 - 5%

Basicity 2.5 after Tyler

3.3 WELD METAL COMPOSITION

3.3.1 The composition of the weld metal at 5 and 6 mm above the base metal shall be as per the requirements of DIN 1736 material No. 2.4806 subject to the following restrictions:

C 0.025% max.

Si 0.50% max.

Elements N & Al are to be Reported

Nb 2.00 - 2.5%

Co 0.03% max.

Co + Ta 0.08% max.

P 0.015% max.



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3.4 PARTICLE SIZE

3.4.1 The flux particle size shall conform to the following:

Sieve size in mm

% Cumulative weight %

+1.5(-1.75)

5 max.

+0.5

40 - 70

+0.25

≥ 70

Each batch/lot of flux shall be furnished with Mesh size certificate.

3.5 CHEMICAL AND MECHANICAL PROPERTIES

- 3.5.1 The electrode and flux combination shall be used to produce test plates (by cladding technique) and subjected to the mechanical and chemical test.
- 3.5.2 The acceptance limits for mechanical tests shall be as per DIN 1736 Part II Material No.2.4806.
- 3.5.3 The weld metal chemistry at 5 and 6 mm above base metal for a weld cladding shall meet the requirements of 3.3.
- 3.5.4 The chemical properties as specified above shall be obtained from a weld deposit made using the proposed flux in conjunction with a strip meeting the requirements of 2.2.

3.6 MARKING

The outside of the each drum and package in which the flux is furnished shall be legibly marked with the following information.

B.H.

SPECIFICATION

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- 1. Flux classification and specification numbers.
- 2. Supplier's name and trade designations.
- 3. Net weight.
- 4. Lot, batch or control number, Date of manufacture.

3.7 PACKAGING AND STORAGE

- 3.7.1 Flux shall be suitably packaged to insure against damage during shipment or storage under tropical conditions.
- 3.7.2 A flux in the original unopened package shall withstand storage under tropical conditions for atleast four years without such storage affecting its welding characteristics or the weld properties.
- 3.7.3 The flux shall be packed in 250 kg water tight steel drums and sealed.

CAPITAL PURCHASE COMMERCIAL TERMS AND CONDITIONS

1.0 QUOTATIONS

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Both the envelopes (Part I & II) shall be put in one cover, duly sealed, superscribing as Part I and Part II of Enquiry No., due date of opening and the address and reference of the Bidder.

The above offer should reach this office on or before the due date by 14.00 Hrs (IST). Late offers will not be considered.

Tender should not be addressed to any Individual's name but only by designation to:

DEPUTY GENERAL MANAGER / SP & WC BHARAT HEAVY ELECTRICALS LIMITED HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620 014 TAMIL NADU, INDIA

Tenders should be free from CORRECTION AND ERASURES, Corrections if any, must be attested. All amount shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.

Offers should be in ENGLISH and accompanied by detailed technical literature, catalogue and detailed dimensional drawings in ENGLISH or otherwise, the offers will not be considered.

2.0 PART I (TECHNICAL & COMMERCIAL BID)

2.1 Technical

This part shall include / indicate the following:

- 2.1.1. Offer should contain complete scope of supply with all technical details, specifications, delivery and other commercial terms and conditions.
- 2.1.2. Point by point confirmation for the Technical Specification enclosed to be provided. if there are any deviation, the same should be clearly specified. Offers received without confirmation to our specification will be rejected.
- 2.1.3. Relevant catalogues to be attached
- 2.1.4. Information on shipping weight and cubage (length, width & height) to be provided.
- 2.1.5. Incase of foreign bidder offer, the Principal's technical offer should be enclosed.

2.2 Commercial

This part shall include / indicate the following:

- 2.2.1. Port of shipment / Station of despatch
- 2.2.2. Terms of payment
- 2.2.3. Taxes & duties applicable.
- 2.2.4. Delivery Schedule
- 2.2.5. Offer validity
- 2.2.6. Country of origin
- 2.2.7. Percentage of agency commission if any along with a copy of Agency agreement.
- 2.2.8. A copy of "Un-Priced Part II" i.e., a copy of the Price Bid without the price details to be enclosed

3.0 PART II (PRICE-BID)

This part should contain the schedule of price particulars and to be co-related to the technical details provided in Part I.

4.0 OPENING OF TENDERS

The Part I - Technical & commercial bid alone would be opened on the Tender opening date. The Part II - Price bid of Technically suitable Bidders alone would be opened. The Technically suitable Bidders would be informed about the tender opening date. Clarifications if any required by BHEL for Technical evaluation would be sought from Bidders before opening of Part II - price bid.

