



PUR 002/01

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

PIPING CENTRE, MATERIALS MANAGEMENT

80, Gopathy Narayanasamy Road, T.Nagar, Chennai-600 017.

Phone : 281588²⁰~~10~~, 281588⁰⁴~~21~~,
28158370
Fax : 044-28157368,
28158869

INDIGENOUS ENQUIRY	ENQUIRY REFERENCE	DATE
	4010700039	23.10.07
		DUE DATE FOR QUOTATION : 07.11.07
THIS IS ONLY A REQUEST FOR QUOTATION AND NOT AN ORDER		

Supplies are requested to go through Terms & Conditions before submission of offers

Sl. No.	Material Code	Description & Specification	Unit	Qty.	DELIVERY SCHEDULE		
					Qty.	Date	Remarks
		AS PER ANNEXURE					

Encl. to Enquiry :

1. IMPORTANT INFORMATION TO BIDDERS
2. TDG : TDG : 07 : 03
3. QP No 6914 : QPC : 04 REV 02 &
4. EDGE PREPARATION DEG. NO. 4-80-468-65388.
5. SPIDER ARRANGEMENT DRAWINGS
- 6.

Dear Sirs,

02 A DT. 27.09.07

Please submit your lowest quotation in triplicate, subject to our terms and conditions overleaf, for the above materials, so as to reach us on or before the due date by 2 P.M.

1. Quotations will be opened at 2.30 P.M. on the due date in camera/in the presence of the tenderers who may like to be present.
2. Price should be nett FOR destination inclusive of risk in transit and remain valid for 120 days from the due date.
3. If any Sales Tax and Excise Duty are payable as extra to the quoted price the percentage of the same should be specifically stated in the quotation falling which the purchaser will not be liable for payment of Sales Tax / Excise Duty. Our T.N.G.S.T. No.3560005 / dt. 1.4.95, C.S.T.No.239383 dt.11.6.91.
4. If the enquired items are coming under D.G.S & D rate contract, please indicate the rate contract prices duly sending a copy of the rate-contract along with your offer.
5. No revision of prices will be entertained after tenders are opened.
6. Manufacturer's name, brand name, trade mark or patent No. if any should be specified. Illustrative leaflets giving particulars are required along with quotation wherever necessary.
7. Products with I.S.I. certification marks will be preferred.
8. The purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject in part or full without assigning any reason whatsoever.
9. Late tenders are liable to be rejected.
10. Any deviations to the enquired Technical and Commercial conditions shall be clearly indicated in the covering letter of the quotation.

Note : a) Point no 3 of terms and conditions mentioned overleaf

if superseded by no 8 of Commercial in important information to bidders.

b) Point no 4 of terms & Condition is not applicable.

Yours faithfully

for **BHARAT HEAVY ELECTRICALS LIMITED**

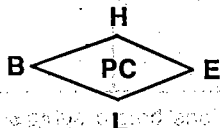
Sr. Manager / Purchase

TERMS AND CONDITIONS

1. QUOTATION : Each tender should be sent in double cover, inner cover should be sealed with tenderer's distinctive seal and super scribed 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 quotations should not be sent in one cover but the quotation against each tender should be sent separately to avoid confusion.

Tenders should be free from CORRECTIONS 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 amounts quoted in words and figures, amount quoted in words shall prevail.

2. PAINTING, PACKING AND MARKING : The supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit, as per enquiry specification wherever applicable. The following marking should be made in each packages.



The above mark should be stenciled on the package itself. Should the packages be too small suitable cards giving these details may be tagged under seal of the seller. Special precaution shall be taken to prevent rusting and corrosion of metal parts during transit.

3. TERMS OF PAYMENT : Payment will be made within 30 days of satisfactory receipt of materials at BHEL stores / site as required by the purchaser. The successful tenderer must send the operation and maintenance manuals, test certificate, drawing, etc., for the materials ordered. These should be sent immediately after despatch of the materials and 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 despatched either by V.P.P. or by the document presented through bank will not be accepted unless agreed to by the purchaser.

