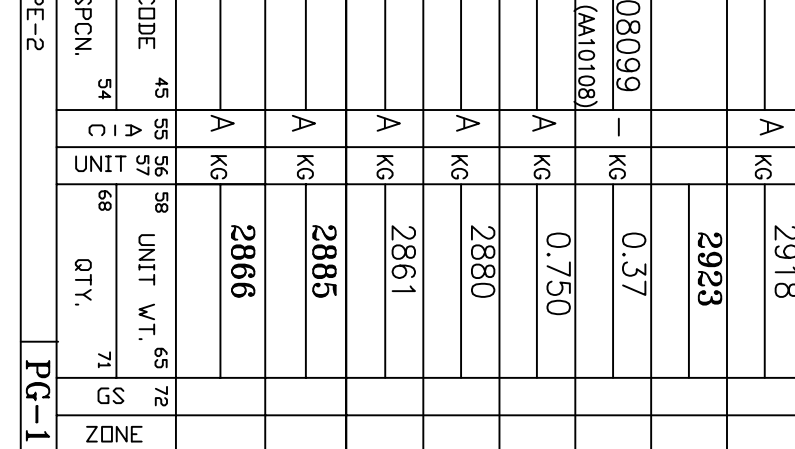
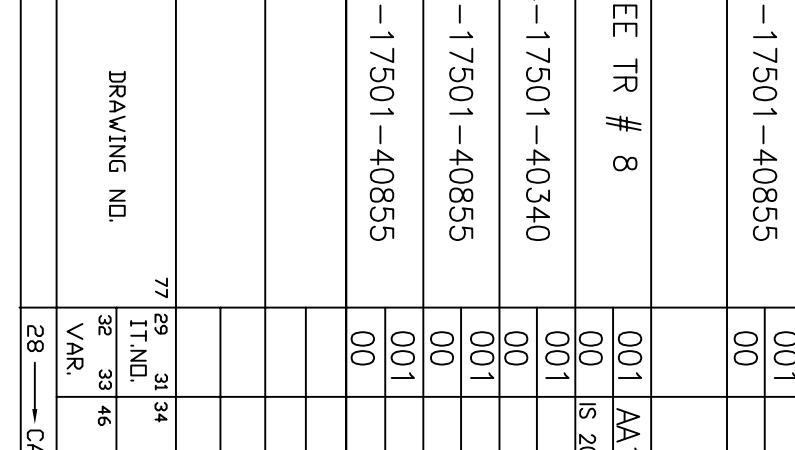
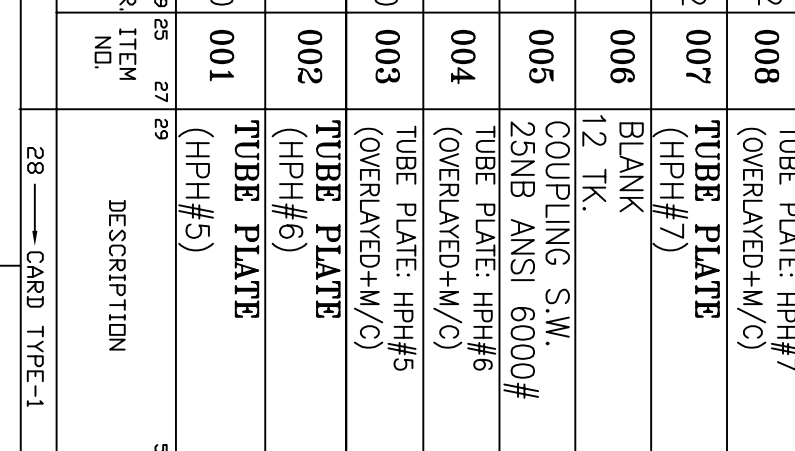