5.0 GENERAL

- 5.1. Incomplete offers will not be considered.
- 5.2. Fixed price: Prices quoted by the bidder shall be fixed and not subject to any escalation whatsoever during the period of bid validity and execution of the Purchase Order. A bid submitted with an adjustable price will be treated as non responsive and rejected. Prices shall be written in words and figures. In the event of difference, the price in words shall be valid and binding. Unit prices shall be considered correct in the event of any discrepancy with regard to total price.
- 5.3. Bid currency: Indian bidders should submit the prices only in Indian Rupees. Foreign bidders may submit their bid in their home currency.
- 5.4. Terms of Delivery: Bidders are required to quote their best delivery period. Foreign Bidders should submit their offer for net FOB Nearest Sea / Air Port. Indian Bidders should submit their offer for FOR Despatching station.
- 5.5. Taxes and Duties: All Taxes and Duties payable as extra to the quoted price should be specifically stated in offers along with CST & TNGST No / Tariff No. etc., failing which the purchaser will not be liable for payment of such Taxes and Duties. Our T.N.G.S.T No. 356005 Dt. 04-04-1995, C.S.T. No. 239383 dt. 11-06-1991.
- 5.6. Validity: The offers shall be kept open for acceptance for 120 days (one hundred and twenty days) from the date of opening of the tender (Part I).

5.7. Terms of Payment:

5.7.1. Indian Bidders

5.7.1.1. The preferred payment terms are indicated below

5.7.1.3. 100% payment, within 45 to 90 days, after receipt / acceptance / commissioning of equipment at BHEL, Tiruchi..

5.7.2. Foreign Bidders

An Irrevocable Letter of Credit shall be established for 90% of the value of the goods. Balance 10% shall be paid on receipt / acceptance / commissioning of the goods at BHEL All bank charges outside India are to Vendor's account.

- 5.8. Liquidated damages: It is clearly understood among the parties to the contract the "Time is the essence of the contract". Therefore, the delivery of the goods specified in the purchase order should be made within the time prescribed. Where the seller supplies or despatches the goods, beyond the delivery period specified the purchaser will have no obligation to accept the goods. If accepted liquidated damages at the rate of 1/2% of the value of goods delayed for each week of delay subject to a maximum of 15% of the order value will be levied.
- 5.9. Risk purchase: Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefor. The supplier shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases.
- 5.10. Agency commission: In case of Foreign Bidders, agency commission if any, payable to their Indian Agents, shall shown separately in the Offer. This will be paid by us in India, in Indian Rupees, on satisfactory completion of the Contract. Copies of current Agency Agreement / Authorization Letter in respect of Agency Commission shall be furnished alongwith offer. For calculation of Rupee equivalent of Agency Commission, exchange rate as prevailing on the date of offer will be taken.
- 5.11. Test certificates / Operating and Maintenance manuals: The Bidders shall clearly mention in their offer, that Test Certificates and Operating Maintenance Manuals, etc., as called for in the Technical Specification, in the required number of copies will be provided at no extra cost.
- 5.12. Modvat credit: (for Indian Bidders only) If any Excise Duty is payable, the chapter head / sub-head reference and the rate of the duty should be quoted. If the tender is availing MODVAT credit for his input materials, the effect of proforma credit should be passed on to the purchaser.
- 5.13. Packing and marking: The Supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit.
- 5.14. Indian agents representing Foreign Manufacturer: Indian agents representing foreign manufacturer should enclose with their offer the letter from their Principal authorising the Indian agent to submit the offer on the Principal's behalf. However the original offer should be directly from the Principal. In case the Indian agent submits offer on their Letter head then a cover letter (in original) from the Principal should be enclosed, clearly mentioning that they are bound by the offer submitted by the Indian agent on their behalf.
- 5.15. Purchase preference will be given to CPSUs as per Government guidelines.
- 5.16. BHEL shall be at liberty to reject or accept any tender, part or in full, at their own discretion and any such action is not liable for any question or claim against BHEL.

For any queries / clarifications the bidders may contact us through our FAX NO. +91 431 2520719 or through e-mail trai@bheltry.co.in (or) psivasub@bheltry.co.in

INSPECTING AUTHORITIES

NAME OF THE AUTHORITY

- 1. Chief Inspector of Boilers Assam
- Chief Inspector of Boilers West Bengal.
- Chief Inspector of Boilers Bihar.
- Director of Bollers, Maharashira.
- Chief Inspector of Boilers, Gujarat.
- 6. Chief Inspector of Boilers, Dethi.
- 7. Chief Inspector of Bollers, Tamil Nadu,
- 8. Director of Boilers, Madhya Pradesh.
- Director of Boilers, Punjab.
- 10. Chief Inspector of Boilers, Orissa.
- Director of Boilers, Uttar Pradesh.
- 12. Director of Bollers, Andhra Fradesh.
- 13. Chief inspector of Boilers, Karnataka
- 14. Chief Inspector of Boilers, Rajesthar.
- 15. Chief Inspector of Boilers, Kerala
- 16. Chief Impector of Bollers, Haryana
- 17. Dy. Chief inspector of Bollers, Positionary Administration Positionary
- 18. Chief inspector of Bollers Himachal Pracess.