4. SECURITY DEPOSIT : In the case of orders above Rs.5,000/- with deliveries of 3 months or above, the seller shall, within 14 days after written notice of acceptance of his tender quotation has been posted to him deposit with the purchaser (in cash or equivalent in Govt. Securities or Bankers Guarantee bond) a sum equal to 5% of total value of the stores detailed in the order as security for the due fulfillment of the contract. No claim shall lie with the purchaser in respect of interest on cash deposits on Govt. Securities or depreciation there of, Purchaser shall be entitled to deduct from the said deposit any loss or damages which they may be put to by reason of any act or default to the seller and recoverable by them from the seller and to call upon the seller to maintain the deposit as its original limit by making further deposits in the event of the Seller failing to make and to maintain the Security of deposit in the manner aforesaid the Purchaser shall be entitled to cancel the order.

5. LIQUIDATED DAMAGES : It is clearly understood among the parties to the contract that time is the essence of the contract. Therefore the delivery of the goods specified, in the purchase order should be made within the time limit 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 or part thereof subject to a maximum of 15% of the order value will be levied without prejudice to any other relief or compensation due to the purchaser under any other condition of this contract.

6. RISK PURCHASE : Alternatively the purchaser at this 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 within the time stipulated as aforesaid 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 in addition to penalty at the rate mentioned in clause 6 above.

7. PREFERENTIAL DELIVERY : It should be noted if a contract is placed on a higher tenderer 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 incidentals in case of failure to complete supplies in terms of such contract within the date of delivery specified in the tender and incorporated in the contract.

8. GENERAL : The purchaser reserves the right to split up the tender and place order for individual terms with different tenderers and also increase 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 the Purchaser will not be applicable to this contract.

ENQUIRY NO: 4010700039
IMPORTANT INFORMATION TO BIDDERS.

DATE: 23.10.07

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 **07.11.07 - Time - 13.30 Hours.**
4. Technical cum Commercial Bid Opening Date **07.11.07 - Time - 14.30 Hours.**
5. Price Bid of only the Technically acceptable offers shall be opened at a later date.
6. The above bid shall be sent in a sealed cover duly indicating

Enquiry No. & date, Tender Opening date and " CW PIPING - IS 3589 – BUDGE BUDGE PROJECT"

To

SDGM / PROCUREMENT

BHEL - Piping Centre

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

T Nagar / Chennai 600 017 . PHONE : 28158804 / 28158820

(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 Welded Pipes – Pipes either **Spiral or Longitudinal Seam Weld** conforming to IS 3589 FE 410 Pipes with Internal and External Painting and as per TDC-TDG:07:05 and to be delivered to Site 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	Sp. Length mm	Specification	Hydro Test (Bars)	Qty. Mtr	Destination	Delivery
01	Dia 1626 x14 OG	10000	IS 3589	26	50.0	BUDGE BUDGE SITE	28.02.08
02	Dia 1626 x14 UG	10000	IS 3589	26	10.0	BUDGE BUDGE SITE	28.02.08
03	Dia 1829 x14 OG	10000	IS 3589	21	30.0	BUDGE BUDGE SITE	28.02.08
04	Dia 1829 x14 UG	10000	IS 3589	21	200.0	BUDGE BUDGE SITE	28.02.08
05	Dia 2435 x18 UG	10000	IS 3589	21	170.0	BUDGE BUDGE SITE	28.02.08

Total Weight = 360 MT

PART - I : TECHNICAL CUM COMMERCIAL.

Technical :

1. The bidder shall supply the Welded Pipes, as per IS 3589 Specification and shall also comply with the following BHEL documents.
 - a. Acceptance to BHEL TDC ref : TDG : 07 : 05 .
 - b. Painting requirements for CW Piping – Budge Budge Phase – I (1 x 250 MW), as per QP No. 6914 : QPC : 04 Rev 02 Dt. 27.09.07 or 6914 : QPC : 04 Rev 02-A Dt. 27.09.07
 - c. Edge Preparation shall be done on each Pipe as per BHEL Drawing No. 4-80-468-65388
 - d. Spiders shall be provided as per the enclosed drawing.

2. Bidders shall clearly indicate their point to point acceptance to the TDC and other requirements and in case, any deviations taken shall be clearly indicated. Also, Please ensure "Not to repeat deviations taken in earlier tenders which have not been accepted by BHEL". This will enable quicker processing of tender. Any deviations taken after placement of Purchase Order "shall not be considered". The bidder shall clearly mention the manufacturing process that will be adopted. Also the proposed WPS (Welding Procedure Specification) shall be enclosed.
3. The Bidder shall submit their Quality plan to BHEL for approval along with the offer indicating the verification, witness and hold points of PDIL and Customer Inspection with percentage of checks involved in the manufacturing process. The Procedure for the Holiday Detector Testing shall be submitted along with the offer.
4. The Bidder shall indicate the raw material specification of Plate/Coil to be used for Pipe Fabrication.
5. Vendors to depute suitable representative to discuss and finalise Technical and Commercial points and Quality Plan etc., to speed up the process before opening the price bid.
6. Inspection shall be done by BHEL/BHEL Authorised Agency and the first lot of pipes shall be inspected and cleared by customer in addition to BHEL.