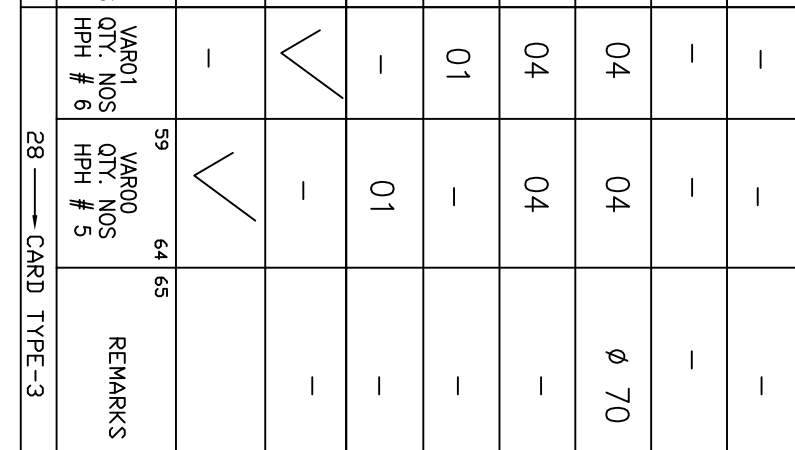
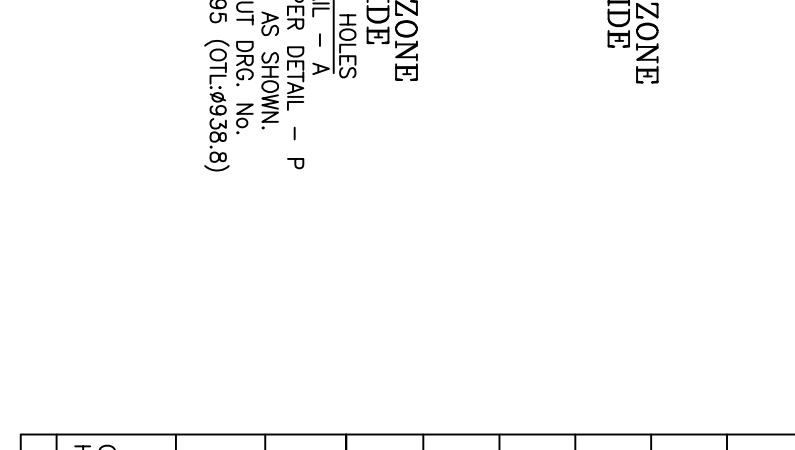
