



Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)

Piping Centre , 80, G. N. Chetty Road, CHENNAI – 600 017
Phone : 91 (044) 28161245, Fax : 91 (044) 28161341
mail: prs@bhelmpc.co.in

e-

REF: ENQ NO:PC9021

DT: 07.06.2010

Sub: Request for Expression of interest documents– reg.

Ref: Enquiry No: PC9021 dt 07.06.10

Please find enclosed the following tender documents for you to submit Expression of interest documents along with vendor registration format available in BHEL web site www.bhel.com (supplier registration , supplier within India).The scope includes collection of hollow forgings , weld and supply as welded tee and Y piece. In addition to technical details vendors are requested to confirm the following enclosed documents.

- 1) Quality plan QPG 53 requirements.
- 2) Technical requirements.
- 3) Welding and machining to the enclosed drawing requirements.
- 4) Edge Preparation as per drawing 3-80-300-19825.
- 5) Terms and conditions.(Applicable points only may be filled in)
- 6) Special terms and conditions.(to confirm/accept point wise)
- 7) List of items.

The documents should reach us before the time of opening technical offers.
Expression of interest enquiry will be opened on 23.06.10 at 14.00 hrs.
Late tenders are liable to be rejected. **Please note there is no price offer in this enquiry. This enquiry is only for selection of vendors.**


(P.RAVI SHANKAR)

DGM / Purchase
BHEL / Piping Centre
80,GN Road, T.Nagar
Chennai-600017
e-mail:prs@bhelmpc.co.in

044/28161245

**BHARAT HEAVY ELECTRICALS
LIMITED PIPING CENTRE, CHENNAI-17
QUALITY DEPARTMENT.**

STANDARD QUALITY PLAN FOR FABRICATED TEES & Y PIECES WITH BHEL MATERIAL

Q.P. NO : QPG:53
REV NO : 00
DATE : 24.02.2010

QA 03 S/N O	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK M	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY		REMARKS
									M	B	
1	2	3	4	5		7	8	9	D*	10	11
1.0	Material	All raw material shall be supplied by BHEL.									
1.1	Forgings, Pipes, Rounds as per BHEL drawing. (Material receipt inspection)	Correctness of material specn., Size, Correlation of melt number with TC	Critical	Verification	100%	Material specification as per Col.2.		TC	✓	P	V ** Material correctness is ensured through mill test certificates (incl. IBR Form IIIA) & hard punching on material.
2.0	IN-PROCESS INSPECTION										
2.1	Machining & Edge Preparation	a) Dimension b) NDT for machined surface	Major Major	Measurement PT / MT	100% 100%	As per BHEL drawing ASME Sec V / ASME B31.1 cl 136.4.4 for PT, Cl.136.4.3 for MT		HC Report	✓	P W	V W
2.2	Welding	a) Procedure & Performance Qualification details b) NDT for Edge preparation c) Fit-up d) Welding Post Weld Heat Treatment a) NDE for Butt joints b) Additional NDE for P91 welds	Major Minor Major Major Major Major Major	Verify PT \$\$ Dimension, Root gap Time/temp. RT \$\$ MT \$\$ UT \$\$	100% 100% 100% 100% 100% 100% 100%	ASME Sec. IX, IBR ASME Sec V / ASME B31.1 cl 136.4.4 As per drg. By IBR qualified welders as per approved WPS Refer Note : 4 ASME Sec V / ASME B31.1 cl 136.4.5 ASME Sec V / ASME B31.1 cl 136.4.3 AD 2000 Merkblat HP 5/3-2002 Edition (also refer Note : 5)		WPS, PQR Report HC HT Chart NDT Report NDT Report NDT Report	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	P P P P P P P P	V/W Refer Note : 3 W - R R W W W W
2.3	Heat Treatment										
2.4	NDE										
LEGEND: * RECORDS, IDENTIFIED WITH 'TICK' (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. M: MANUFACTURER B: BHEL P: PERFORM W: WITNESS AND V: VERIFICATION PT - PENETRANT TEST; MT- MAGNETIC PARTICLE TEST; RT - RADIOGRAPHY TEST; UT- ULTRASONIC TEST											
APPROVED BY : P. ELANGO VAN, SDGM /QA PREPARED BY : G. PANNEER SELVAM, DGM /QA PAGE 01 OF 03											

