



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

Purchase / PCPS

TITLE HIGH VELOCITY OXY FUEL(HVOF) METAL SPRAYING OF CFBC BOILERS WATERWALL PANELS FOR 64 Sq.m.	Phone: +91 431 2574043/2574160 Fax : +91 431 252 0233 / 0525 Email : imuthu@bheltry.co.in majothi@bheltry.co.in
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	Reference Number: Enquiry MM/PCPS/HVOF METAL SPRAY	Enquiry Date: 26.11.2011	Due date for submission of quotation: 21.12.2011
You are requested to quote the Enquiry number date and due date in all your correspondences. This is only a request for quotation and not an order			

BHEL/Trichy is looking for Bidders for In-Situ HVOF (High Velocity Oxygen Fuel) Metal spraying of CFBC boilers Waterwall Panels for 64 Sq.m.

ENCLOSURE :

- 1) SPECIFICATIONS FOR IN-SITU HVOF COATING OF KONIAMBO CFBC BOILER WATER WALL TUBES (SPECIFICATION NO.: CFBC-HVOF-001/REV.02), PAGE NO.: 01 OF 06 TO 03 OF 06.
- 2) ANNEXURE - AA: EQUIPMENT, CONSUMABLES, INSTRUMENTS & MAN POWER TO BE ARRANGED BY VENDOR - PAGE NO.: 04 OF 06, 05 OF 06.
- 3) ANNEXURE - BB: MATERIALS & UTILITIES ARRANGED BY BHEL OR CUSTOMER AT SITE - PAGE NO: 06 OF 06
- 4) SKETCH NO:4-5312-PP-001/REV00 - COMBUSTOR WATER WALL PLAN VIEW - 1 PAGE
- 5) SCOPE FOR HVOF COATING - KONIAMBO CFBC BOILER - MR:319000-00420-MR 0150-0003/Rev.07- 1 PAGE
- 6) ANNEXURE - INDICATIVE CHART DEFINING SCOPE OF WORK BEARING NO: MR:31900-00420-MR-0150-0003 / Rev.07* - 1 PAGE

BHEL commercial terms & conditions with Price Bid formats and all annexure can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units) Bharat Heavy Electricals Limited) under enquiry reference "MM/PCPS/HVOF METAL SPRAY"

Tenders should reach us before 14:00 hours on the due date
Technical bid will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present.

Yours faithfully,
For Bharath Heavy Electricals Limited

Purchase Officer / Purchase/ PCPS

BHEL/FBC&HRSG/Purchase

TERMS AND CONDITIONS (for ENQUIRY)

1 (a) QUOTATION: Each tender should be sent in double cover, inner cover should be sealed with tender's distinctive seal and superscribed with correct tender No. item of supply and due date of opening. The outer cover should only bear the address of this office and should not have any indication that a tender is within. Two or more quotation should not be sent in one cover but the quotation against each tender should be sent separately to avoid confusion. Tender should not be addressed to any individual's name but only by designation.

(b) Tenders should be free from CORRECTION AND ERASURES. Corrections if any, must be attested. All amounts 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.

© Price should be net F.O.R dispatching station inclusive of risk in transit and remain valid for 60 days from due date.

(d) If any Sales Tax is payable as extra to the quoted price it should be specifically stated in quotations along with CST & TNGST No. failing which the purchaser will not be liable for payment of Sales Tax. Our T N G S T No.3560005 Dt.01-04-1995, CST No.239383 Dt.11.06.1991.

(e) No revision of prices will be entertained after tenders are opened.

(f) Manufacturer's Name, Trade Mark or Patent No. if any should be specified. Illustrative leaflets giving technical particulars are required along with quotation wherever necessary.

(g) Product with ISI Certification marks will be preferred.

h) The Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any tender in part or full without assigning any reason whatsoever.

2. SAMPLES: Wherever possible, sample should be submitted separately whether specifically requested or not so as to reach the Purchaser on or before the due date of the enquiry. They should be clearly marked with the enquiry No and the date on the outside cover to facilitate identification.

3. PACKING AND MARKING: The supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit.

4 TERMS OF PAYMENT: Payment will be made within 30 days of satisfactory receipt of materials at site. Wherever required by the purchaser, the successful tenderer must send the operation & maintenance manuals, test certificate, drawings etc., for the materials ordered. These should be sent immediately after dispatch of the materials and a statement to that effect should be made in the invoice. Failure to comply with this provision will result in delay in payment of the bills. Goods dispatched either by V P P or by the document presented through bank will not be accepted unless agreed to by the Purchaser.

The duplicate copy of the invoice meant for the transporters should accompany the material as stipulated under C.E Rules 52A and 173C (or) 57GG. A Photostat copy of the above invoice for each delivery challen should be submitted along with the original bills routed through bank or submitted directly to BHEL Finance Department.

5 SECURITY DEPOSIT: For purchases over Rs.5,000/- the successful tenderer/s may be requested to furnish a Bank Guarantee. Security Deposit for an appropriate value as may be determined by BHEL.

6 LIQUIDATED DAMAGES/PENALTY AND INTEREST ON ADVANCES FOR DELAY IN DELIVERY:

If the supplier fails to deliver the raw material / equipment / components within the period in the contract the purchaser shall deduct Liquidated Damages a sum equivalent to 0.5% of the price for each week of delay up to a maximum of 15% of the price of the delayed/undelivered goods. In addition to the recovery of interest at normal cash credit rate plus 2% for the unadjusted portion of the advances. If the delay in delivery of a part contributes to delay in execution of total system. LD and interest on advances will be recovered on the total contract price/total advance paid.