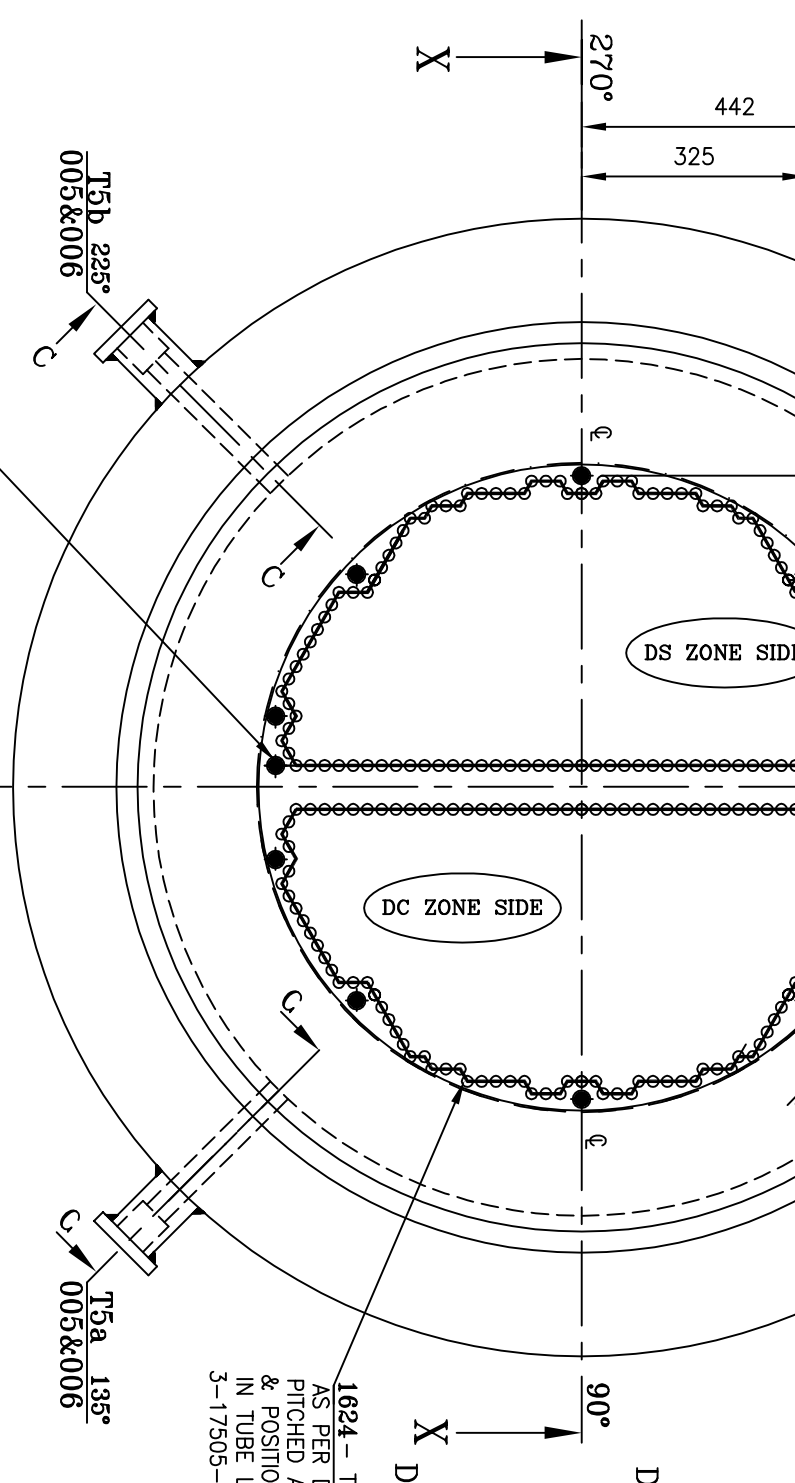
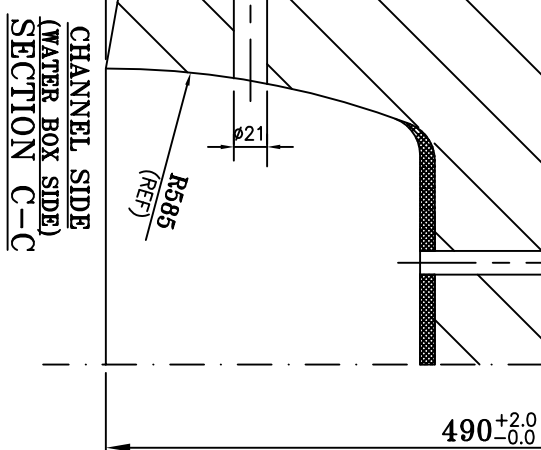
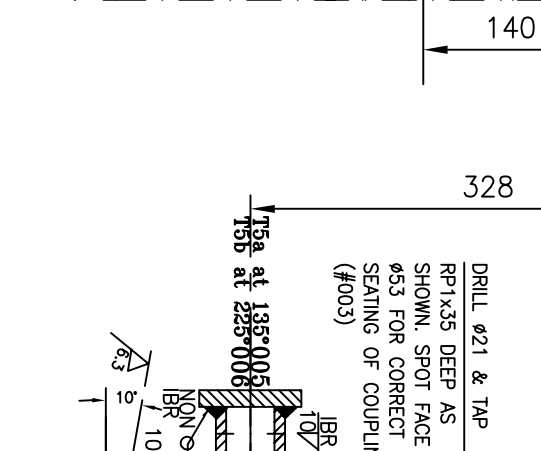