End

APPROVED BY : PELANGOVAN, SDGM/QA

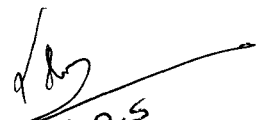
PAGE 01 OF 03

		BHARAT HEAVY ELECTRICALS LIMITED PIPING CENTRE, CHENNAI-17 QUALITY DEPARTMENT.		STANDARD QUALITY PLAN FOR FABRICATED TEES & Y PIECES WITH BHEL MATERIAL				Q.P. NO : QPG-53 REV NO : 00 DATE : 24.02.2010													
QA 03		COMPONENT & OPERATIONS		CHARACTERISTICS		CLASS		TYPE OF CHECK		QUANTUM OF CHECK		REFERENCE DOCUMENT		ACCEPTANCE NORMS		FORMAT OF RECORDS		AGENCY		REMARKS	
1		2		3		4		5		6		7		8		9		10		11	
NOTES:																					
1) The items shall be manufactured as per BHEL drawing, BHEL QP & IBR. 2) First off Trail will be witnessed by BHEL for first 2 items from raw material to finished product. On successful completion of First off Trail, regular production can be done by the Vendor as per the quality plan. 3) (i) WPS, PQR shall be approved by BHEL. Electrodes shall be of BHEL approved make. (ii) For F91/P91 material, GTAW rods (ER 90 S - B9) SMAW electrodes (E9015 - B9) used shall be of following makes. a) Bohler Schweistechnik Austria, Austria. b) Bohler Thyssen schweisstechnik, Germany. c) Kobe Steels Ltd., Japan. d) Oerlikon Welding Ltd., Switzerland. e) Metrode Products, U.K. The core wire chemistry shall be equivalent to F91/P91. Synthetic electrodes are not permitted. 4) PWHT shall be done in a calibrated furnace. For F91/P91 material, PWHT shall be done immediately after welding at 760 ± 10 deg.C. Holding time shall be minimum 2 Hrs for thickness upto 50mm; minimum 4 Hrs for thickness upto 100 mm. PWHT for other material shall be as per ASME B31.1. 5) The UT shall be conducted by Pulse Echo contact testing. The digital equipments namely GE Inspection technology (Krautkramer make), Olympus (EPOCH IV, XT), Sonatest (Master scan series-350M/380M) U.K. or its equivalent models with A-scan presentation that generates and receives frequencies in the range of 1 MHz to 5 MHz shall be used for examination. The calibration blocks used shall be of same material specification, diameter & thickness. The UT equipment shall be calibrated at the beginning of each period of extended use or every 3 months whichever is less. 6) Painting: a) Surface preparation : Blast cleaning b) Primer coat : 50 microns of Red oxide zinc phosphate as per IS12744 c) Finish coat : 70 microns of Synthetic enamel as per IS2932 d) Shade : (i) Smoke grey for Carbon steel (ii) Sea green for Alloy steel 7) All fittings shall be colour coded circumferentially at ends as given below: SA / 105 SA 106 Gr.C: BLUE. SA 182 F22 / SA 335 P22 : BLUE & RED SA 182 F91 / SA 335 P91 : BROWN & RED. 8) The fittings shall be punched / etched with Material code, Heat number, Material specification, Makers emblem, Inspectors seal and Statutory authorities seal. In addition, the above details along with size shall be paint stencilled on the fittings. If workorder - DU numbers are given in the Purchase order, the same shall be punched and paint stencilled. 9) Machined ends of the fittings shall be well protected using end caps and fittings shall be suitably packed in box / crate to avoid transit & other damages.																					
LEGEND: * RECORDS IDENTIFIED WITH 'TICK' (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. M: MANUFACTURER B: BHEL P: PERFORM W: WITNESS AND V: VERIFICATION PT - PENETRANT TEST; MT- MAGNETIC PARTICLE TEST; RT - RADIOGRAPHY TEST; UT- ULTRASONIC TEST																					
PREPARED BY : G.PANNER SELVAM, DGM /QA																					
APPROVED BY : P.ELANGO VAN, SDGM /QA																					
PAGE 03 OF 03																					

TECHNICAL REQUIREMENTS FOR GETTING EXPRESSION OF INTEREST FOR FABRICATED TEES WITH BHEL MATERIAL- SA182F91 SPECIFICATION

END PC 9021

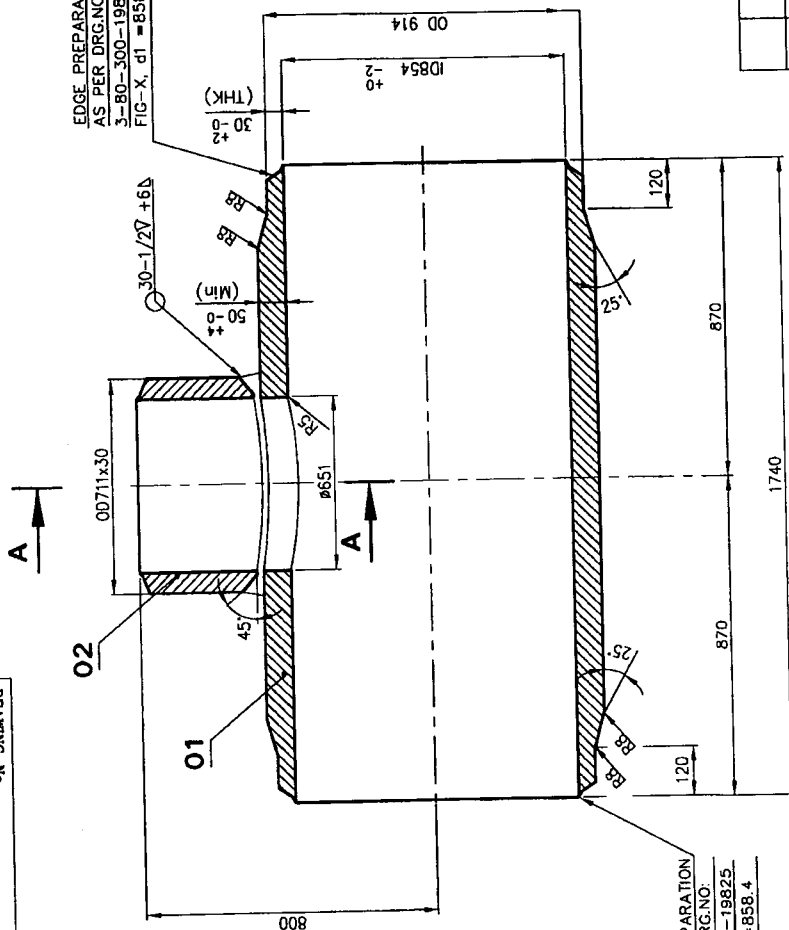
- 1) Vendor shall have adequate facilities and experience to fabricate Tees as per BHEL QP no QPG: 53. The raw forging conforming to SA182 F91 specification issued by BHEL.
- 2) Vendor should have executed similar job involving SA335 P91 / SA182 F91 material of thickness around 20 mm. Experience in higher alloy material will also be considered.
- 3) Vendor shall have Heat Treatment Furnace (Gas or Electrically operated) with a maximum of +/- 5 deg.C variation. Copy of the calibration certificate to be furnished.
- 4) Vendor shall have WPS, PQR, and WPQ validated by reputed agencies and welders shall also be qualified by IBR.
- 5) Vendor is not allowed to offload any activities except NDE with BHEL's approval.
- 6) Vendor shall furnish the following details relevant to the tendered item.
 - a) List of machineries & equipment.
 - b) List of testing equipments / instruments.
 - c) Welding procedure along with copies of WPS,PQR,WPQ
 - d) Heat Treatment facility details and its latest calibration certificate.
 - e) NDE administering (inhouse / offloaded). If offloaded, details of agency, facilities and qualifications are required.
 - f) Manpower details. (Production & Inspection, those will be employed for this job).
 - g) Organization chart.
 - h) Experience in executing similar job.(details like customer, project, sizes & quantity involved, year of supply to be furnished)
 - i) Complete set of technical documents for any one job executed
 - j) clientele list