Commercial :

1. The prices quoted by the Bidder shall be on F.O.R. Ex-works basis with Freight extra for transportation of Finished pipes to Budge Budge site. 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. The Bidder shall clearly indicate whether Service Tax for Transportation is included or not in the Freight Rate quoted. Documentary evidence for proof of payment of Service Tax shall be submitted for payment.
3. The bidder shall confirm in this Part of bid that he has given all the breakups as requested in the price bid format as enclosed (Part II - Price) . Two alternative Price offers shall be submitted in the Price Bid, as per the format enclosed. PO will be placed for any one of the alternates.

(The bidder shall also enclose in Part I a copy of un priced - Price part format to know whether the bidder have taken care of all the points).

4. The bidder shall clearly indicate the applicable Taxes / Duties / CESS. (See Format).
5. Delivery - 28th February 2008.
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 offer i.e 60 days from the date of opening of Price Bids.
8. Payment terms - 100 % against Acknowledged Lorry way Bill from Site and within 60 days from the date of despatch and submission of clear documents, as listed below,
 - a. Invoice (Original).
 - b. Excise Gate Pass if applicable.
 - c. Acknowledged Lorry Way Bill / Delivery Challan.
 - d. Original Test certificate and Inspection reports.

Note : As a policy any request for LC will not be considered and is not acceptable to BHEL. Bids with Payment Terms through Letter of Credit will be rejected. The Bidders shall strictly adhere to the Payment Terms as indicated above.

9. 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.

PART - II - PRICE :

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

- a. Base Price shall include Cost of Raw Material plus conversion cost per Mtr of bare pipe including Edge Preparation and providing Spider Arrangement and Testing as per TDC : TDG : 07 : 05.
- b. Ordering shall be on FOR - Site 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 of Price Bids.

LIST OF DOCUMENTS ENCLOSED :

1. TDC : TDG: 07:05.
2. QP No. 6914 : QPC : 04 Rev 02 Dt. 27.09.07
3. QP No. 6914 : QPC : 04 Rev 02-A Dt. 27.09.07.
4. Edge Preparation Drawing No. 4-80-468-65388
5. Spider Arrangement drawings.

The above documents from 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.


Sr. Purchase Officer
Purchase

-4-

PRICE :

In this part of bid, the bidder shall provide the price strictly in the below mentioned format.

Alternate – 1 : As per Quality Plan No. 6914 : QPC : 04 Rev 02

a. Under Ground - As per Sl.no. 1 (b) of Painting Scheme

Sl. No	Pipe Size	Total Qty in Mtrs	Base Price of Pipe Rate/Mtr (Ex-Works) as per TDC: TDG:07:05	Extra inside Coating Rate/Mtr (Coal Tar Epoxy Primer – 1 x 50 Microns) – Primer Coat	Extra inside Coating Rate/Mtr (Coal Tar Epoxy – 1 x 100 Microns) – Over Coat	Extra Transportation Cost/Mtr of Finished Pipe to Budge Budge Site
USE EXCEL FILE -PRICE FORMAT- GIVEN BY US (REFER ENCLOSED PRICE FORMAT) FOR GIVING YOUR OFFER						

In this part of bid, the bidder shall provide the price strictly in the below mentioned format.

b. Over Ground - As per Sl.no. 2 (b) of Painting Scheme

Sl. No	Pipe Size	Total Qty in Mtrs	Base Price of Pipe Rate/Mtr (Ex-Works) as per TDC: TDG:07:05	Extra inside Coating Rate/Mtr (Coal Tar Epoxy Primer – 1 x 50 Microns) – Primer Coat	Extra inside Coating Rate/Mtr (Coal Tar Epoxy – 1 x 100 Microns) – Over Coat	Extra Transportation Cost/Mtr of Finished Pipe to Budge Budge Site
USE EXCEL FILE -PRICE FORMAT- GIVEN BY US (REFER ENCLOSED PRICE FORMAT) FOR GIVING YOUR OFFER						

P. J. - B

-5-

PRICE :

In this part of bid, the bidder shall provide the price strictly in the below mentioned format.