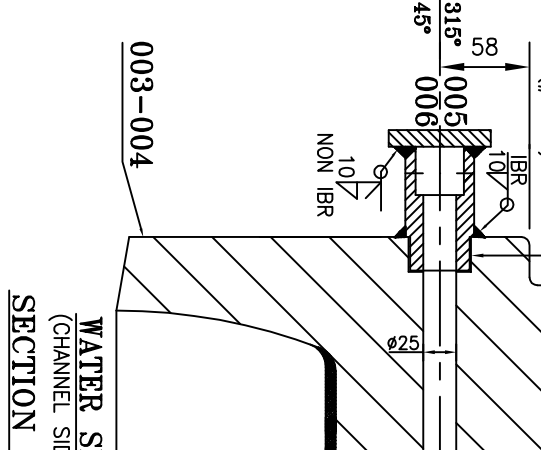
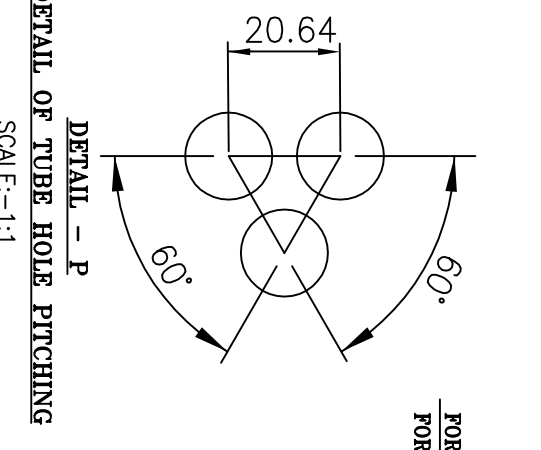
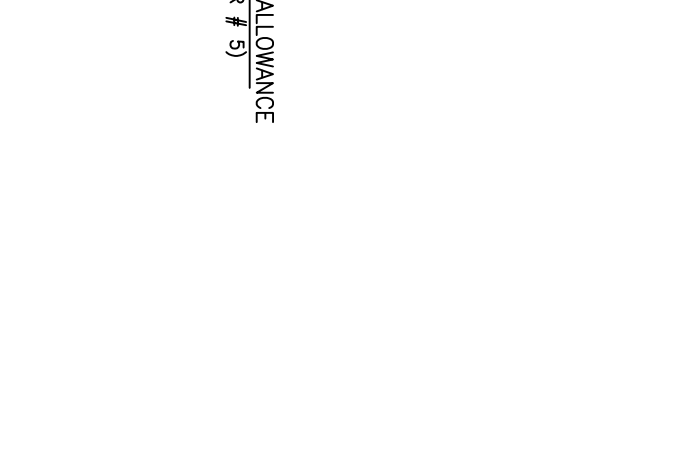
