



BHEL PIPING CENTRE : CHENNAI 600 017

ENQUIRY NO: 4010900033

DATE: 29.09.09

IMPORTANT INFORMATION TO BIDDERS.

1. This Tender is a **TWO PART BID**.
Type and quantum of work is detailed in "SCOPE OF WORK"
2. The quoted price shall be " FIRM " till the complete execution of the scope.
3. Mode of Operation for Price Bid – Reverse Auction
4. Last date for submission of offer **12.10.2009** - Time - **13.30** Hours.
5. Techno-Commercial Bid Opening Date **12.10.09** - Time - **14.30** Hours.
6. The above bid shall be sent in a sealed cover duly indicating

Enquiry No. & date, Tender Opening date and "IS 3589 PIPES – "ANPARA" Projects

To

ADDL.GM / MM

BHEL - Piping Centre

Old No 93, (New No:80) G N Chetty Road

T Nagar / Chennai 600 017 . PHONE : 28161216 / 28161331

SCOPE OF WORK :

BHEL requires the below mentioned quantities of various sizes of Welded Pipes – Pipes either **Spiral or Longitudinal Seam Weld** conforming to IS 3589 FE 410 Pipes with Painting and as per TDC-TDG:07:05 and to be delivered to "ANPARA" project site. The raw material plate is to be arranged by suppliers themselves.

LIST OF ITEMS

Enq. Sl.no	Pipe Size in MM OD x Thickness	Qty. Mtrs	Delivery	Work Order Details
10	1829mm x 14mm OG	60.0	30.01.10	P 6960-1-80-468-001
20	1829mm x 14mm OG	60.0		P 6961-1-80-468-001
30	3240mm x 20mm UG	800.0		P 6960-1-80-468-002
40	3240mm x 20mm UG	1000.0		P 6961-1-80-468-002
50	2235mm x 18mm UG	220.0		P 6960-1-80-468-003
60	2235mm x 18mm UG	230.0		P 6961-1-80-468-003
70	2235mm x 18mm OG	60.0		P 6960-1-80-468-004
80	2235mm x 18mm OG	90.0		P 6961-1-80-468-004
90	1422mm x 12mm UG	60.0		P 6960-1-80-468-005
100	1422mm x 12mm UG	60.0		P 6961-1-80-468-005

Total Weight ~ 3575 MT

TECHNICAL CUM COMMERCIAL

Technical :

1. The bidder shall supply the Welded Pipes, as per IS 3589 Specification and BHEL TDC. The Bidder shall also comply with the following BHEL documents.
 - a. Technical requirements viz. Length, Edge Preparation, Spider Arrangement, Quality Plan etc, as finalized and agreed in MOU (Enquiry No. BHEL:PC:PUR:CW:IS 3589 : 001 Dt. 24.04.08)
 - b. Painting requirements for CW Piping as per the enclosed Painting QP for Anpara Project.



ENQUIRY NO: 401090001357- 25.02.2009

Commercial :

1. The prices quoted by the Bidder shall be on F.O.R. Ex works basis inclusive of Packing and Forwarding charges with Freight extra for transportation of Finished pipes to various project sites. Price quoted shall be "FIRM" till the execution of the complete scope with raw material plate in their scope.
2. Payment for freight will be based on per meter.
3. The bidder shall furnish all the breakups as requested in the price bid format as enclosed.
4. The bidder shall clearly indicate the source of supply and all the applicable Taxes / Duties / CESS.
5. Delivery – Supplies to be completed before 30.01.2010. The Bidder shall strictly confirm to our delivery requirement.

Delivery is the essence of the Contract/ PO. BHEL may accept or reject the price bid if delivery is not as specified, or if offered delivery is not suiting Project Plan/ Production plan as per BHEL.

BHEL has the right to order partly or fully considering the various requirements. BHEL may short close/cancel an order or divert to another vendor if the performance of the vendor is poor, or the delivery requirement of the item is very critical and not being met, at any time during the currency of the Contract/PO irrespective of the PO Delivery date, if there is no response for improvement in delivery as per BHEL requirement.

BHEL may counter offer the final L1 rate to other eligible vendors for acceptance and decide to distribute the Purchase orders fully or partly to the accepting vendors for ensuring deliveries meeting production/ project requirement. BHEL decision will be final in this regard.

BHEL has the right to reject delayed deliveries or accept on a conditional basis.

6. Terms of Payment –

100% payment within 45 days from the date of submission of documents. Acknowledgment of receipt of materials from the Project Site should be submitted by supplier to BHEL before release of Payment.