7 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 dispatch within the time stipulated as aforesaid of 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 in addition to penalty at the rate mentioned in clause 6 above.

8 PREFERENTIAL DELIVERY: It should be noted if a contract is placed on a higher tender as a result of this invitation to tender in preference to the lowest acceptable offer in consideration of the earlier delivery, the seller will be liable to pay to the purchaser the difference between the contract rate and that of the lowest acceptable tender on the basis of final price F O R destination, including all elements of freights, sales tax, duties and other incidental in case of complete supplies in terms of such contract within the date of delivery specified in the tender and incorporated in the contract.

9 MODVAT/CREDIT: 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. Tender under " MODVAT" shall be preferred.

10 GENERAL : The Purchaser reserves the right to split up the tender and place order for individual items with different tenders and also increase or decrease the quantity.

Any other conditions which might have been quoted by the Seller and are in contravention to the terms prescribed in the order and which have not been specifically accepted in by Purchaser will not be applicable to the contract.

6

Specifications for In - situ HVOF coating of Koniambo CFBC boiler Water wall tubes
(Specification No. : CFBC-HVOF-001/Rev.02)

Introduction

The vendor has to carry out in-situ HVOF coating of boiler tubes inside the CFBC boiler at a height of about 16 meters from ground (approximately 9 meters from the nozzle grate). Equipment/facilities provided at site to the vendor are listed under Clause BB of this specification. All necessary equipment, working personnel, consumables including powder required for coating should be arranged by the vendor (Refer clause AA of this specification). The vendor should visit the site and decide about the placement of various equipment and cables and other accessories required for carrying out the coating job. This specification is common for two boilers coming up in New Caledonia – near Australia.

I. Technical Specifications:

A. Area to be coated: The area to be coated in the individual boiler is approximately 32 sq. m/boiler in Koniambo CFBC –New Caledonia.

B. Grit blasting: Grit blasting of boiler tubes in-situ using the following:

1. Grit blasting machine: grit blasting at a min. 7 ata pressure.
2. Grit : Alumina grit of size 16 - 20 mesh
3. Surface finish after grit blasting: 10-15 microns
4. Compressed air: Pressure and quantity to be specified by vendor.

C. HVOF coating: HVOF coating of boiler tube surfaces using chromium carbide based powder as per the requirement given below:

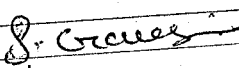
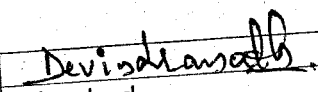
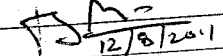
1. HVOF coating system: Portable HVOF system, gas or liquid based.
2. Coating thickness: 200-300 microns with uniform taper. Taper from 200-300 micron thickness to zero over a height of 250mm.
3. Coating hardness: Min. 750 HV_{0.3} micro hardness on coated samples.

II. Scope of work by Vendor :

A. Equipment, Materials and consumables : The vendor should arrange for alumina grit, grit blasting machine, Chromium Carbide Coating powder, Portable HVOF coating system and other paraphernalia required for HVOF coating. (Refer clause AA & BB of this specification).

Sample ($\text{Cr}_2\text{C}_3 + 25 \text{ NiCr}$) Powder (100 gms) along with the test certificate (of the source where it is bought) used for spraying to be submitted (to BHEL – Trichy) for our analysis & approval prior to start of work (grit size and morphology).

Removal of debris after grit blasting and coating shall be under the scope of the vendor.

		
Prepared	Checked	Approved

B. Spares and maintenance of equipment: The vendor should have minimum two spray guns, two powder hoppers and necessary spares for continuous operation. Maintenance of equipment is under the scope of the vendor.

C. Place and duration: The work has to be carried out at project sites located at New Caledonia. From the date of order, vendor should mobilize the required powder and other equipment & facilities (that are under vendor scope) at the site for start of operation within 30 days. The entire job for one boiler should be completed and handover the boiler to BHEL within 7 - 12 working days in one visit. The work has to be carried out in all the shifts.

D. Quality: Surface preparation and coating quality such as surface roughness after grit blasting, coating thickness, will be monitored by the supplier. Supervision and ensuring the quality of coating and the workmanship shall be the prime responsibility of the vendor. However, BHEL will have the right to only cross check the parameters for their own reference and information which is independent of the onus of responsibility on the part of the vendor in fulfilling the work in line with the mutually agreed scope/specification. BHEL will cross check the coating thickness and surface roughness with the specified requirement. The vendor should bring calibrated surface roughness and thickness measuring instruments to site for in-situ measurement. The personnel used for HVOF coating shall be qualified and the procedure adopted by the vendor shall be submitted for evaluation.

E. Vendor evaluation: The vendor should submit data in the enclosed format regarding HVOF equipment to be used, fuel being used, fuel flow rate, oxygen/air pressure and flow rate and cooling water flow rate etc. Vendor shall also submit two manually coated samples with taper (200-300 micron thickness coating for a height of 250mm and uniform tapering from 200-300 micron to 0 for a height of 250mm) on one side and grit blasted surface on the other side as required for evaluation to BHEL Trichy. The vendors will be qualified based on the evaluation of the coating. In addition, experience in HVOF at site at least with one customer is desired (reference to be provided).