Mr G.R.S

DRAFTING No.

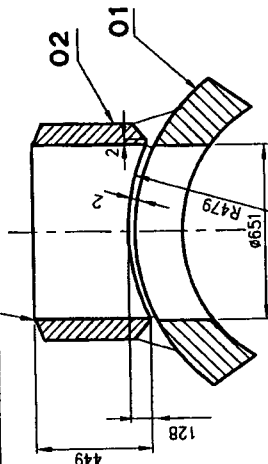
EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
FIG-X, d1 =858.4

EDGE PREPARATION/
AS PER DRG.NO:
3-80-300-19825
FIG-X, d1=858.4



a) GTAW : ER90S-B9 (A)
b) SMAW : E9015-B9 (A)

EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
FIG-X, d1=665



SECTION-AA

[illegible]

STANDARD

REV	DATE	ALTD
01		APPD

TITLE
FABRICATED UNEQUAL TEE
OD914x30/OD711x25 F91

3-80-999-97773

SIZE A3

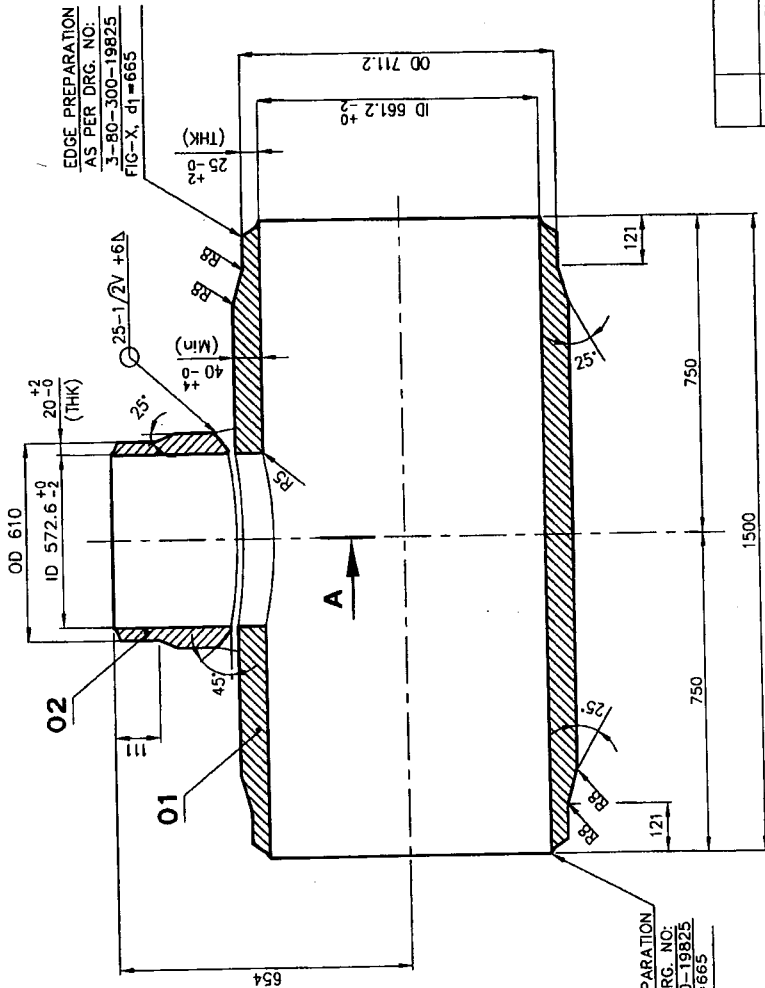
6

FIRST ANGLE PROJECTION(ALL DIMENSIONS IN MILLIMETRES)