Payment will be made for the actual length supplied.

The following despatch documents should be submitted directly to BHEL & not to be routed through bank.

- a) Invoice in triplicate.
- b) Delivery Challan in duplicate.
- c) Guarantee certificate.
- d) Lorry Way Bill.
- e) Inspection reports.
- f) ED gate pass with a confirmation that the original is sent with the goods.



ENQUIRY NO: 401090003401 20.09.2009

Liquidated Damages:

If the supplier fails to deliver the Raw material / 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 a maximum of 5% of the price of delayed/undelivered goods to be reckoned from the contract delivery date to cargo readiness date i.e Date of LR.

8. Bidder shall give a minimum validity of 60 days from the date of Technical bid opening.
9. All other commercial terms as finalized and agreed in the MOU (Copy enclosed. Enquiry No. BHEL:PC:PUR:CW:IS 3589 : 001 Dt. 24.04.08)
10. In case of incomplete/inadequate information provided against the requirements of this tender, the offer shall be liable for rejection.
11. L1 bidder shall not automatically qualify for getting the order and BHEL has the right to negotiate price and delivery and if warranted BHEL shall also split the order on two or more parties. If split between 2 parties the ratio shall be 60:40. 60% on original L1 bidder and 40% to L2 bidder who has matched with L1 price.
12. Offers with deviation from the above Commercial and Technical Terms will not be considered.

PRICE :

The bidder shall provide the price strictly as per the price format annexed herewith. In this addition to the hard copy, the bidder has to submit in soft copy also in excel format (Preferably in CD).

- a. Base Price shall include Cost of Raw Material plus conversion cost per Meter of bare pipe including Edge Preparation and providing Spider Arrangement and Testing as per BHEL TDC : TDG : 07 : 05.
- b. Ordering shall be on FOR - Site basis.
- c. Percentage of applicable Taxes, Duties, CESS, Service Tax on Transportation etc shall be clearly indicated.
- d. Service Tax, if included in Freight or extra, shall be clearly indicated.
- e. A soft copy of the price format with price details are also to be sent along with price bid.

Prices quoted shall be " FIRM " till complete execution of the scope and bidder shall give **validity** of this price offer for a period of **minimum 60 days** from the date of opening of Bids.



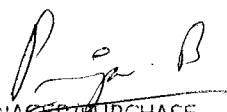
ENQUIRY NO: 4010900033DT 29.09.2009

LIST OF DOCUMENTS ENCLOSED :

1. Painting Quality Plans
ANPARA - Painting QP Reference QPC6960: QPC : 12 Rev 01Dt. 11.09.09
2. BHEL TDC : TDG : 07 : 05
3. Price Format

The above documents form part of this tender document and bidder shall ensure that they have received all these along with tender and confirm.

- **Pre Qualified** is the criteria for consideration for other than the BHEL Approved Vendors. After qualifying for registration, the new Vendors, may be considered for future inline with their system and policy. Such Vendors will not be considered in this Enquiry.
- The new Vendors may download Vendor registration forms from BHEL Web Site www.bhel.com and submit all relevant data for formal registration.


MANAGER/PURCHASE

PRIMA BALAJI
Dy. Manager, Purchases
BHEL, Hyderabad
T. Nagar, Chaitanyam 500 017.

Over Ground

Work Order Details

- Fig. 3

Enquiry No. 4010900033 Dt.29.09.2009
 Price Format for ANPARA D TPP EXTN 6 & 7 (2x500MW)
 Painting QP Reference No. 6960 QPC:12 REV: 01 DATE:11.09.2009

Under Ground

Sl. No	Pipe Size	Material Code	Total Qty in Mtrs	Base Price of Pipe Rate/Mtr (Ex-Works) as per TDC: TDG:07:05	Extra Coating Rate/Mtr based on Zinc Rich Primer-1 x 50 Microns) – Primer Coat	inside Epoxy Rich Tar Epoxy – 2 x 75 Microns) Finish Paint	Extra Coating Rate/Mtr	inside (Coal) – Anpara D Site	Extra Transportation Cost/Mtr of Finished Pipe to
1	3240 x 20 UG	1593860100UG	1800						
2	2235 x 18 UG	1593859700UG	450						
3	1422 x 12 UG	159387080UG1	120						
USE EXCEL FILE -PRICE FORMAT- GIVEN BY US (REFER ENCLOSED PRICE FORMAT) FOR GIVING YOUR OFFER									