Alternate – 2 : As per Quality Plan No. 6914 : OPC : 04 Rev 02-A

a. Under Ground - As per Sl.no. 1 (a) and (b) of Painting Scheme

Sl. No	Pipe Size	Total Qty in Mtrs	Base Price of Pipe Rate/Mtr (Ex-Works) as per TDC: TDG:07:05	Extra inside Coating Rate/Mtr (Coal Tar Epoxy Primer – 1 x 50 Microns) – Primer Coat	Extra inside Coating Rate/Mtr (Coal Tar Epoxy – 1 x 100 Microns) – Finish Coat	Extra Coating Rate/Mtr (Coal Tar Epoxy Primer – 1 x 50 Microns) – Primer Coat	Extra Transportation Cost/Mtr of Finished Pipe to Budge Site
USE EXCEL FILE -PRICE FORMAT- GIVEN BY US (REFER ENCLOSED PRICE FORMAT) FOR GIVING YOUR OFFER							

b. Over Ground - As per Sl.no. 2 (a) and (b) of Painting Scheme

Sl. No	Pipe Size	Total Qty in Mtrs	Base Price of Pipe Rate/Mtr (Ex-Works) as per TDC: TDG:07:05	Extra inside Coating Rate/Mtr (Coal Tar Epoxy Primer – 1 x 50 Microns) – Primer Coat	Extra inside Coating Rate/Mtr (Coal Tar Epoxy – 1 x 100 Microns) – Over Coat	Extra Coating Rate/Mtr (Coal Tar Epoxy Primer – 1 x 50 Microns) – Primer Coat	Extra Transportation Cost/Mtr of Finished Pipe to Budge Site
USE EXCEL FILE -PRICE FORMAT- GIVEN BY US (REFER ENCLOSED PRICE FORMAT) FOR GIVING YOUR OFFER							



**ENQUIRY
(INDIGENOUS)**

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
80, G.N.ROAD, T.NAGAR
Purchase Department - Piping Centre
CHENNAI - 600 017.
TAMILNADU (INDIA)

ZPage 1/1

PHONE :
GRAMS : BHARATELEC
FAX NO :
E-mail :
Web :

Enquiry No	Enquiry Date	Due Date for Quotation
4010700039	23.10.2007	07.11.2007
Please quote Enquiry No, Date and due date in all correspondences. This is only a request for quotation and not an order		

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	159385960000 PIPE DIA1626X14 OG (SPI/LONG) IS3589-410 TDC: TDG:07:05 Length: 10000.00	M	50.000	50.00	28.02.08
20	159386020001 PIPEDIA1829X14(SPI/LS)IS3589-410MPA-OG TDC: TDG:07:05 Length: 10000.00	M	30.000	30.00	28.02.08
30	1593859600UG PIPE DIA 1626X14(SPI/LONG)IS3589-410MPA TDC: TDG:07:05 Length: 10000.00	M	10.000	10.00	28.02.08
40	1593860200UG PIPEDIA1829X14(SPI/LS)IS3589-410MPA-UG TDC: TDG:07:05 Length: 10000.00	M	200.000	200.00	28.02.08
50	1593870400UG PIPE 2435X18 IS3589FE410(SPIRAL/LS) TDC: TDG:07:05 Length: 10000.00	M	170.000	170.00	28.02.08

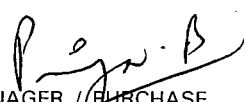
General Note:


Enclosures:

"LD clause has to be confirmed without fail."

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**

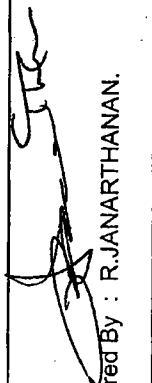
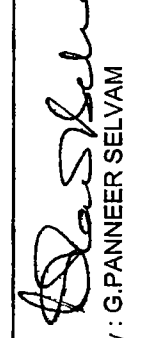

MANAGER / PURCHASE
(Piping Centre)