3-80-999-9774

DRAWING No

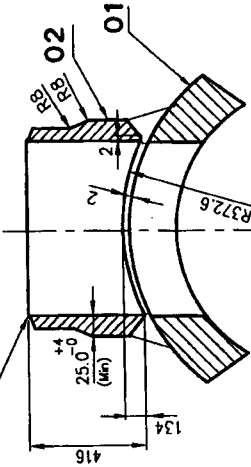
A



EDGE PREPARATION
AS PER DRG. NO.
3-80-300-19825
FIG-X, d1=665

EDGE PREPARATION
AS PER DRG. NO.
3-80-300-19825
FIG-X, d1=665

EDGE PREPARATION
AS PER DRG. NO.
3-80-300-19825
FIG-X, d1=572.6



SECTION-AA

- NOTES :-
1. DESIGN PRESSURE : 48.4 Kg/Sq.Cm (g)
 2. DESIGN TEMPERATURE : 568° C
 3. FOLLOW QPG : 53
 4. PIPE SA335P91(A) CAN ALSO BE USED IN PLACE OF SA182F91(A).
 5. FABRICATION, INSPECTION, TESTING AS PER IBS 1950.
 6. CONTOUR OF ITEM 02 SHALL BE TO SUIT OUTER SURFACE OF ITEM 01.
 7. ELECTRODES TO BE USED ARE,
a) GTAW : ER90S-B8 (A)
b) SMAW : E9015-B8 (A)
ELECTRODES GIVEN ABOVE ARE INDICATIVE. VENDOR TO GIVE WPS FOR BHEL'S APPROVAL.
 8. FINISHED ASSY MATERIAL CODE: 92-505-791-0000.

12.5

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	NAME	SIGN	DATE	NO OF ITEMS
02	BRANCH NOZZLE ID572.6x25Min L416	3-80-999-97774	01	SA 182 F91		20.02.10	1
01	BASE PIPE ID661.2x40Min L1500	3-80-999-97774	01	SA 182 F91		20.02.10	1
				MATERIAL CODE			
				MATERIAL SPEC.			
				UNIT WT.			
				QTY.			

DEPT.	GRADE OF UN TOL DIM C/M/F	SCALE	WEIGHT (Kg)	BHEL PO REF NO.	ITEM No.
01	C/M/F	N.T.S.	1191.000	3-80-310-24190	
				3-80-999-97705	

TITLE	CARD CODE	DRAWING No.	REV
FABRICATED UNEQUAL TEE OD711.2x25/OD610x20 F91	U 01	3-80-999-97774	00

STANDARD

REV DATE ALT ID APPD

01

CAUTION THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY

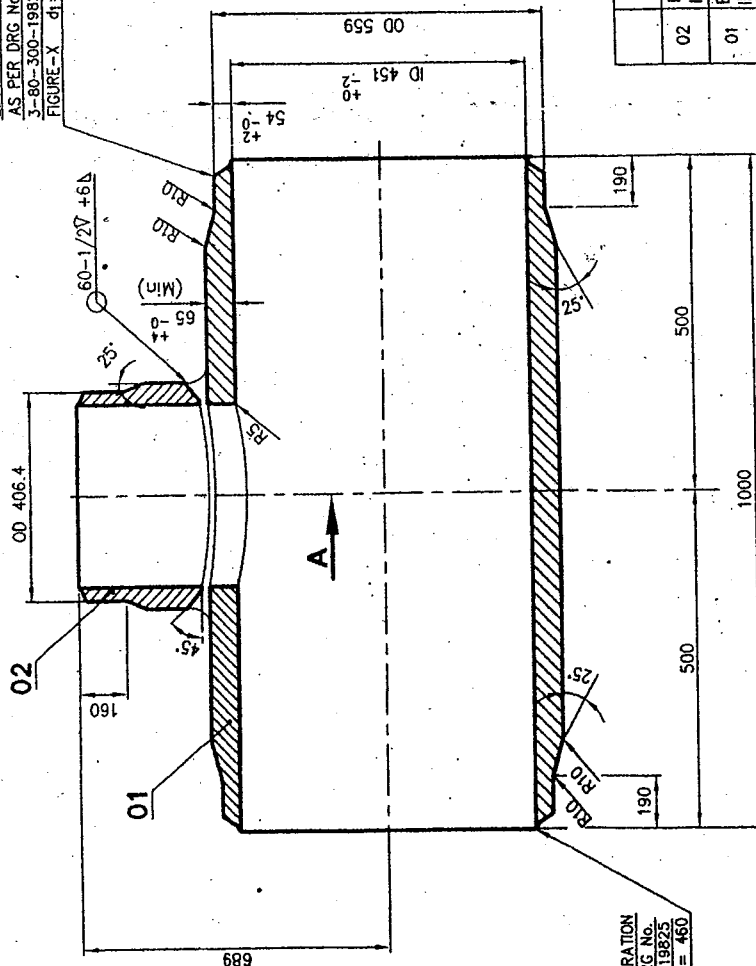
FIRST ANGLE PROJECTION(ALL DIMENSIONS IN MILLIMETRES)

