

ENQUIRY NO: 4010900031

DATE: 29.09.09

IMPORTANT INFORMATION TO BIDDERS

1. This Tender is a **TWO PART BID**
Part I - Technical cum Commercial.
Part II – Price.
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. Last date for submission of offer **14.10.09 - Time - 13.30 Hours.**
4. Technical cum Commercial Bid Opening Date **14.10.09 - Time - 14.30 Hours.**
5. Price Bid of only the Technically acceptable offers shall be opened at a later date.
Acceptance of offer is also subject to **BHEL's / IBR's approval** for manufacturing.
Mode of Operation for Price Bids : Bid Opening/ Online Reverse Auction.
6. The above bid shall be sent in a sealed cover duly indicating

Enquiry No. & date, Tender Opening date and "PLATE FORMED PIPES - SA 672 GR B 70 "

To
AGM / MM
BHEL - Piping Centre
New No:80 , G N Chetty Road
T Nagar / Chennai 600 017 . PHONE : 28161244/ 28161216

(Technical cum Commercial offer and Priced offer shall be put in separate envelopes with the above mentioned details on it.)

SCOPE OF WORK :

BHEL requires the below mentioned quantities of various sizes of SA 672 GR B 70 Pipes and as per TDC-TDG:08:03 and to be despatched to Trichy Stores as per Technical specification detailed out in Technical and Commercial Part of this Bid. The raw material plate is to be arranged by suppliers themselves.

LIST OF ITEMS

Enq. Sl.no	Pipe Size ODxThickness in MM	Sp. Length	Specification	Hydro Test (Bars)	Qty. Mtr	Destination	Delivery
10	Dia 508 x10	6500	SA 672 GRB 70	70	1670.0	Trichy	31.12.09
20	Dia 610 x10	6500	SA 672 GRB 70	63	300.0	Trichy	31.12.09
30	Dia 813 x10	6500	SA 672 GRB 70	47	174.0	Trichy	31.12.09
40	Dia 914 x10	6500	SA 672 GRB 70	42	126.0	Trichy	31.12.09
50	Dia 1219 x10	6500	SA 672 GRB 70	31	120.0	Trichy	31.12.09
60	Dia 1626 x12	6500	SA 672 GRB 70	28	186.0	Trichy	31.12.09

Total Weight ~ 437 MT

PART - I : TECHNICAL CUM COMMERCIAL.

Technical :

1. The bidder shall supply the Welded Pipes, as per **SA 672 GR B 70 CL 22** Specification and shall also comply with the following BHEL documents.
Acceptance to BHEL TDC ref : TDG : 08 : 03.
2. Bidders shall clearly indicate their point to point acceptance to the TDC and other requirements and incase any deviations taken shall be clearly indicated. Supplier to certify that all conditions are acceptable except as indicated in their offer. The bidder shall clearly mention the manufacturing process that will be adopted. Also the proposed WPS (Welding Procedure Specification) shall be enclosed. Please avoid taking deviation which were "not accepted" in previous tender.

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 BHEL Trichy Stores. 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.
(The bidder shall also enclose in Part I a copy of unpriced - Price part format to know whether the bidder have taken care of all the points).
4. The bidder shall clearly indicate all the applicable Taxes / Duties / CESS.
5. Delivery – 31.12.2009. 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. LD @ 0.5 % per week subject to a maximum of 15 % for the undelivered portion shall be levied.
7. Bidder shall give a minimum validity of 60 days for the price offer.
8. Payment terms - 90 % against despatch within 60 days and balance 10 % after receipt & acceptance of pipes at Stores within 60 days from the date of receipt of clear documents.

The following documents shall be submitted for 90% payment.

- a. Invoice (Original).
- b. Excise Gate Pass if applicable.
- c. Lorry Way Bill / Delivery Challan.
- d. Original Test certificate and Inspection reports. (Soft copy also).

The following documents shall be submitted for 10% payment.

- a. Invoice (Original).
- b. Acknowledged copy of invoice / LR for having received and accepted of pipes at stores.

In case of incomplete / inadequate information provided against the requirements of this tender the offer shall be liable for rejection.

10 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.