	Bharat Heavy Electricals Ltd, Piping Centre, Chennai - 600 017	Painting Scheme For CW, ACW Piping. Project : BUDGE BUDGE- UNIT - III 1 X 250 MW Customer Nos : 0329 , 6914	QP No : 6914 : QPC: 04 Rev : 02-A Date : 20.09.2007 Page : 01 of 01
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Sl. No	PGMA Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat		Total DFT microns min
			Paint	No of coat	Paint	No of coat	Paint	No of coat	
1	BURIED PIPING DIAMETER > 1000 mm a) External Surface b) Internal Surface	Blast clean to Sa 2 1/2	Coal tar epoxy primer DFT 50µ-min	1	-	-	-	-	50
			Coal tar epoxy primer DFT 50µ-min	1	-	-	Coal tar Epoxy DFT 100 microns	1	150
2	OVER GROUND PIPING DIAMETER > 1000 mm a) External Surface b) Internal Surface	Blast clean to Sa 2 1/2	Coal tar epoxy primer DFT 50µ-min	1	-	-	-	-	50
			Coal tar epoxy primer DFT 50µ-min	1	-	-	Coal tar Epoxy DFT100 microns	1	150
3	OVER GROUND PIPING DIAMETER < 1000 mm External Surface (Boiler Aux Cooling water)	Blast clean to Sa 2 1/2	Coal tar epoxy primer DFT 50µ-min	1	-	-	-	-	50
			Coal tar epoxy primer DFT 50µ-min	1	-	-	-	-	50

Note :

- 1) Surface cleaning shall be to Sa 2 1/2 and surfaceprofile/roughness shall be measured by means of Press 'O' film and recorded.
- 2) Holiday test shall be conducted on fully cured coatings as per manufacturer recommendations and shall be witnessed by BHEL/BHEL-nominated agencies.

 Prepared By : R.JANARTHANAN.	 Reviewed & Approved By : G.PANNEER SELVAM
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Bharat Heavy Electricals Ltd,
Piping Centre,
Chennai - 600 017

Painting Scheme For CW, ACW Piping.
Project : BUDGE BUDGE- UNIT - III 1 X 250 MW
Customer Nos : 0329 , 6914

QP No : 6914 : QPC: 04
Rev : 02
Date : 20.09.2007
Page : 01 of 01

Sl. No	PGMA Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat		Total DFT microns min
			Paint	No of coat	Paint	No of coat	Paint	No of coat	
1	BURIED PIPING DIAMETER > 1000 mm a) External Surface b) Internal Surface	- Blast clean to Sa 2 1/2	- Coal tar epoxy primer DFT 50µ-min	- 1	- -	- -	- Coal tar Epoxy DFT 100µ	- 1	** refer Note 3 below 150
2	OVER GROUND PIPING DIAMETER > 1000 mm a) External Surface b) Internal Surface	- Blast clean to Sa 2 1/2	- Coal tar epoxy primer DFT 50µ-min	- 1	- -	- -	- Coal tar Epoxy DFT 100µ	- 1	** refer Note 3 below 150
3	OVER GROUND PIPING DIAMETER < 1000 mm External Surface (Boiler Aux Cooling water)	-	-	-	-	-	-	-	** refer Note 3 below

Note :

- 1) ROZP : Red Oxide Zinc Phosphate Paint 2) µ = microns
3) No painting on external surface, however painting will be done by BHEL/PSER as per contract requirements at site.

Prepared By : R.JANARTHANAN.