86976-666-08-E

DRAWING No

A

EDGE PREPARATION
AS PER DRG No.
3-80-300-19825
FIGURE-X d1= 460

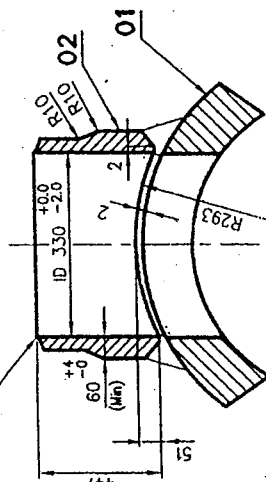


EDGE PREPARATION
AS PER DRG No.
3-80-300-19825
FIGURE-X d1= 460

NOTES :-

1. DESIGN PRESSURE : 188.5 Kg/Sq.Cm (g)
2. DESIGN TEMPERATURE : 540° C
3. FOLLOW TDG : 108
4. ELECTRODES TO BE USED ARE,
a) GTAW : ER90S-B9 (A)
b) SMAW : E9015-B9 (A)
ELECTRODES GIVEN ABOVE ARE INDICATIVE. VENDOR TO
GIVE WPS FOR BHEL'S APPROVAL.
5. PIPE SA333F91(A) CAN ALSO BE USED IN PLACE OF
SA182F91(A).

EDGE PREPARATION
AS PER DRG No.
3-80-300-19825
FIGURE-X d1= 336



SECTION-AA

STANDARD

02	BRANCH NOZZLE L=447 ID 330.0 x Thk 60.0 Min	3-80-999-97698	SA 182 F91	A	265.40	84360	UNIT WT.	QTY.
01	BASE PIPE L = 1000 ID 451.0 x Thk 65.0 Min	3-80-999-97698	SA 182 F91	A				
ITEM NO.	DESCRIPTION	DRAWING NO.	MATERIAL CODE	MATERIAL SPEC.	ITEM NO.	UNIT WT.	QTY.	

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



BHARAT HEAVY ELECTRICALS LTD.,
PIPING CENTRE,
CHENNAI 600 017

DEPT. CODE



SCALE N.T.S.

WEIGHT (Kg) 1109.000

DATE 07.02.08

DATE 07.02.08

DATE 07.02.08

FABRICATED UNEQUAL TEE

(OD559.0x54.0/OD406.4x38.0)

U 01

3-80-999-97698

0

FIRST ANGLE PROJECTION ALL DIMENSIONS IN MILLIMETRES

92861-300-08-3
DRAWING NO.

NOTES:-

- 01. APPLICABLE FOR P91 MATERIAL
- 02. FOR OD MISMATCHING REF. FIGURE-Xa.
- 03. $\alpha = 6^\circ$ FOR WALL THICKNESS ≤ 30 mm
- 04. $\alpha = 10^\circ$ FOR WALL THICKNESS > 30 mm

MATCHING EDGE PREPARATION FOR MISMATCH OD
DIAMETRICALLY GREATER THAN 8 mm
(ie. OD1 - OD2 > 8 mm.) APPLICABLE FOR
BENDS/FITTINGS OF P91 MATERIALS

NOTES:-

- 01. OD OF STRAIGHT TO BE PHYSICALLY MEASURED/VERIFIED.
- 02. $\alpha = 6^\circ$ FOR WALL THICKNESS ≤ 30 mm
- 03. $\alpha = 10^\circ$ FOR WALL THICKNESS > 30 mm

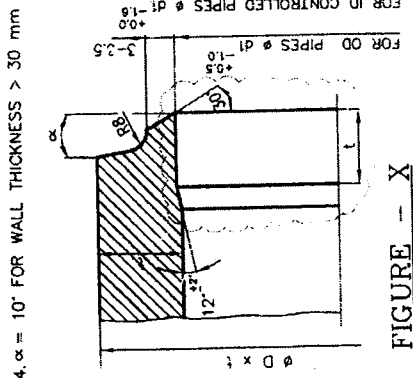


FIGURE - X

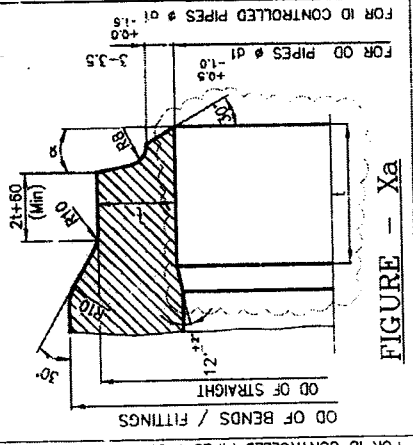
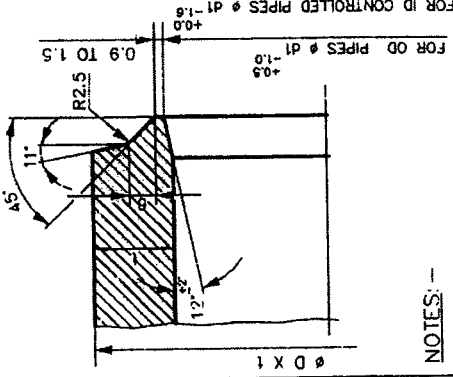