Work Order Details

1. Pipe Dia 3240 x 20 UG - (ENQ S.NO 30) P 6960- 1 - 80 - 468 DU 002 - 800 Mtrs
1. Pipe Dia 3240 x 20 UG - (ENQ S.NO. 40) P 6961- 1 - 80 - 468 DU 002 - 1000 Mtrs
2. Pipe Dia 2235 x 18 UG - (ENQ S.NO. 50) P 6960- 1 - 80 - 468 DU 003 - 220 Mtrs
2. Pipe Dia 2235 x 18 UG - (ENQ S.NO. 60) P 6961- 1 - 80 - 468 DU 003 - 230 Mtrs
3. Pipe Dia 1422 x 12 UG - (ENQ S.NO. 90) P 6960- 1 - 80 - 468 DU 005 - 60 Mtrs
3. Pipe Dia 1422 x 12 UG - (ENQ S.NO. 100) P 6961- 1 - 80 - 468 DU 005 - 60 Mtrs

1.0 SCOPE

- 1.1 This Technical Delivery Conditions specify the requirements in addition to IS:3589 for electrically welded (ERW \ SAW) steel pipes.
- 1.2 The pipes are intended for water services (under Non-IBR piping system only).
- 1.3 The pipes shall conform to the size, grade and quantity as specified in the purchase order.

2.0 MATERIAL

- 2.1 The plates / coils used for pipe shall meet the requirements as per IS: 3589 Grade Fe 410 MPa including mechanical test requirements.

3.0 DIMENSIONAL TOLERANCES

- 3.1 The tolerances limits are:
OD:- Upto NB 1600 mm: ± 4 mm; Above NB 1600 mm: ± 6 mm
Thickness:- Upto 14mm : $+1.3$ mm / -0.8 mm; Above 14 mm : $+1.4$ mm / -0.8 mm.

Length:- for OD upto 1300 mm : $+10$ mm / -0 mm;
for OD above 1300 mm : ± 50 mm

Ovality (Difference between major and minor inside diameter) : 0.5% maximum

Squareness of ends: The ends of pipe section shall not vary by more than 3 mm at any point from a true plane perpendicular to the axis of the pipe and passing through the center of the pipe at the end.

- 3.2 Other tolerances shall be as per IS: 3589

4.0 MANUFACTURING

- 4.1 The pipe shall be of longitudinally welded or spirally welded as indicated in the P.O.
- 4.2 The ends shall be edge prepared as indicated in the purchase order.
- 4.3 Circumferential seams shall be 1500 mm apart from each other and from ends.
- 4.4 All pipes shall be completely finished and free from surface, sub surface defects such as pits, cracks, weld spatters & laminations etc..

5.0 NDE

- 5.1 The spiral welds/butt welds of length 100 mm from both the ends of the pipe shall be radiographically tested.

6.0 HYDROSTATIC PRESSURE TEST

- 6.1 Each pipe shall be subjected to a hydraulic test pressure as per IS: 3589 .
(i.e., using the formula $P = 2ST / D$)

7.0 INSPECTION

- 7.1 All pipes shall be inspected by the vendor prior to BHEL / Customers' Inspection. BHEL or BHEL authorized inspector / Customer will select the pipes at random and carryout the inspection. The necessary Material Despatch Clearance Certificate is to be obtained by the vendor prior to the despatch of material.

P.Elangovan, QA K.Ganeshan, MM	Approved by C. Karunakaran, Engg K. Vedaprasad, QC
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8.0 PAINTING AND PACKING

- 8.1 Unless otherwise specified in the Purchase Order, all the pipes shall be coated with resin type translucent dry type rust preventive on the outside; pipes of diameter above NB 450 mm, shall be coated inside also.
- 8.2 Spiders are to be provided on both ends of the pipes as per the drawing - if indicated in the enquiry / Purchase Order.

9.0 MARKING

- 9.1 All pipes shall be paint stencilled, hard punched with the following details.

Paint Stencil

- Specification
- Heat number
- Pipe number
- Manufacturer's identification
- Material Code
- Size

Hard punch

- Specification
- Heat number
- Pipe number
- Manufacturer's identification

- 9.2 In addition to the above, for the *pipes directly despatched to project site*, the following details (furnished in the P.O. or separately) shall be **paint stencilled & hard punched** on both ends of the pipes

- | | | |
|-----------------|----------|----------------|
| ➤ Work order No | ➤ DU No | ➤ Project name |
| ➤ Quantity | ➤ Weight | |

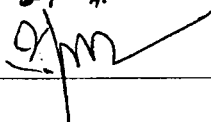
10.0 CERTIFICATES

- 10.1 Three original test certificates typed in English shall be submitted along with the Inspection report.