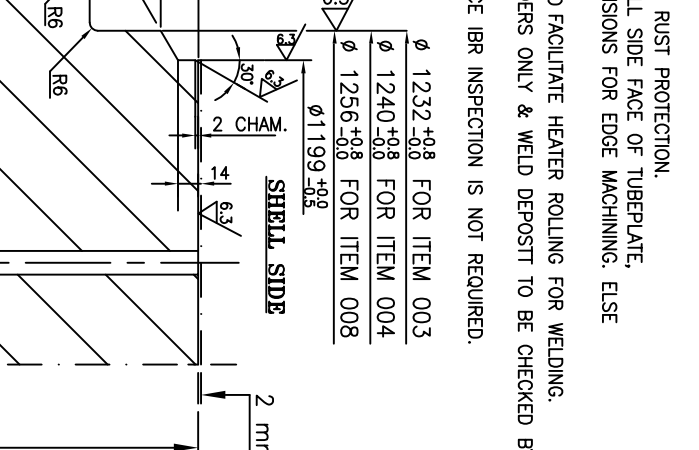
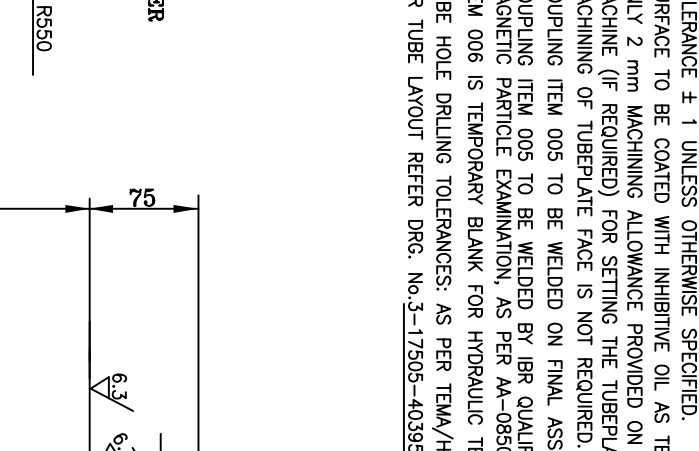
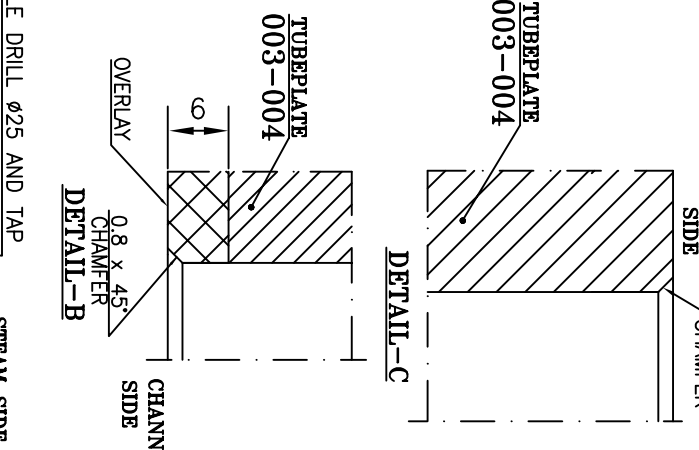