Reviewed & Approved By : G.PANNEER SELVAM

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

REV	DATE	ALTERED
		APPROVED

ALL DIMENSIONS ARE IN MILLIMETRES

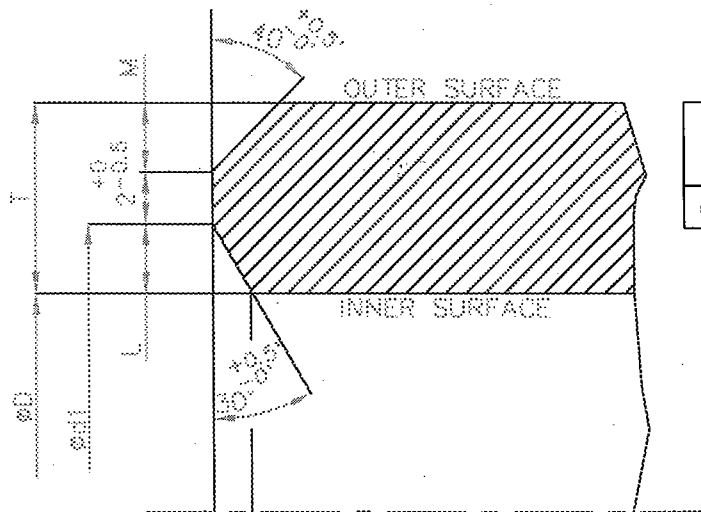


FIG-A

PIPE SIZE OD X T	ød1	øD	T	L	M
ø 2435 X 18	2421	2399	18	11	5

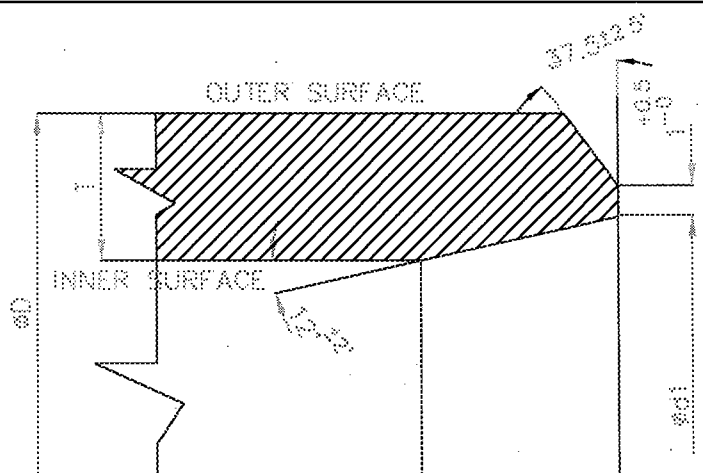


FIG-B

PIPE SIZE øD X T	ød1
ø 1829 X 14	1801.0
ø 1626 X 14	1598.0

BUDGE BUDGE LP PIPING 1X250 MW



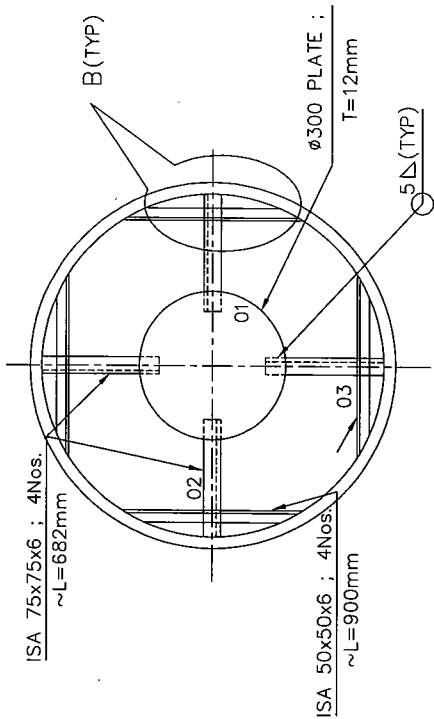
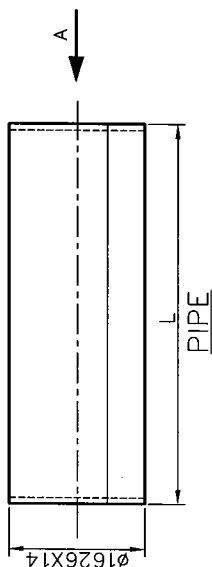
BHARAT HEAVY ELECTRICALS LIMITED
PIPING CENTRE
CHENNAI 600 017

NAME	SIGN	DATE	NO. OF VAR
DRN I.BISWAS		01-08-07	
CHD I.BISWAS		01-08-07	
APPD S.MADHAVAN		01-08-07	

DEPT	GRADE OF UNTOL.DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	ITEM NO.	NO. OF ITEMS
CODE	C / M / F	N.T.S				
TITLE EDGE PREPARATION DETAIL (FOR MAIN CIRCULATION WATER PIPING)				CARD CODE U 01	DRAWING NO. 4-80-468-65388	
					REV 00	