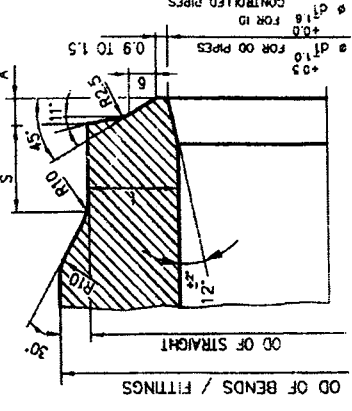
FIGURE - Xa



NOTES:-

- 01. USE WHEN $t \geq 14.2$ mm.
- 02. FOR OD MISMATCHING REF. FIGURE-Pa

STYLE - P



STYLE - Pa

MATCHING EDGE PREPARATION FOR MISMATCH OD
DIAMETRICALLY GREATER THAN 8 mm
(ie. OD1 - OD2 > 8 mm.) APPLICABLE FOR
BENDS/FITTINGS OTHER THAN P91 MATERIALS

NOTES:-

- 01. OD OF STRAIGHT TO BE PHYSICALLY MEASURED/VERIFIED.
- 02. WHEN $t \leq 65$, $S+A = 65$ Min. & $t \leq 65$, $S=65$ Min. WHERE t = THK OF CONN. PIPE (STRAIGHT).

MATCHING EDGE PREPARATION FOR MISMATCH OD
DIAMETRICALLY GREATER THAN 8 mm
(ie. OD1 - OD2 > 8 mm.) APPLICABLE FOR
ELBOWS OTHER THAN P91 MATERIALS

NOTES:-

- 01. OD = OUTSIDE DIA OF CONNECTING PIPE (STRAIGHT) TO BE PHYSICALLY MEASURED/VERIFIED.
- 02. t = THK OF CONN PIPE (STRAIGHT)

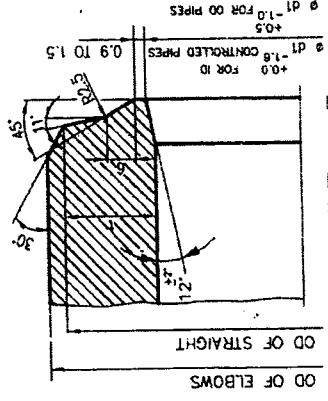
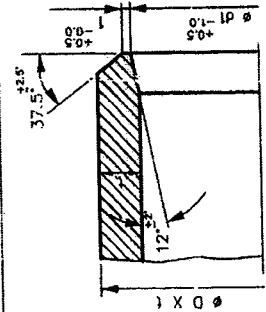


FIGURE - Z

GENERAL NOTES:-

- 01. THE MINIMUM THICKNESS AT WELD END SHALL NOT BE LESS THAN
 - a) 0.875 TIMES t NOM. FOR OD PIPES
 - b) t MIN. FOR ID CONTROLLED PIPES
 - 02. t NOM & t MIN SHALL BE AS PER SPECIFIED PIPE SIZE
- NOTES FOR WELDING:-
- 01. WELD REINFORCEMENT TO BE FLUSH GROUND AND MERGED WITH PARENT METAL WITHOUT ANY UNEVENNESS.



STYLE - D

NOTES:-

- 01. USE WHEN $t < 14.2$ mm.

STANDARD

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		NAME		DATE	NO OF ITEMS
BHARAT HEAVY ELECTRICALS LTD.		DR. R. RAGUNATH	11.10.01	11.10.01	
PIPING CENTRE, CHENNAI		CHD. M. C. SAKARAN	11.10.01	11.10.01	
DEPT.		APPO. A. VELAYUTHAM	11.10.01	11.10.01	
GRADE OF UN TOL. DIM		WEIGHT (kg)		NAME OF ORIGIN. ORGANISATION	
C/M/F		SCALE		DRAWING No.	
CODE		C/M/F		REV	
PROJECT NAME REMOVED AND 'STANDARD' INCORPORATED IN TITLE BLOCK.		U 01		3-80-300-19825 01	
TITLE		EDGE PREPARATION DETAILS		REV	



TERMS & CONDITIONS

SL NO	BHEL REQUIREMENT	SUPPLIER CONFIRMATION
1	TYPE OF BID – Offers are invited to submit in <u>single/ Two parts</u> In case of Single Part Bid no deviation shall be taken and bids will be rejected if any deviation is taken. The order will be finalized based on price /negotiation with all other conditions being accepted by the bidder. In case of Two part bid, the following procedure shall be followed. Part-I TECHNICAL - CUM – COMMERCIAL PART :- This part of the Bid shall contain following Technical and Commercial Points only (Except Price Portion) - Acceptance to our Quality plan , drawings as given in the tender. Deviation if any shall be clearly indicated. If there is nos specific indication about deviation it will be taken as totally accepted and processed. - Copy of price bid without price part to know the items for which you are quoting against this tender. (Money values shall not be indicated i.e.un priced bid). PART II PRICE PART : The unit price on FOB Sea port (or) C&F Chennai seaport India (foreign vendors) / FOR Destination basis (indigenous vendors) and shall include all testing, inspection , packing & Forwarding charges. This part of the Bid shall contain item-wise Price details against each Enquiry SI.No. and the same shall be put in a sealed cover duly indicating Tender No, Tender Opening date, and “Price Bid” on the Sealed cover. Price quoted by the Supplier, element wise including Taxes & Duties shall be as per the format enclosed. Soft copy of the same also to be provided immediately after the price bid opening. Incase of difference between the two, hard copy will prevail and binding on the supplier. Preconditions for price will not be accepted. Both the above referred parts of the Bid each sealed in a separate cover shall be put in a sealed outer cover duly indicating Tender No.& Date, Tender Opening date and to be sent to DGM / PURCHASE(FITTINGS) BHEL : PIPING CENTRE 80, G.N CHETTY STREET T.NAGAR, CHENNAI 600 017	Not applicable for this enquiry Not applicable for this enquiry Not applicable for this enquiry
2	If you are not interested / not in a position to participate in the tender, please send regret letter for not participating, before due date of the tender.	
3	You are requested to quote only for the sizes / spec for which you are approved by BHEL, Piping Centre.	
4	Tolerances for dimensions other than edge preparation shall be as per ASME B 16.9/B 16.28/B 16.11:	
5	Quality Documents as listed below should be sent to Purchase / Piping centre BHEL Chennai immediately after the shipment / dispatch of items and not through Bank. i) Three sets of original certificates item-wise (ie) Works TC, IBR Form III C, UT Report, MPI report, Dimensional report, Raw Material TC (Xerox copy) ii) 3 copies of IBR Form III C for each item duly attested by the makers	