11. Offers with deviation from the above Commercial and Technical Terms will not be considered.

PART - II - PRICE :

In this part of bid, the bidder shall provide the price strictly in the below mentioned format. In addition to the hard copy, the bidder has to submit in soft copy also in excel format. This format shall be sent and the same is to be submitted along with the offer

Enquiry no. 4010900031 dt.29.09.09

Sl. no	Pipe Size	Length in mm	HTP in Bars	Qty. in Meters	Bare Pipe rate per Mtr (Ex-works)	Extra Transportation cost /mtr of Finished pipe to Stores /Trichy
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- a. Base Price shall include Cost of Raw Material plus conversion cost per Meter of bare pipe including Testing & IBR Inspection.
- b. Ordering shall be on FOR - Ex-Works basis .
- c. Percentage of applicable Taxes, Duties and CESS shall be clearly indicated .
- d. Service Tax on transportation if included shall be clearly indicated.
- e. A soft copy of the price format with price details are also to be sent along with price bid.
(Preferably in CD).

The Price 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 Technical cum Commercial Bid and clarification if any resolved.

LIST OF DOCUMENTS ENCLOSED :

1. TDC : TDG: 08:03.

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

PRIYA BALAJI

Dy. Manager Purchase

BULL. 1000

T. Nagar, Chennai - 600 017.

BHARAT HEAVY ELECTRICALS LIMITED
PIPING CENTRE, CHENNAI – 600 017.

Title : Technical Delivery Conditions for plate formed pipes
to ASME SA 672.
Specification No: TDG : 08 Rev : 03
Project : ALL PROJECTS
Material : ASME SA 670
Equipment : Pipes.

Accepted By:-

Engineering

Materials
Management

OP & C

Rev : NO:-

03

04

05

06

Date :-

03. 10.2005

Prepared
Revised by

Reviewed /
Approved by

Issued by Piping Centre / Quality Assurance

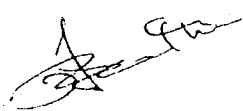
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TECHNICAL DELIVERY CONDITION FOR PLATE FORMED
PIPES TO ASME SA 672

EDG 08.03
03/10/2003

REV NO	REVISED CLAUSE	DESCRIPTION
2	6.1	Heat Treatment as per specification added.
2	---	Other clauses Re- worded for better clarity.
3	4.1 Modified	Cirseam weld included based on DCIB's feed back.



TECHNICAL DELIVERY CONDITION FOR PLATE FORMED : TDG:08:03
PIPES TO ASME SA 672 : 03/10/2005

1.0 **SCOPE**

1.1 This technical delivery condition specifies the additional requirements for the delivery of Electric Fusion Welded pipes conforming to ASME SA 672

1.2 The grades covered are B60, B65 and B70

1.3 The class of the pipes shall be C1.22 (Stress Relieved condition).

1.4 These pipes are intended for power piping services at stress levels and temperature allowed by ASME B31.1 and IBR.

1.5 The pipes shall conform to size, grade and quantity as specified in the enquiry/purchase order.

2.0 **APPLICABLE CODES AND PROCEDURES**

2.1 The pipes shall also conform to INDIAN BOILER REGULATIONS, 1950.

2.2 All welders, welding procedures shall be qualified as per ASME Section IX, and IBR.

2.3 Non-Destructive Examination procedures shall be as per ASME Section V

3.0 **MATERIAL**

3.1 The chemical composition of the steel plates shall be as per ASME SA 515 Gr.60 for B60, Gr.65 for B65 and Gr.70 for B70 except that the carbon percentage shall be limited to 0.25% irrespective of plate thickness.

3.2 The steel shall be of fully killed plain carbon steel.

3.3 The plate shall be in control rolled or normalised condition. The heat treatment condition of the plate shall be recorded in the Test Certificate.

4.0 **WELDING**

4.1 The joints which includes longitudinal and circumferential welds shall be full penetration welds made in accordance with the qualified procedures as per ASME Section IX. Longitudinal seams on adjacent pipe shell shall be offset by at least 90 deg.

4.2 One production test coupon per size/per melt shall be made for every 60 meters as per Chapter IX of IBR.

5.0 **NON-DESTRUCTIVE EXAMINATION**

5.1 All the plates used for the manufacture of pipe shall be ultrasonically tested. UT testing shall be done as per A435 and acceptance standard shall be as per A-578 Level-B.