F. Safety: Safety of working personnel, machinery and materials including handling of fuel and supporting gases will be sole responsibility of the vendor. Safety equipment like safety shoes, belts, helmets, ear plugs, gas masks / artificial respiration kits etc will be arranged at site.(Refer Doc.BB).All Statutory safety requirements for carrying out the HVOF coating, if any, should be taken care by the vendor.

G. Guarantee: The vendor shall stand guarantee for the quality, life of the coating and workmanship. The life of the coating shall be minimum two years from the date of application. The above is in addition to their meeting out the powder quality requirements.

<i>S. Ganesan</i>	<i>Devinthasath</i>	<i>PSM</i> 12/08/2011
Prepared	Checked	Approved

The guarantee includes conformity on the parameters viz. micro structure & hardness as specified. Premature peeling off due to poor powder quality, poor coating quality and improper workmanship including surface preparation and coating within the guarantee period shall be rectified and the required area shall be recoated by the vendor at their own cost within a short notice during the guarantee period within a short period of one week. Normal gradual erosion over the guarantee period due to boiler operations is excluded from the scope of guarantee.

H. Operators Qualification: Vendor shall qualify minimum 3 operators to be engaged in the HVOF coating at site as per the procedure laid down in AWS and produce records of qualification of such operators to BHEL-Trichy for verification. Vendor shall employ only those qualified operators at site for carrying out the HVOF coating.

<u>S. Ganesan</u>	<u>Devindranath</u>	<u>[Signature]</u> 12/08/2011
Prepared	Checked	Approved

AA: Equipment, Consumables, Instruments & Man power to be arranged by Vendor:

1. Equipment:

Sl. No.	Description of Equipment	CE marking requirement to be provided prior to shipment.	Remark	Vendor to specify the requirement in this column.
1	Grit blasting machine	Yes	Quantity - 1 set	
2	HVOF metal spray system complete with powder feeder, hoses & fittings etc.	Yes	Quantity - 2 sets	
3	Any other equipments deemed necessary	Yes		
4	Connections to Compressor		Terminal points, end connection details with mating flanges will be furnished by BHEL/Customer	
5	Compressor hose and fittings	As per regulatory requirements		

2. Consumables:

Sl. No.	Description of consumable	CE marking requirement to be provided prior to shipment.	Remarks	Vendor to specify the requirement in this column.
1	Alumina grit	Yes	Quality & Quantity to be specified	
2	Chromium carbide Coating Powder	Yes	Quality & Quantity to be specified	

<i>S. Ganesan</i>	<i>Devindranath</i>	<i>VSM</i> 12/08/2011
Prepared	Checked	Approved

3. Instruments:

Sl. No.	Description of Instrument	Remarks	Vendor to specify the requirement in this column.
1	Surface Roughness meter		
2	Coating thickness meter		
3	Hardness tester		

4. Man power:

Sl. No.	Description of Instrument	Remarks	Vendor to specify the requirement in this column.
1	Skilled person for grit blasting & coating for all shift operation.	Man days to be specified	
2	Unskilled person for grit blasting & coating for all shift operation.	Man days to be specified	
3	Supervisor	Man days to be specified	

5. General:

1. Vendor to furnish the cleaning methodology and disposal details during and after HVOF coating at site.
2. MSDS (Material safety data sheet) to be provided by the vendor.
3. Written procedure on HVOF coating shall be furnished by the vendor.

8. <u>Green</u>	<u>Devindanath</u>	<u>12/08/2011</u>
Prepared	Checked	Approved

BB:Materials & Utilities arranged by BHEL or customer at site:

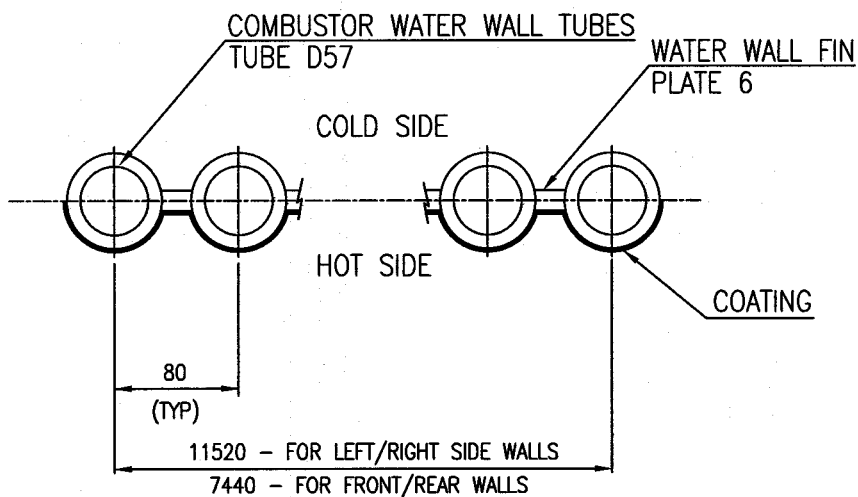
Sl. No.	Description	Remarks	Vendor to specify the requirement in this column.
1	Power supply	3 ph. / 1 ph. Voltage, Amperage requirement to be specified.	
2	Space & Water	Requirement to be specified by the vendor.	
3	Scaffolding		
4	Compressor/Compressed air.	Quantity & Pressure to be specified by the vendor.	
5	Safety equipment	i) Scaffolding ii) Safety shoes iii) Safety belt/harness iv) Safety goggles v) Safety gloves vi) Ear plugs vii) Gas masks/ artificial respiration kit viii) Safety guidelines ix) Statutory licence	
6	Buffer tank/manifold for fuel	Quantity, pressure & temperature to be specified by the vendor.	
7	Oxygen	Quantity, pressure, temperature, flow to be specified by the vendor.	
8	Nitrogen	Quantity, pressure, temperature, flow to be specified by the vendor.	
9	Fuel (Propane Gas or LPG)	Quantity, pressure, temperature, flow to be specified by the vendor.	