3-80-898-24544

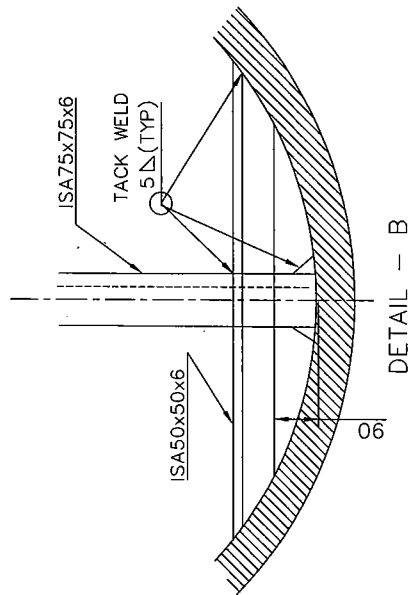
DRAWING No



VIEW - A

NOTES

1. QUANTITY INDICATED IN BOM IS FOR ONE MITRE BEND/PIPE.
2. MATERIAL FOR SPIDER ARRANGEMENT IS TEMPORARY MATERIAL WHICH WILL BE CUT AND REMOVED AT SITE.HENCE THIS MATERIAL IS NOT COVERED IN GMS AND HAS TO BE PROVIDED BY SUB CONTRACTOR.



DETAIL - B

VAR NO.	ITEM NO.	DESCRIPTION	DRAWING NO.	REV NO.	MATERIAL CODE	MATERIAL SPEC.	UNIT	QTY.
	03	ISA50x50x6 L=900			150131560000			4 050
	02	ISA 75x75x6 L=682			IS2062Fe410A			4 650
	01	PLATE 300 T=12			150111320000			6 658
					IS2062Fe410A			2

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECTBHARAT HEAVY ELECTRICALS LTD.,
PIPING CENTRE,
CHENNAI 600 017NAME
L.BISWAS
CHD L.BISWAS
APPS.MADHAVAN

SIGN

DATE
01.08.07
01.08.07
01.08.07NO OF
ITEMSREV
01
ZONE

DATE

ALTERED
APPROVED

DEPT.

GRADE OF
UN TOL DIM
C/M/F

SCALE

WEIGHT (Kg)

REF TO ASSY / OLD DRG

ITEM
No.

TITLE

SPIDER ARRANGEMENT
OD 1600

DRAWING No.

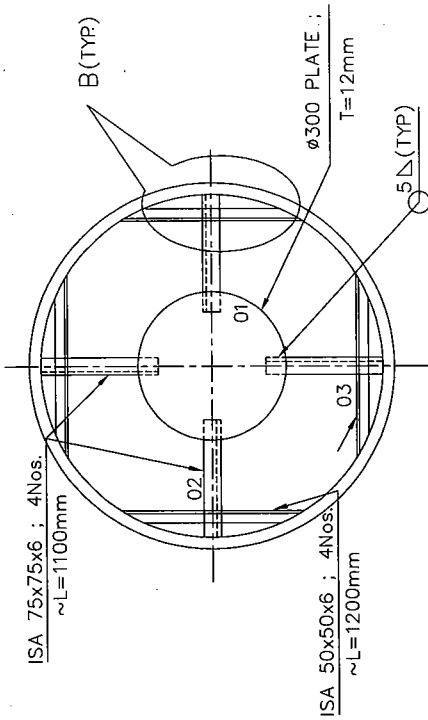
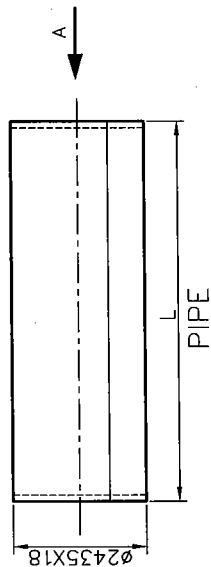
3-80-468-24544

REV

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3-80-468-24546

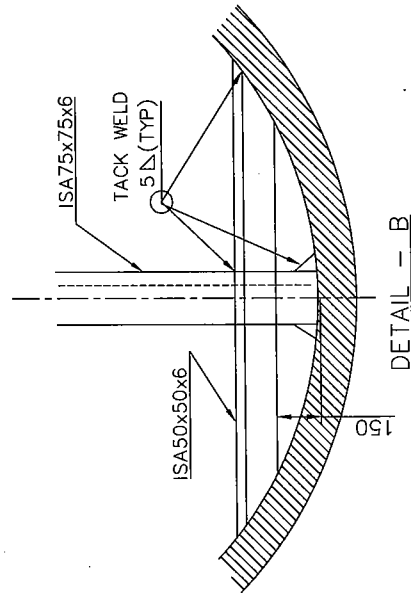
DRAWING No



VIEW - A

NOTES

1. QUANTITY INDICATED IN BOM IS FOR ONE MITRE BEND/PIPE.
2. MATERIAL FOR SPIDER ARRANGEMENT IS TEMPORARY MATERIAL WHICH WILL BE CUT AND REMOVED AT SITE.HENCE THIS MATERIAL IS NOT COVERED IN GMS AND HAS TO BE PROVIDED BY SUB CONTRACTOR.