6	representative who has signed in IBR Form III C. The company seal shall be affixed below the signature in case the ordered quantity of an item is 10 and above, (otherwise you can restrict the number of attested copies to the ordered quantity of an item). These certificates are to be dispatched along with the other TC and not through Bank. All the above documents are to be submitted in soft copy apart from the hard copies as above, if the materials are not ready on the date of visit by BHEL INSPECTOR against specific call for inspection by vendor, all the expenses incurred for the visit shall be liable for recovery from, the invoices of the vendor. Further, this will also have an adverse bearing on the performance rating of the vendor. Year of Code for Viz. the standards ASME B16.9, ASME B 28 & ASME B.16.11 etc. shall be latest and the specific year is to be mentioned in the Manufacturer's test certificates, as well as in IBR Form III-C. Also the relevant Year Code for material standard and the NDT standard (ie U.T/LPI/MPI) has to be mentioned.	
7	VALIDITY OF THE OFFER :- The quotation shall be valid at least for a period of 90 days from the date of price bid opening date. Offer with lesser validity will not be considered.	
8	DELIVERY SCHEDULE :- As indicated in the Enquiry	
9	TERMS OF DELIVERY :- FOR SITE or Trichy – Indigenous vendors FOB Loading seaport (or) CFR-Chennai port, India – Foreign vendors	
10	TAXES & DUTIES :- Please indicate clearly the percentages of applicable taxes, duties like CST, Excise Duty or any other taxes / duties. See Pricing Format enclosed.	
11	TRANSPORT :- . For Indigenous suppliers: All the Items are to be dispatched to our Trichy Stores/Site as per PO through BHEL approved road carriers only .List of authorised transporters will be furnished at the time of entering in to contract. Changes if any, in the transporters list during contract period shall be communicated from time to time. For Foreign suppliers: All Items are to be shipped to Chennai Harbour – India	Not applicable for this enquiry
12	PRESERVATION :- As per respective Technical Delivery Condition.	
13	INSPECTION :- A) IBR & Third Party inspection agency for CS & AS materials. B) Third Party inspection agency for SS Materials C)Lloyds Inspection / SGS/BV/BHEL approved agencies D)BHEL / QC Inspection.	

SL NO	BHEL REQUIREMENT	SUPPLIER CONFIRMATION
14	CERTIFICATION :- IBR TC in form III C, inspection report of BHEL Third Party inspection agency, Mfg TC, incorporating BHEL Specification requirement /ASME requirement. Mechanical / Hardness & Heat treatment and other Lab test reports to be furnished. Confirmation report to BHEL Specification to be furnished. Basic raw material (Mill) TC & other requirements as per TDC / Specns shall be submitted. Inspection Charges:- Inspection charges of BHEL/ Their representative are to BHEL A/c. Any other testing charges and IBR inspection charges should be included in the quoted prices. Inspection documents shall be furnished for each batch of dispatch / consignment. If entire P O quantity is manufactured in one lot but dispatched in phased manner, original IBR should be sent along with the first consignment and the attested Xerox copy of IBR shall be sent for subsequent consignments.	
15	IDENTIFICATION As per TDC	
16	GUARANTEE : Vendors shall guarantee the supplies for a period of 24 months from the date of dispatch of materials or 18 months from the date of their commissioning which ever is later	
17	PENALTY :- “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 upto a maximum of 15% of the price of delayed/undelivered goods to be reckoned from the contract delivery date to cargo readiness date (i.e., final inspection agency’s signed date in the certificate)”	
18	TERMS OF PAYMENT : 90% payment against presentation of following documents to our Finance Departments Directly with a copy of Invoice alone to Purchase department. - Invoice in Triplicate - Delivery Challan in duplicate. - Guarantee certificate in duplicate. - Lorry Way Bill Copy- one copy (Original copy of LWB should be sent through the carrier) - Inspection report copy – one copy - IBR Form III-C- one copy - ED gate pass original or copy with a confirmation that the original is sent with the goods. Balance 10% will be paid on submission of Invoice along with GR reference. For Foreign Vendors: 100% through LC and PBG for 10% of PO Value.	Not applicable for this enquiry
19	For all other Terms & Conditions,. If the offer is not confirmed for any other terms we will load highest offer submitted by any other supplier.	
20	GENERAL :- - The PO copy with all details will be given to successful bidders in soft mode also. However Hard copy will be used for record purpose. The same soft copy should be utilized by the suppliers to furnish information as called for in the format. See attached format for details. This soft copy will go up and down between BHEL and the supplier for tracking the full process and smooth closing of the PO - During the Contract period, any of our sister units of BHEL Piping Centre will be entitled to place order for this item on the same terms and conditions - BHEL reserves the right to cancel this tender without assigning any reasons what so ever. - Deviation taken after placement of order will not be accepted (Both technical & on delivery) - Suppliers to analyze in detail, at the time of submission of offer with reference to our “delivery” requirement of fittings and confirm compliance or otherwise. - To ensure correct & timely submission of all original test certificates including IBR Form III-C. There should not be any discrepancies in detail leading to time wastage in clarification and revisions.	