General:

- 1) Schedule of HVOF coating will be furnished by BHEL.

<i>S. G...</i>	<i>Devind...</i>	<i>12/08/2011</i>
Prepared	Checked	Approved

HVOF COATING ON COMBUSTOR WALLS



COMBUSTOR WATER WALL PLAN VIEW

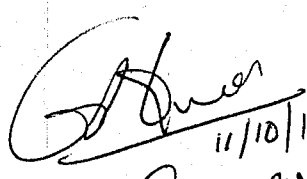
NOTE:

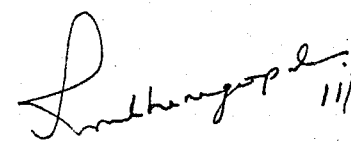
01. HVOF COATING TO BE DONE ON ALL 4 SIDES OF COMBUSTOR WATER WALLS OF THE CFBC BOILER
02. THE ABOVE PLAN VIEW SHOWS THE SURFACE PROFILE OF THE WATER WALL TO BE HVOF COATED.
03. FOR DETAILS REFER HVOF COATING SPECIFICATION No: CFBC-HVOF-001.

PROJECT: KONIAMBO-CFBC BOILER

PREPARED T.S	CHECKED T.R	APPROVED S.B	SKETCH No: 4-5312-PP-001	REV 00
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Koniambo CFBC Boiler				
MR-319000-00420-MR-0150-0003 Rev.07				
Scope for HVOF Coating				
S.No.	System	Scope	CE marking requirement to be provided by BHEL prior to shipment	Remarks
scope of work of BHEL /sub vendor/M/s PK				
A Grit blasting:				
1	Grit blasting machine	Vendor (Application - M/s PK)	yes	
2	Alumina grit	Vendor (Application - M/s PK)	MSDS data sheet	1. Quantity of Alumina by Vendor . 2. Disposal of waste by vendor. 3. Material Safety Data Sheet (MSDS) data sheet by vendor.
3	Compressor / Compressed air	M/s PK	not applicable	Pressure requirement to be provided by Vendor.
4	Connections for Compressor	Vendor (Application - M/s PK)	not applicable	Terminal point for HVOF vendor: M/S PK will furnish the end connection details with mating flanges.
5	Compressor hose and fitting provided for the coating	Vendor (Application - M/s PK)	As per local regulatory requirement (yes)	
B HVOF Coating:				
1	Portable HVOF system	Vendor (Application - M/s PK)	yes	
2	Chromium Carbide coating powder (HVOF)	Vendor (Material - BHEL)	MSDS data sheet	
3	Oxygen	M/s PK	NA	quantity, pressure, temperature, flow to be specified by Vendor
4	Nitrogen	M/s PK	NA	quantity, pressure, temperature, flow to be specified by Vendor
5	Fuel (Propane Gas or LPG)	M/s PK	N/A	quantity, pressure, temperature, flow to be specified by Vendor
6	Buffer tank / Manifold for fuel storage	M/s PK	NA	quantity, pressure, temperature, flow to be specified by Vendor
7	Powder feeder	Vendor (Application - M/s PK)	MSDS data sheet	quantity, pressure, temperature, flow to be specified by Vendor. PK will only provide air connection and all other items to be provided by Vendor.
C Safety equipments:				
1	Scaffolding	M/s PK		PK will provide as per local regulations
2	Safety shoes	M/s PK		PK will provide as per local regulations
3	Safety belt / Harness	M/s PK		PK will provide as per local regulations
4	Safety goggles	M/s PK		PK will provide as per local regulations
5	Safety gloves	M/s PK		PK will provide as per local regulations
6	Ear plugs	M/s PK		PK will provide as per local regulations
7	Gas masks / artificial respiration kit	M/s PK		PK will provide as per local regulations
8	Safety guidelines	M/s PK		PK will provide as per local regulations
9	Statutory License	M/s PK/BHEL/Vendor input as required.		PK will provide as per local regulations
D Others				
1	Power supply	M/s PK		Vendor to indicate power supply requirement in line with project specification
2	Space	M/s PK		
3	Water	M/s PK		Requirement to be specified
4	Calibrated surface roughness & thickness measuring instruments.	Vendor (Application - M/s PK)	Yes	Vendor to provide details
5	Cleanliness	Vendor (Application - M/s PK)		Vendor will clean the area and disposal details to be provided
Written procedure				
		Vendor		
Visa requirement				
		PK		Details of passport and duration to be provided
Schedule				
		PK		schedule for mobilization
Scope of Work.				
I Material		Data sheet		
		Storage procedure		
II Application		Scope		
		Vendor	Customer	
		1) Special equipment	1) Schedule of requirement for visit	
		2) Skilled man power	*2) Work force needed for preparatory work	
		3) Application procedure	3) Scaffolding accessories for approach	
		4) QAP	4) Power, Gas, Air, etc	
		5) Details of *	5) Office	
		6) Details of support need from customer	6) VISA	
III Inspection & Protocol		BHEL, CUSTOMER, VENDOR at site.		
IV Vendor Approval				
Remarks				
All the equipment and components brought in by the HVOF vendor will be taken back after the completion of coating.				
Packing list to be furnished by BHEL to PK.				
The safety and CE marking etc, requirement of the system, equipment, amenities provided by PK to be taken care of by PK.				
Material safety Data Sheet shall be provided by the vendor.				
Any machines, tools, tackles and other paraphernalia required, other than specified above shall be arranged by the vendor as per regulatory requirement.				
BHEL will obtain two offers from the HVOF vendors. One for Material supply for BHEL to place Purchase order. And the second offer for application in sealed cover of				
L1 bidder for material part will be given to customer for placing Purchase order by customer.				
Tentative Schedule of vendor visit to Koniambo site for HVOF coating:				
CFBC Boiler #1		April- 2012		
CFBC Boiler #2		September-2012		