- 10.2 The test certificate shall furnish the following details.

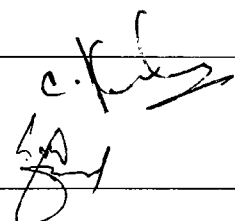
- a. Purchase Order references.
- b. Test Certificate number.
- c. Specification, grade, size, quantity
- d. Heat number of plate (or pipe number with traceability to heat number)
- e. Chemical composition and mechanical properties
- f. Hydrostatic pressure test report
- g. RT Report.

P.Elangovan, QA
K.Ganeshan, MM



Approved by

C. Karunakaran, Engg
K. Vedaprasad, QC




BHARAT HEAVY ELECTRICALS LIMITED PIPING CENTRE, CHENNAI- 17 QUALITY ASSURANCE & CONTROL DEPT.		PAINTING SCHEME FOR LP PIPING (CW / ACW / ECW / Plant water, Air Piping, etc.,) PROJECT NAME : - ANPARA - 'D' TPEXTN 6 & 7 (2 X 500MW) BHEL CUSTOMER Nos :- 0659, 0660, 6960, 6961.										QPNo : 6960:QPC:12 Rev No : 01 Date : 11.09.2009	
Sl. NO	PGMA / Description	Surface Preparation & Surface Profile	Primer coat			Intermediate coat			Finish coat			REMARKS	
			Primer	No of coats	Paint	No of coats	Shade	Paint	No of coats	Shade	Total DFT Microns (Min.)		
1	2	3	4	5	6	7	8	9	10	11	12	13	
1	(a) Internal Surface - CW Pipe (for pipe dia - 1000 mm and above)	Blast Cleaning SS-SPC-10 SA 2½ (Refer Note 1)	Epoxy based Zinc rich Primer (Refer Note 2)	1 (50 Microns Min. per coat)	----	----	----	Coal tar epoxy (Refer Note 2)	2 (75 Microns Min. per coat)	----	200 Microns (Refer Note 3)		
	(b) Holiday test (Refer Note 3)	Holiday testing by low voltage (75 Volts Min.) wet sponge Holiday detector or by High voltage (Voltage per micron of DFT is as recommended by Paint Manufacturer subjected to minimum of 5V / Micron). Holiday test Equipment to be calibrated before testing.											
2	External Surface of CW -Buried Piping / Encased in concrete (For pipe dia- 1000 mm and above) (Temporary Protection for transportation from works to site). **Further protection to be done by BHEL Erection Group as per Contract requirement.	SSPC-SP3 / Power Tool Cleaning	Red Oxide Zinc Phosphate (Alkyd base to IS 12744)	1 (30 Microns per coat)	----	----	----	----	----	----	30 Microns		
3	External Surface (over ground piping) of CW, ACW (For all diameters)	SSPC-SP3 / Power Tool Cleaning	Red Oxide - Zinc Phosphate (Alkyd base to IS: 12744)	2 (25 Microns per coat)	Digitally signed by Shikrisha S Date: 2009.09.17 10:42:05 GMT+05:30 Reason: CATT Location: NTPCEOC	----	----	Synthetic enamel Long oil Alkyd to IS: 2932	3 ** (35 microns per coat) (2 at shop + 1 at site)	Smoke Grey (Shade No. 692 of IS: 5)	120 at shop + 35 at site	** 1 coat of DFT- 35 microns finish coat at site	
4	External Surface of ECW, Plant water (For all diameters)	SSPC-SP3 / Power Tool Cleaning	Red Oxide Phosphate base to IS: 12744)					Synthetic enamel Long oil Alkyd to IS: 2932	3 ** (35 microns per coat) (2 at shop + 1 at site)	Smoke Grey (Shade No. 692 of IS: 5)	120 at shop + 35 at site	** 1 coat of DFT- 35 microns finish coat at site	
5	Galvanised and Stainless steel Piping												


No painting

Notes:

1. Blast cleaning to near white metal to obtain roughness as per epoxy paint data sheet.
2. Application of Epoxy based Zinc rich Primer, Coal Tar Epoxy shall be done as per manufacturer's data sheet / recommendation, meeting the thickness requirements as per this document
3. Witness by BHEL / BHEL nominated inspection agency.



PREPARED and REVIEWED BY : R.LOGANATHAN, Sr.Addl Engr Gr1 / QA



APPROVED BY: G.PANNEERSELVAM, DGM / QA

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