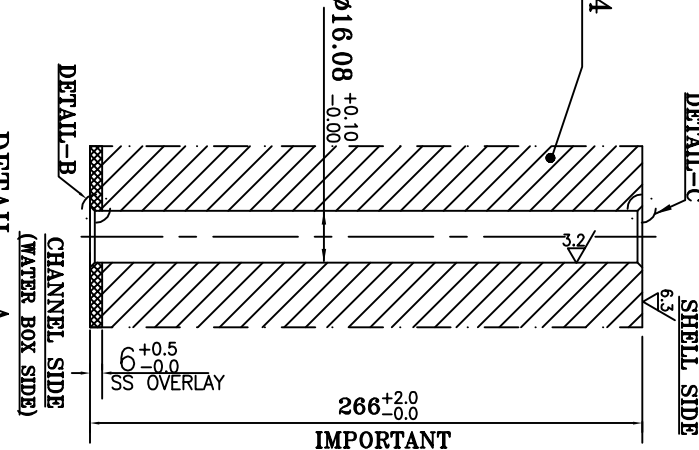
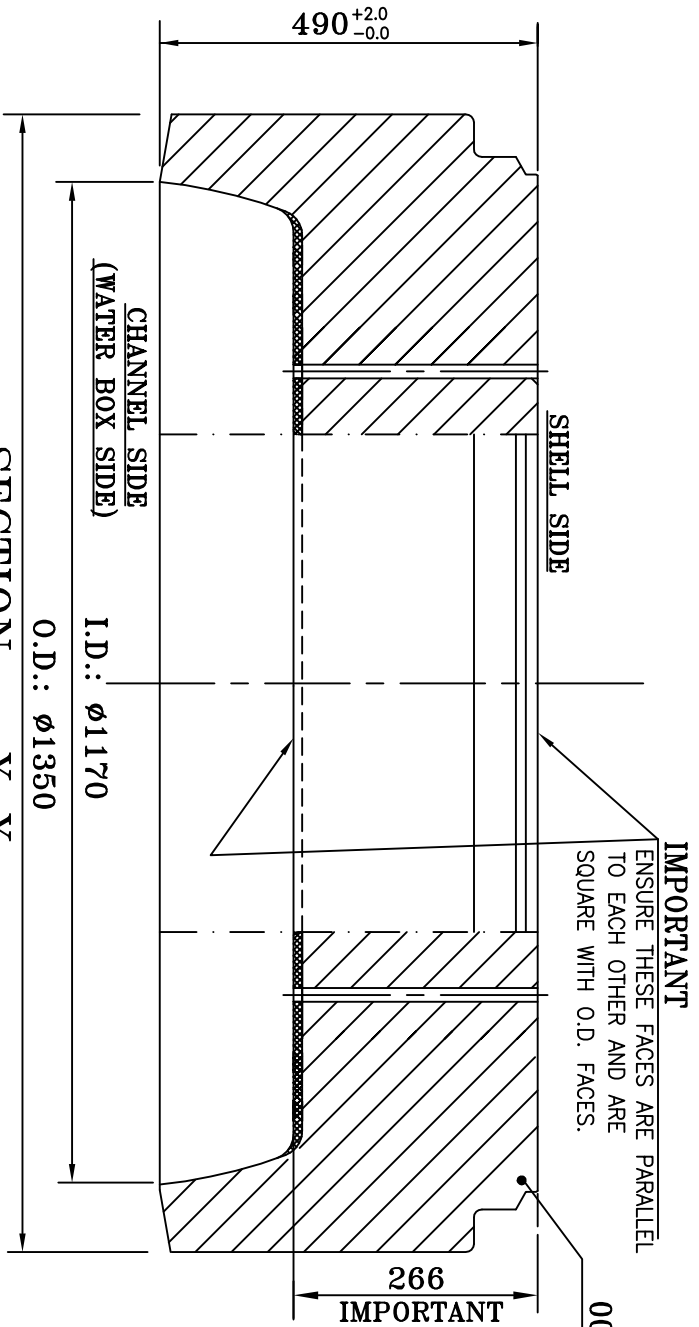