 11/10/11
 (O.P. M. V. R. A. 11)


 11/11/11
 (R. MADHANAGOPAL)
 BHEL - TRUCHY.

ANNEXURE - Indicative chart defining Scope of work bearing No: MR:319000-00420-MR-0150-0003

Rev.07*

1) Two offers are to be sent by HVOF vendors in two parts (Techno-commercial and Price bid separately in two sealed covers) as following:

- a) One for **Material (Chromium Carbide Coating powder) supply** for BHEL to place Purchase order by BHEL.
- b) The second offer is for **Application of Chromium Carbide Coating powder**. The technical bid of all vendors will be opened by M/s. BHEL. The price bid of technically qualified L1 vendor will be give to our customer M/s.PK, for placing of Purchase order by our customer.

2) Offer for Material (Chromium Carbide Coating powder) supply shall be submitted comprising of following details as per slno. **B2** of indicative chart :

- a) Material specification.
- b) Storage procedure of the material.
- c) Packing list of the material.
- d) Material supply data sheet(MSDS)

3) Offer for Application of Chromium Carbide Coating powder shall be submitted comprising of following details as per **Vendor** (under Scope)

- a) Equipment to be used with CE marking.
- b) Skilled manpower details.
- c) Detailed application procedure of HVOF coating including Surface cleaning.
- d) Quality Assurance Plan (QAP) addressing from surface preparation till protocol sign.
- e) Details of work force needed for preparatory work.
- f) Details of support needed from customer
- g) Equipment for measurement of thickness of HVOF coat.
- h) Obtain protocol after completion of work from BHEL side, customer side shall be furnished for application portion for inspection and clearance purpose.

3) The Price-bid for "Application of Chromium Carbide Coating powder" will be valid for a period of one year from the date of opening of price bid for "Material(Chromium Carbide Coating Powder) supply".

4) Wherever scope is indicated as M/s. PK, vendor shall examine the same and get all their doubts if any, clarified prior to submission of techno-commercial and price bid for 'Application of Chromium carbide" part.

5) Vendor shall demonstrate compliance aspect of HVOF(Chromium carbide coating powder) to customer in different stages as applicable and shall clearly address in Vendor Quality Plan (VQP) for verification purpose. Necessary instruction with CE marking, valid calibration certificate shall be used for measurement purpose.

* Indicative chart for application of HVOF shall include supervision part also as part of application scope, since this skilled job of application is being carried out by vendor.

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT AND THE EXPIRY DATE OF BG MUST BE AFTER 60 DAYS FROM THE DATE OF COMPLETION OF WARRANTY PERIOD)

PERFORMANCE BANK GUARANTEE

In accordance of M/s. Bharat Heavy Electricals Limited (A Government of India undertaking, a company incorporated under the Companies Act 1956 having its Registered Office at "BHEL House", SIRI Fort, New Delhi 110 049) through its High Pressure Boiler Plant Division located at Tiruverumbur, Tiruchirapalli- 620 014 (hereinafter called 'the Company') having entered into a contract withhereinafter called 'the said contractor' which term includes 'suppliers' for the purpose of this Bond and under the terms and conditions of the contract No..... Dt Between BHEL, Trichy and as per the contract, the contractor / supplier is to furnish a performance Bank guarantee for Rs. for the due performance of the equipment to be supplied under the above referred contract and for the fulfillment of all the terms and conditions of the contract, We(indicate the name of the bank) (herein after referred to as the bank) at the request of (Contractor(s)) do here by undertake to pay 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 with full address), 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 and conditions contained in the said Agreement or by the 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 unconditionally to the Company any money so demanded notwithstanding any dispute(s) raised by the Contractor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or before any other authority relating thereto our liability under this present being absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the arbitration proceedings or by any other authority. The payment so made by us under this Bond shall be a valid discharge of liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.

4. We.....(indicate the name of 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 the Company certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. (I) 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. But where such claim or demand has been preferred by the Company with the Bank before the expiry of the said date, the claim shall be enforceable notwithstanding the fact that the said enforcement is effected after the said date.

(ii) For the purpose of this clause, any letter making demand on the Bank by M/s. BHEL dispatched by Registered Post with Ack.Due or by Telegram or by any Electronic media addressed to the above mentioned address of the Bank shall be deemed to be the claim / demand in writing referred to above irrespective of the fact as to whether and when the said letter reaches the Bank, as also any letter containing the said demand or claim is lodged with the bank personally.

6. We(indicate the name of 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 powers 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 would, but for this provision, have effect of not so relieving us.