5.2 The full length of each weld shall be radiographically examined in accordance with ASME SA 672 and accepted as per ASME Section VIII - paragraph UW -51.

TECHNICAL DELIVERY CONDITION FOR PLATE FORMED : TDG:08:03
PIPES TO ASME SA 672 : 03/10/2005

5.3 Weld repairs shall be carried out as per ASME SA 672 and accepted as per ASME Section VIII.

5.4 When long seam pipes are joined to make the required length, the long seams shall be at least 90deg apart from each other. 100% RT shall be carried out on the circumferential and "T" joint.

6.0 **HEAT TREATMENT**

6.1 All the pipes shall be heat treated as per SA 672 specification.

7.0 **MECHANICAL TESTS**

7.1 Wherever applicable, the plate shall be subjected to tensile test at 350deg C and a bend test as per IBR.

7.2 Mechanical and metallurgical test shall be carried out as per Chapter XII of IBR on each welded test plate. The tests to be conducted are listed below:

Type of test	No. of tests	Reference Standard
a) Tension test for weld seam	1	ASME Section IX-QW-422
b) All weld metal tension test	1	IBR Reg.259
c) Guided bend test (Face & Root)	2 each	ASME Sec.IX-QW-462 (a)
d) Macro & Micro structure test	1 each	IBR & ASME Sec.IX
e) Impact test Charpy-V	1 set	ASTM A370 Type-A

7.3 One test plate may represent a lot of pipes up to 60 meters in length.(also refer 4.2above) Test plate shall be of the same grade of material, same melt, and same thickness of the pipe and shall be subjected the same heat treatment of the pipe.

8.0 **HYDRAULIC PRESSURE TEST**

8.1 Each length of pipe shall be subjected to a hydraulic test pressure as per ASME SA530, but in no case the test pressure shall be less than 1.5 times the design pressure or the HTP value indicated in the purchase order.

9.0 **DIMENSIONAL TOLERANCES**

9.1 The tolerance on length, outside diameter, out of roundness, wall thickness and weight shall be as per ASME SA 672.

9.2 Dimensional report supported with the necessary sketch/details shall be included in Test Certificate.

10.0 **WORKMANSHIP**

- 10.1 All pipes shall have smooth surfaces, free from loose scales and defects like laps, seams, folds, cracks, pitting etc. The surface imperfection beyond the permissible limit of ASME SA 672 shall be removed mechanically without affecting the minimum thickness and finish. All pipes shall be coated with resin type translucent rust preventive on the inside and outside.

11.0 **COLOUR CODING**

- 11.1 Each pipe shall be colour coded longitudinally.
SA 672 B60 Cl.22 - Red & White
SA 672 B65 Cl.22 - Red & Blue
SA 672 B70 Cl.22 - Red & Aluminum

12.0 **MARKING AND PACKING**

- 12.1 P.O No, SIZE, LENGTH, QTY, SPECIFICATION, GRADE, MELT/HEAT No, MAKER'S MARK AND INSPECTOR SEAL shall be hard punched and paint stenciled on the pipe 100mm away from both ends. All pipes shall be sent as loose with proper sling marks and end stiffeners.

13.0 **CERTIFICATES**

- 13.1 Three original test certificates typed in English shall be given along with the pipes.
- 13.2 The pipes must be delivered along with test certificates legibly written in English.
- 13.3 The test certificates shall furnish the following details:
- Purchase Order Reference.
 - Test Certificate Number.
 - Specification, grade, size and dimension.
 - Steel making process of the plate.
 - Heat number of the plate.
 - Ladle analysis of plate.
 - Heat treated condition of plate.
 - Mechanical test results of the plate.
 - Mechanical and metallurgical test results of the weld test coupons.
 - Radiography test reports with acceptance standard.
 - Heat treated condition of pipe.
 - Hydraulic test pressure results.
 - Ultrasonic test results with acceptance standard.
- 13.4 All the plates and pipes must be inspected at the mills and the test certificates in IBR Form IV and IIIA shall be countersigned by an inspecting authority recognised under Appendix-C of IBR.
- 13.5 The pipes shall be subjected to inspection by authorities nominated by BHEL and the test certificate shall be countersigned by them.