DETAIL - B

VAR NO.	ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	MATERIAL SPEC.	UNIT WT.	QTY.
	03	ISA50x50x6 L=1200			150131560000 IS2062Fe410A			5 400
	02	ISA 75x75x6 L=1100			150130050000 IS2062Fe410A			7 480
	01	PLATE 300 T=12			150111320000 IS2062Fe410A			6 658
								2

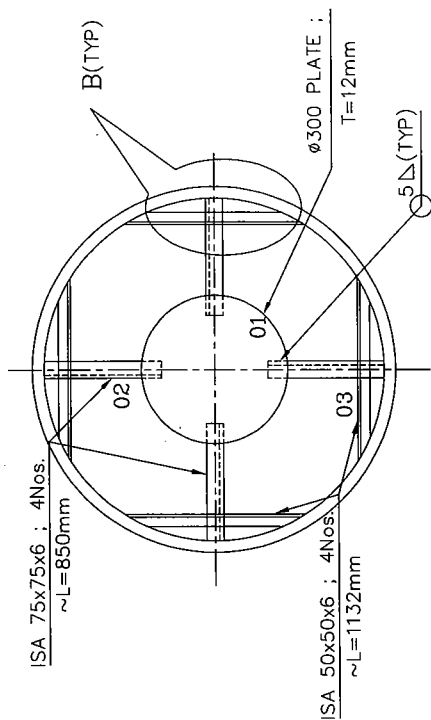
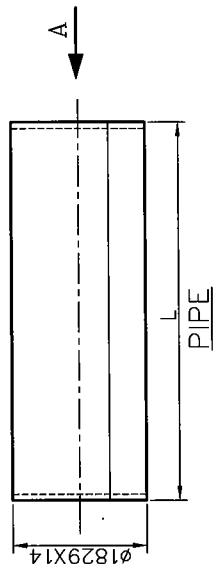
TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

REV 01	DATE	ALTERED	APPROVED	ZONE	DEPT.	GRADE OF UN TOL DIM C/M/F	SCALE	WEIGHT (Kg)	REF TO ASBY / OLD DRG	ITEM No.	NO OF ITEMS	DATE	SIGN	NAME	DRN	CHD	APPS	ITEM No.	REV
01								116.34				01.08.07		LEISWAS					00
BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017										BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017									
SPIDER ARRANGEMENT OD 2400										SPIDER ARRANGEMENT OD 2400									
U 01										U 01									
3-80-468-24546										3-80-468-24546									

SIZE A3

3-80-468-24545

DRAFTING NO.





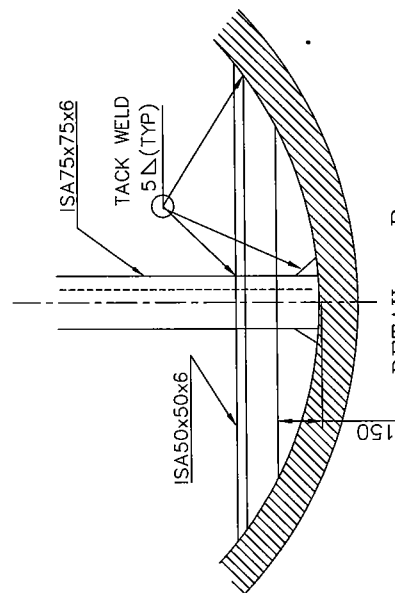
VIEW - A

NOTES

1. QUANTITY INDICATED IN BOM IS FOR ONE MITRE BEND/PIPE.
2. MATERIAL FOR SPIDER ARRANGEMENT IS TEMPORARY MATERIAL WHICH WILL BE CUT AND REMOVED AT SITE.HENCE THIS MATERIAL IS NOT COVERED IN GMS AND HAS TO BE PROVIDED BY SUB CONTRACTOR.

[illegible]TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

REV 01	DATE	ALTERED APPROVED	DEPT.	GRADE OF UN TOL DIM C/M/F		SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DRG	ITEM No.	BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017			NO OF ITEMS		
															
										DRN			DATE		
										CHD			SIGN		
						APPS. MADHAVAN			01.08.07						



DETAIL - B

SIZE A3