7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

8. It shall not be necessary for the company to proceed against the contractor before proceeding against the guarantor-bank and the guarantee herein contained shall be enforceable against them notwithstanding any security, which the company may have obtained or obtain from the Contractor shall, at the time when proceedings are taken against the guarantor hereunder be outstanding or unrealised.

9. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Tiruchirapalli.

10. The guarantor hereby declare that it has power to execute this guarantee and the executant has full powers to do so on its behalf under the proper authority granted to him/them by the guarantor

11. We(indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing.

In witness whereof we....., (indicate the name of Bank) have hereunto setout Bank Seal the _____ day _____ month 200

LIST OF NATIONALISED BANKS

- 01. ALLAHABAD BANK**
- 02. ANDHRA BANK**
- 03. BANK OF INDIA**
- 04. BANK OF BARODA**
- 05. BANK OF MAHARASTRA**
- 06. BHARATH OVERSEAS BANK**
- 07. CANARA BANK**
- 08. CENTRAL BANK OF INDIA**
- 09. CORPORATION BANK**
- 10. DENA BANK**
- 11. INDIAN BANK**
- 12. INDIAN OVERSEAS BANK**
- 13. OREINTAL BANK OF COMERCE**
- 14. PUNJAB NATIONAL BANK**
- 15. PUNJAB AND SIND BANK**
- 16. STATE BANK OF INDIA**
- 17. STATE BANK OF TRAVANCORE**
- 18. STATE BANK OF MYSORE**
- 19. STATE BANK OF BIKANER & JAIPUR**
- 20. STATE BANK OF HYDERABAD**
- 21. STATE BANK OF PATIALA**
- 22. STATE BANK OF MAHARASTRA**
- 23. SYNDICATE BANK**
- 24. UCO BANK**
- 25. UNION BANK OF INDIA**
- 26. UNITED BANK OF INDIA**
- 27. VIJAYA BANK**

OTHER BANKS	
28	ABN AMRO BANK N.V.
29	CITI BANK N.A.
30	DEUTSCHE BANK AG
31	HDFC BANK LTD.
32	ICICI BANK LTD.
33	IDBI LTD.
34	STANDARD CHARTERED BANK
35	THE HONGKONG AND SHANGHAI BANKING CORPORATION LTD.

BHEL / FBC & HRSG / Purchase

TERMS & CONDITIONS (FOR IMPORT ENQUIRY)

I OFFER:

Offer in English Language and in Triplicate in a sealed cover super scribing the Enquiry Number and the due date shall be submitted (addressed) to:

The Manager/Purchase/FBC&HRSG
Building No.79
Bharat Heavy Electricals Limited
High Pressure Boiler Plant
TIRUCHIRAPALLI - 620 014
Tamil Nadu, India

Offer should be firm for net FOB Nearest Sea Port and C&F Chennai Port price indicating the shipping specifications and the earliest delivery in respect of offers from overseas suppliers. Offer from indigenous sources shall be firm for F.O.R TIRUCHIRAPALI.

II DOCUMENTS:

- (i) offer should be accompanied by detailed technical literature, Catalogue and detailed dimensional drawing in English and In Triplicate or otherwise, the offer will not be considered.
- (ii) In case Overseas suppliers route their offer through their accredited selling agents, a letter of authority should be furnished mentioning the name and address of their selling agents who are authorized to bid, negotiate and concluded a contract on their behalf.

III AGENCY COMMISSION:

- (i) In respect of the offer from Overseas suppliers, agency commission, if any, payable to their agents in India, shall invariably be shown separately in the pro forma invoice and this will be paid by us IN INDIA in Indian Rupees, on satisfactory completion of the contract.
- (ii) If overseas principal has any tie up with any third party in respect of Agency Commission it should be declared while submitting the offers.
- (iii) Copies of current Agency Agreement / Authorization Letter in respect of Agency Commission shall be furnished along with offer, if not made available earlier.
- (iv) For calculation of Rupees equivalent of Agency Commission, exchange rate as prevailing on the date of order will be taken.

IV SPARES:

The tender should quote separately for spares that are required for two years trouble free operations. The spares offer should accompany the offer of main equipment otherwise the quotation will be overlooked.

V VALIDITY:

The offers for main equipment and spares shall be kept open for acceptance for 120 days (one hundred and twenty days) from the date of opening of the tender.

VI TEST CERTIFICATES, OPERATING AND MAINTENANCE MANUALS:

The tender shall clearly mention in their offer that the Test certificate and Operating and Maintenance Manuals etc., as called for in the Technical specification in the required number of copies will be provided at no extra cost. If any amount is payable as extra, the same shall be indicated separately in the offer.

VII TERMS OF PAYMENT :

In the event of an order the Purchase will arrange for an Irrevocable Letter of Credit against presentation of documents. Under no circumstances confirmed and irrevocable letter of credit will be established by the Purchase.

VIII GENERAL:

- (i) Preference will be given to suitable indigenous or ex-stock imported offers failing which imported offers from incoming consignment against the indigenous supplies " stock and sale licence" will be accepted. If stock and sale licence is not available with the indigenous suppliers, the same shall be indicated in their offer.
- (ii) Bank Guarantee: The supplier in the event of an order should furnish a Bank Guarantee from an approved Bank at no extra cost in a pro forma which will be supplied to the Supplier, along with the order, for an amount equipment to 10% of the value of the contract. The Bank Guarantee should remain in full force and effect during the period that would be taken for successful completion of the contract and shall continue to be enforceable till 12 months from the date of receipt of consignment at Purchaser's site or 18 months from the date of last shipment at the Port of delivery whichever is earlier.