	• BHEL reserves the right to increase or decrease the tendered quantity which may vary by plus minus 15%. • Lowest prices received against BHEL tenders does not mean order will be placed on that Supplier. BHEL reserves the right not to consider the same. • BHEL reserves the right to negotiate or re-float the tender opened if L1 price /or other details are not acceptable to them • BHEL reserves the right to negotiate the L1 rate. • BHEL reserves the right to order on more than one vendor at the lowest acceptable price to BHEL • BHEL RESERVES THE RIGHT TO GO FOR A REVERSE AUCTION INSTEAD OF OPENING THE SUBMITTED SEALED BID, WHICH WILL BE DECIDED AFTER TECHNICAL EVALUATION. • Pre qualification 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.	
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Note : Please confirm your acceptance/other wise to all the points indicated above positively and submit this format duly filled, signed & stamped along with the technical bid.

VENDORS SIGNATURE

Special conditions to Enquiry NO:PC :9021 dt 07.06.10

A. The proposed work is a conversion work. Scope of work includes the following:

1. Collecting Raw material and depositing back the finished items from BHEL Tiruchi.
2. Pre machining inspection
3. Transfer of Seals in accordance with IBR and BHEL requirements.
4. Machining the Hollow forgings and profiling with Edge preparation.
5. Fit up for welding
6. Pre heating, Root welding, and welding with Approved procedure
7. Post weld heat treatment
8. Non destructive testing and Handing over.
9. **Delivery shall be 4 months from the date of collection of raw material from BHEL /Trichy stores.**

B. Bidder shall have experience in fabrication involving Handling, machining, welding, Heat Treatment, Testing of Material P91/T91/F91. Manufacture will be in accordance with IBR.

C. Approved weld procedures, Welding processes shall be used and Qualified welder shall be deployed. Approved preheating and Heat-treatment procedure shall be used.

E. Non destructive testing's as indicated in Quality plans to be adopted at all stages.

F. First item of manufacture shall be treated as the Trial item and only after acceptance of the first item other items shall be manufactured. Inspection by BHEL will be carried out at each stage of machining, fitup, welding and heat treatment. Clearance from BHEL to be obtained at each stage.

G. The total work may be distributed to the L 1 vendor or by Counter offering negotiated L 1 rate considering the Total Quantum, capacity, performance and time available.

H. A valid Bank Guarantee of Rs 1000000/ from a public sector bank shall be furnished before collecting the raw material. BG shall be valid for a period of one year or until completion of the work.

I. Price quoted shall be exclusive of Electrodes. Electrodes required as recommended by BHEL will be supplied free of cost as per BHEL calculations. Care shall be taken in using the electrode optimally. The quantity of electrode to be used will be certified by BHEL.

J. Material shall be collected by the vendor from BHEL Trichy stores and necessary coordination's for the same shall be taken care by vendor. Vendor scope includes further transport to vendor works and returning the finished items to BHEL trichy. Some material may be issued in running meter to cover requirements of more than one item. Scope includes cutting, as required by machine after getting approval of the cutting plan. Cost of scrap will be recovered from vendor at BHEL applicable rates. Full cost of material will be recovered from the vendor in case of any damage / defect during handling and manufacture by the vendor. BHEL has the right to order only on the vendor who fulfill the tender requirement as well as qualifies as assessed by BHEL. BHEL also has the right to order in part or full or withdraw/ reduce the quantity.



LIST OF ITEMS TO BE WELDED AND CONVERTED TO TEE AND Y PIECE.

ENQ- ITEM NO.	ITEM	DESCRIPTION	DRAWING	MATERIAL CODE	QTY
1	Fabricated unequal tee	FAB UET 914 X 30 / 711 X 25 SA182F91	3-80-999-97773/00	925057900000	12
2	Fabricated unequal tee	FAB UET 711.2 X 25/610 X 20 SA182F91	3-80-999-97774/00	925057910000	21
3	Fabricated unequal tee	FAB UET 323.9 X 31 / 219.1 X 25 SA182F91	3-80-999-97775/00	925058070000	5
4	Fabricated unequal tee	FAB UET 323.9 X 31 / 168.3 X 27.5 SA182F91	3-80-999-97776/00	925058090000	7
5	Fabricated Y piece	Y PIECE OD 559 X 54/406.4 X 38 SA182F91	3-80-999-97698/00	925057830000	4

P. J. Brown