AREA OF OPERATION

Assam

Weit Bengal

Bihar -

Maharaakka

Cujarat, Daman & Diu and Dadra & Nagar Haveli

N.C.T.D.

Temilnedi

Madhya Pradesh

Punjab

Orissa

Uttar Pracesh

Andhra Pradesh

Kamataka

Rejesthen

Kerala

Haryana & Cheadainth

Pondicherry

Handal Prodest



CBF113661

CBF113427

- J3. M/s. Velosi Certification Bureau Ltd., 318a Kings Road, Cliffon House Reading, Berkshire, RGI 4IO, United Kingdom
- 34. M/s ABSG Consulting Inc. 16855, North Chase Drive, Houston, Texas 77060-6008, U.S.A.
- 35. M/s Moody International Ltd., Cuckfield House, High Street, Cuckfield, West Sussex, RH 17 SEL, U.K.
- 36 M/s TUV Rheinland, Berlin-Brandenburgne, Am Grauen Stein – 51195 Klon, Germany.
- M/s OOO "TekhnoLogicheskielinergosistime",
 I, Kalinia St. Belgorod, 308001,
 RUSSIA.
- 38. M/s Det Norske Veritas, Veritusveien 1, P.O. box 300, N-1322. Hovik, NORWAY.
- M/s National Text House,
 11/1, Judges Court Road,
 Alipore, Calcutta 700027.



BHARAT HEAVY ELECTRICALS LIMITED, TRICHIRAPALLI – 620 014 \$P & WC/MM/MFG

(To be fifled and submitted along with Offer)	
BHEL Commercial Terms and Conditions for Import Supplies	Vendor's Confirmation / Comments
Technical confirmation to BHEL's Specification as called for in BHEL Format shall be furnished. If needed additional sheets shall be used.	
Prices shall be quoted item wise only as per the model format enclosed.	
Prices shall be quoted on "FIRM PRICE" basis only. The prices should by only on FOB/FCA basis inclusive of Packing & Forwarding charges if any	
Validity of offer shall be for a minimum period of 120 days from the date of Tender opening	
Delivery period from the date of Letter of Intent shall be clearly mentioned in the offer.	
Liquidated damages @ ½% per week subject to a maximum of 15% of the order value shall be applicable for delay in deliveries.	
Following Risk Purchase clause shall be applicable: The Purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated or if the same were not available, the best and the nearest available substitute therefore. The supplier shall be liable for any loss, which the Purchaser may sustain by reason of such risk purchases.	
Payment terms for Foreign vendor (Principal): 90% value of the goods will be paid through an irrevocable Letter of Credit established by our bankers. Balance 10% will be paid against acceptance of goods for which supplementary invoice 10% of total Purchase order value shall be submitted. All bank charges outside India are to vendor's account only.	·
Payment terms for Indian Agent: Indian Agency commission, if any, shall be clearly specified in the offer and the same will be paid in Indian Rupees against acceptance of the materials.	
Part Shipment or Transhipment is not permissible	
Any warranty replacement during warranty period shall be supplied free of charge on FOR BHEL, Trichy basis.	
Materials will be inspected and proved at vendor's works prior to dispatch. However final inspection and acceptance of equipment will be after installation at BHEL, Trichy.	
Offers should be submitted only in sealed cover super-scribing clearly the Enquiry reference and due date.	:

NOTE:-

- a) It is confirmed that all the terms and conditions stipulated in the Enquiry have been fully understood by us and all clarifications & details have been obtained.
- b) The prices are to be offered only on FOB/FCA basis, inclusive of Packing & Forwarding charges if any.
- c) Your specific acceptance to our <u>Payment terms</u>, <u>LD</u>, <u>Risk Purchase Clause</u> are essential for consideration of your offer. Other wise your offer is liable for rejection.

CBF113427

MODEL PRICE BID FORMAT FOR FOREIGN VENDORS

S.No. Description of Item

Unit

Qty

Rate

Value

Ex-work Value

Packing & Forwarding Charges, If any

FOB /FCA Charges, if any

FOB Value

Approximate Freight Charges

Approximate Transit Insurance Charges

Approximate Gross Weight, Net. Weight & Dimensions of the Consignment

Signature & Seal of Vendor

NOTE: The Price bid should submitted strictly in line with the above FORMAT.