XI LD/PENALTY AND INTEREST ON ADVANCES FOR DELAY IN DELIERY:

" If the supplier fails to deliver the equipment / components within the period specified in the contract the Purchaser shall deduct Liquidated Damages a sum equivalent to 0.5% of the price for each week of delay up to maximum 15% of the price of the delayed / undelivered goods, in addition to the recovery of interest at normal cash credit rate plus 2% for the unadjusted portion of the advances. If the delay in delivery of a part contributes to delay in execution of total system, LD and interest on advances will be recovered on the total contract price / total advance paid"



BHARAT HEAVY ELECTRICALS LIMITED
FBC & HRSG / PURCHASE
TIRUCIRAPPALLI - 620 014, TAMILNADU

445 - 407 (Rev.01)

INSTRUCTIONS TO TENDERERS (INDIGENOUS)

- 01.a Tenderers shall quote their price on **Ex-Works / FOR Despatching point** basis. Materials will be transported by road through BHEL / TRICHY approved transport carriers to respective destinations indicated in the tender.
- b Split-up prices must be furnished by the tenderer for the basic Instrument / Equipment and for all accessories quoted.
02. Offer must include Spares required for:
 - a) Commissioning of the equipment.
 - b) 2 years trouble free operation.
03. If the tender specification calls for various alternatives, all such alternatives are to be quoted by the tenderers.
04. Data sheet as called for in the enquiry shall be filled by the tenderer in full and submitted along with the quotations.. **Offers with incomplete information in data sheet are liable for rejection.**
05. Offers shall be accompanied by copies of drawings, catalogues, illustrated leaflets as called for in the tender specification.
06. In case of tenders invited in two parts, vendors shall furnish **Un-priced Complete Bill Of Materials in the technical bids** for our evaluation. Technical bids alone will be opened on the tender due date.
07. Manufacturer's quality plan must be sent along with the offer. The Vendor shall submit along with the offer the list of components made in house and the list of bought out components, the source, the quality requirements for the same. A copy of the product catalogue with all the relevant information shall also accompany the offer. **In case BHEL Standard Quality plan is applicable, vendor to confirm for their compliance.**
08. Each and every point of BHEL specification / data sheet must be either confirmed or commented upon without fail either in typed form or in neatly hand written form bringing out clearly the deviations (if any) taken by the tenderers. However, the tenderers must make all efforts to adhere to BHEL specifications in toto. Offers received without such point to point confirmations / comments shall be considered incomplete and liable for rejection.
09. **Status of tender submission shall invariably be informed to BHEL either over E-Mail / Fax atleast two days in advance of due date, failing which no extension of due date is entertained.**

10. **No advance will be made along with order.** Our payment terms will be **100% within 45 days after receipt and acceptance of materials at our works / site.** Please note that finalisation of tender is not only on the price factor but also on your accepting our terms of payment.
11. The equipment shall be guaranteed for a period of **12 / 18** months from the date of putting the equipment in use or **18 / 24** months from the date of despatch whichever is earlier.
12. Vendor to confirm for providing **Bank Guarantee for 10% order value** (as per BHEL format) valid for a period mentioned in the point No.11 .
13. Please quote **DGS&D** rates if the equipment is covered under the current rate contract. A copy of current rate contract shall also be enclosed with the offer.
14. The purchase also reserves the right to allow to the Public Enterprises price preference facilities as admissible under Government policy.
15. The rate of excise duty prevalent on the date of quotation shall be clearly indicated in the offer itself for incorporation in the Purchase Order. It will be payable at the quoted rates subject to completion of delivery within the stipulated dates. However revision due to statutory variations will be applicable.
16. In case of an order, **3 sets of hard copies of detailed dimensional drawings, O&M instructions & manuals** and **2 sets of soft copies in CD** will have to be furnished by the supplier **at no extra cost.**
17. If the component requires approval of the prospective supplier's drawing before manufacture, such drawings must be furnished within two weeks from the date of Letter of Intent unless contracted otherwise. Drawings to be submitted for approval must be complete in all respects without necessitating submission of revised drawings for approval.
18. **"Original Invoice for Buyer"** should be submitted along with the advance copy of documents to, The Manager / Purchase / IPP, Bldg.No.79, BHEL, Trichy-14 for each of the despatch made, for processing payment.
19. Detailed offer should reach us before the due date indicated in the tender. Telegraphic offers will normally be not accepted and will be treated as incomplete.
20. Offers must reach us latest **before 2.30 P.M.** on the date of opening of tender viz:
21. The materials are to be despatched to :

BHARAT HEAVY ELECTRICALS LIMITED, TRICHY

PCPS / PURCHASE

Ref:TP/MM/PCPS/HVOF METAL SPRAY

Dated:26.11.2011

SPECIAL CONDITIONS

1. This tender is for the Job of In-situ HVOF Metal Spraying of CFBC boiler water wall panels(32sq.m) of Koniambo Nickel SAS (New Caledonia-near Australia) as per the enclosed specification No.: CFBC-HVOF-001/REV02, 6 pages using Chromium carbide powder for CFBC Boilers -1&2.
2. The offered price shall be valid for one year from the date of price bid opening.
3. The vendor shall have adequate experience in this job.
4. The tender is in TWO parts. Techno-commercial Bid consisting of Technical Bid with Commercial terms & conditions along with Quality plan for the supply in-line with our requirements and another part containing Price Bid. Both Techno-Commercial bid and Price Bids are to be submitted in separate sealed covers. In addition to technical and commercial conditions, vendors who are not registered as vendors of BHEL, Trichy have to submit the filled in "Supplier Registration Forms" (available in www.bhel.com website) along with the technical bid. Based on this and other conditions, as well as capacity and capability, vendor will be shortlisted. Both these covers are to be put in a single cover duly super scribing the Enquiry Number. The technical bid with commercial terms and conditions will be opened on the due date and based on the acceptance of techno-commercial bid and vendor evaluation, the price bid of the qualified vendors will be opened on a suitable date with due intimation.

Following will be the criteria for short-listing the vendors

- Evaluation of dully filled Supplier Registration Forms.
 - Availability of minimum manufacturing, handling, testing and measuring facilities as detailed in the Supplier Registration Form.
 - BHEL will have the right for spot assessment of the facilities.
 - Meeting our techno-commercial requirements of the enquiry.
 - Customer approval for the vendors before ordering.
 - Accepting and entering into Integrity Pact (IP)
5. BHEL reserves the right to increase or decrease the tender quantity and split the tendered quantity among more than one vendor and place orders accordingly in any proportion based on commitment , requirement and supplier's capability in terms of delivery and quality as assessed by BHEL.
 6. BHEL reserves the right to Negotiate with the L1 vendor.
 7. BHEL reserves the right to re-float the tender opened, if L1 price is not the lowest applicable price to them inter-alia other reasons.

8. Applicable Commercial terms shall be clearly spelt out in the offer ie. Payments, Taxes & Duties, PBG, completion of works, LD clause, validity of offer etc.
9. Full details can be downloaded from BHEL's website <http://www.bhel.com> (Tender Notifications page > NIT_XXXXX) or from the Govt. Tenders website <http://tenders.gov.in> (Public Sector Units > Bharat Heavy Electricals Limited page against Ref. No. NIT_XXXXX). Interested parties may submit their offers to the following address, along with vendor registration requirement in BHEL format hosted in BHEL web site.

SR. MANAGER / PURCHASE / PCPS, 4TH FLOOR, BLDG.79, Bharat Heavy Electricals Ltd.,
HIGH PRESSURE BOILER PLANT, TIRUCHIRAPPALLI - 620 014, TAMILNADU, INDIA.

Ph: (0431) 2574043 / 2574160, FAX: 2520233

E-Mail: imuthu@bheltry.co.in, majothi@bheltry.co.in.

Sr.Manager/Purchase/PCPS

QUOTATION DATA SHEET

THE TENDERS SHALL FURNISH THE PARTICULARS CALLED FOR IN THE QUOTATION DATA SHEET ENCLOSED AND SUBMIT THE FILLED IN DATA SHEET ALONG WITH THE QUOTATION WITHOUT FAIL OFFERS WITH INCOMPLETE INFORMATION IN DATA SHEET ARE LIABLE FOR REJECTION. IN CASE OF DISCREPANCY, INFORMATION CONTAINED IN THIS DATA SHEET SHALL BE CONSIDERED FOR EVALUATION.

PLEASE STRIKE OUT WHICHEVER IS NOT APPLICABLE:

PROJECT:

ENQ.NO & DATE :

DUE DATE :

01	VALIDITY	UPTO
02	DELIVERY PERIOD	..... MONTHS / WEEKS
03	DELIVERY PLACE	
	(a) EX-WORKS PLACE	
	(b) FOR / DESPATCHING POINT	
04	EXCISE DUTY	..... % / NOT APPLICABLE
05	TAX	..... % / NOT APPLICABLE
	(a) C S T	..... % / NOT APPLICABLE
	(b) LOCAL TAXES (SUPPLY WITHIN THE STATE)	..... % / NOT APPLICABLE
06	OCTROI CHARGES	..... % / NOT APPLICABLE
07	PACKING CHARGES	..... % / NOT APPLICABLE
08	FORWARDING CHARGES	..... % / NOT APPLICABLE
09	FREIGHT CHARGES	..... % / NOT APPLICABLE
10	INSURANCE CHARGES	..... % / NOT APPLICABLE
11	TESTING / IBR CHARGES (LUMPSUM)	..... % / NOT APPLICABLE
12	COMMISSIONING CHARGES (LUMPSUM)	..... % / NOT APPLICABLE
13	PAYMENT TERMS	
14	ACCEPTANCE FOR PROVIDING BANK GUARANTEE AS PER BHEL PROFORMA	YES / NO / APPLICABLE
15	DIMENSIONAL DRGS / DATA SHHETS	ENCLOSED / NOT APPLICABLE
16	ANY OTHER ADDITIONAL FACTORS	
17	LD CLAUSE @ 0.5% PER WEEK MAXIMUM 15% FOR THE DELAYED DESPATCHING	
18	GUARANTEE PERIOD SHALL BE 18 / 24 MONTHS	

WE CONFIRM THAT THE STATUTORY LEVIES, DUTIES, TAXES ETC FURNISHED ABOVE ARE BASED ON THE LATEST GOVT NOTIFICATION. WE ALSO CONFIRM THAT WE HAVE GONE THROUGH ALL THE CONDITIONS OF THE ENQUIRY AND OUR OFFER IS ACCORDINGLY SUBMITTED

SIGNATURE WITH SEAL