65504-10521-2 IN DRG



INVENTORY NO. 1632540/2023/HEP-HCM26100  
SIGN AND DATE 2-17505-40325  
REF. DRG. NO.

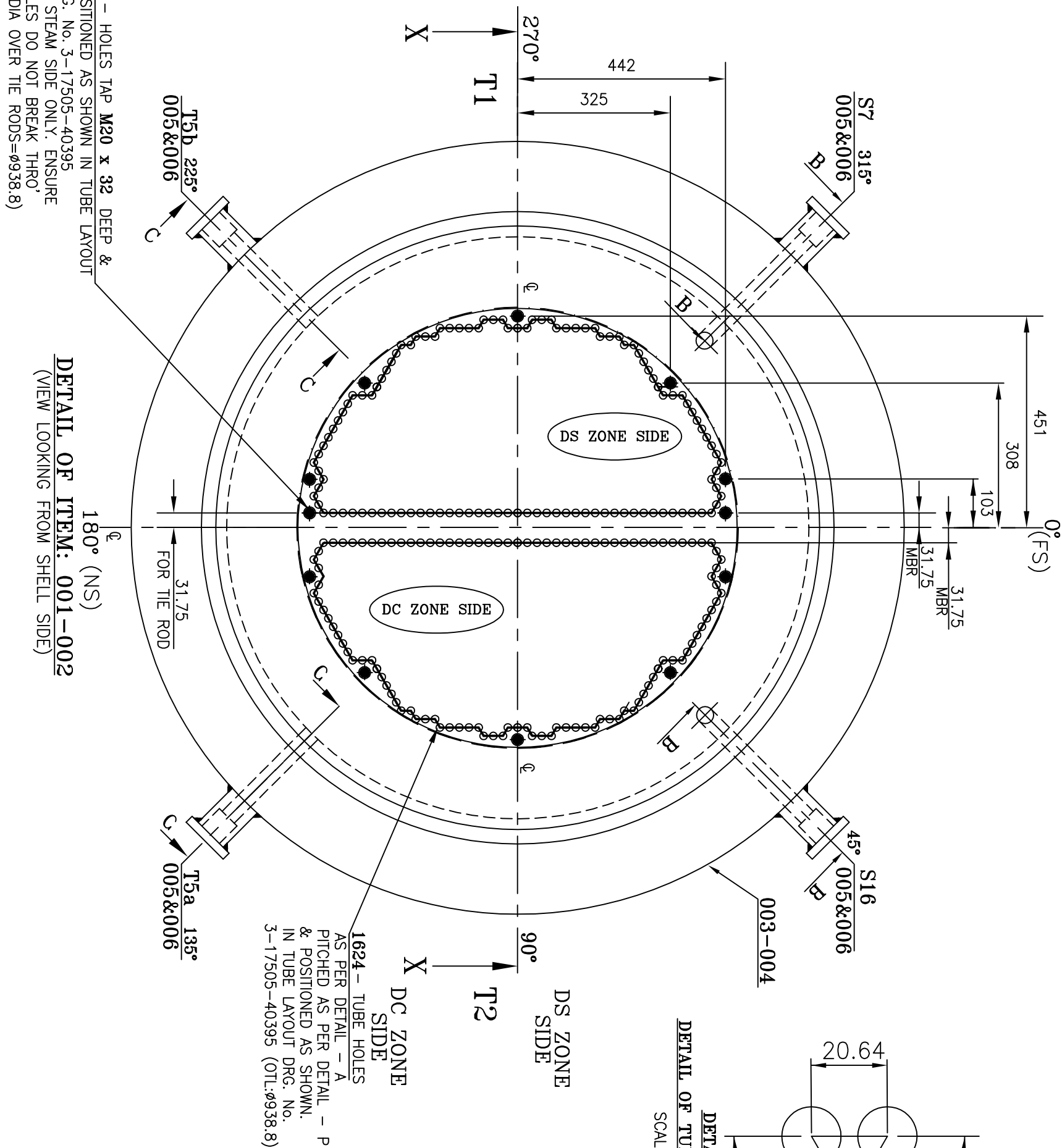
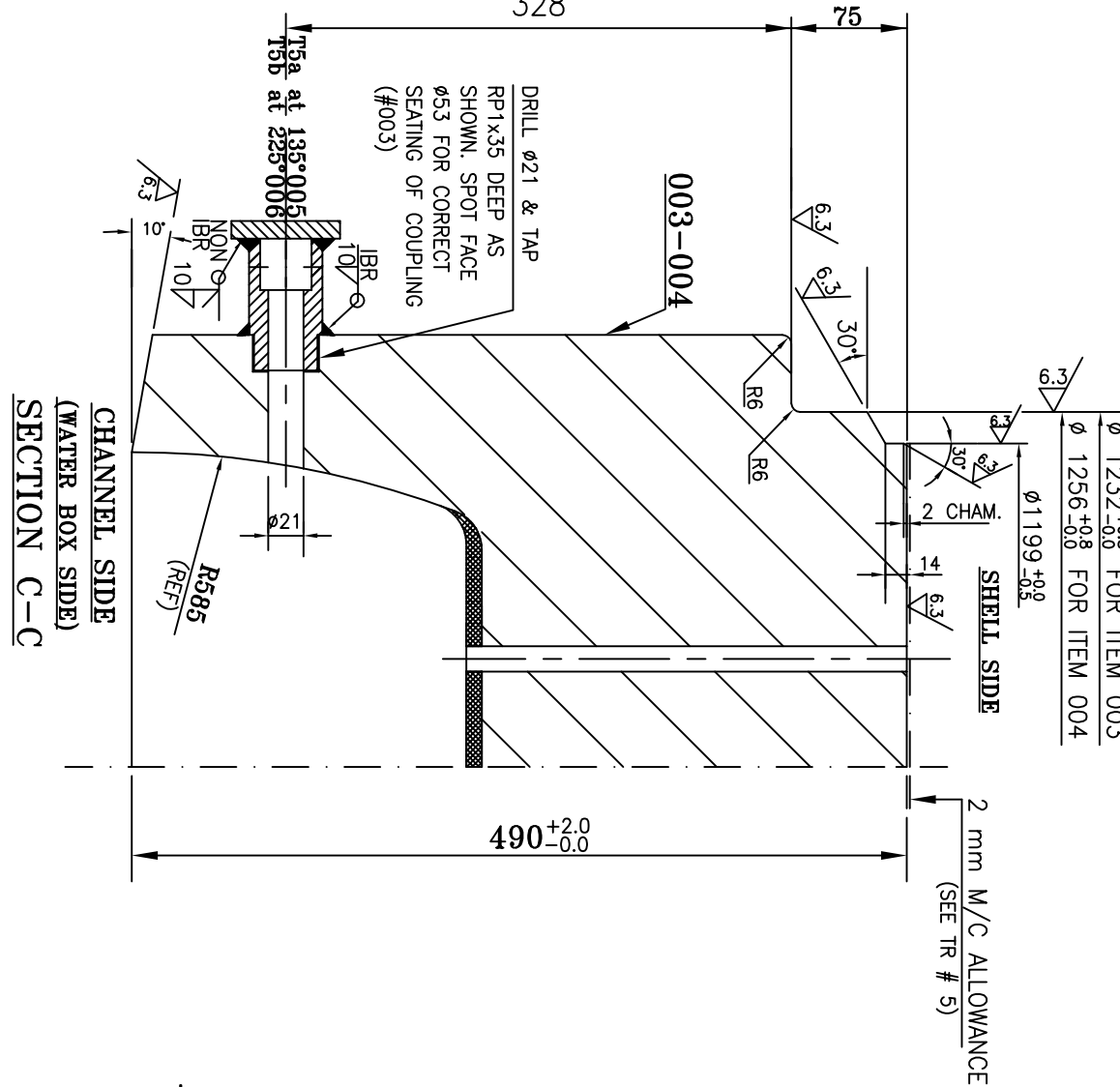
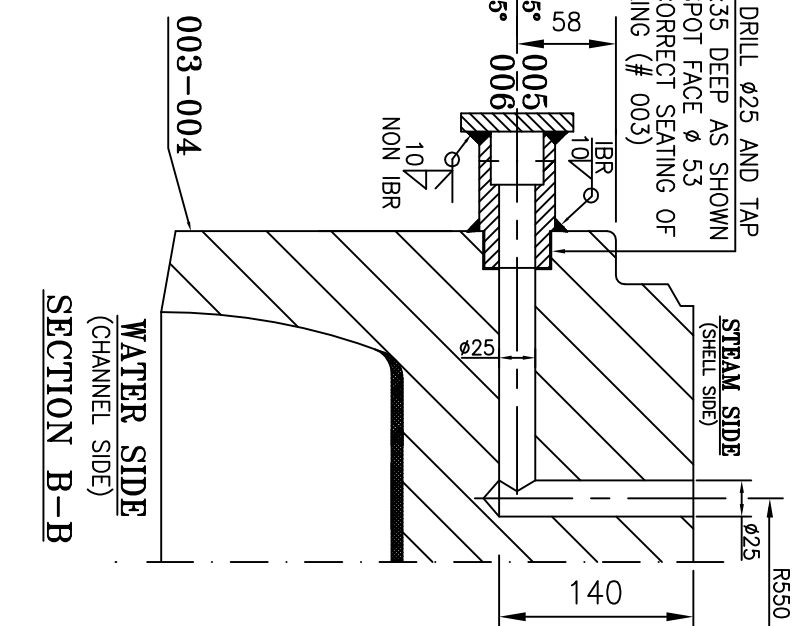
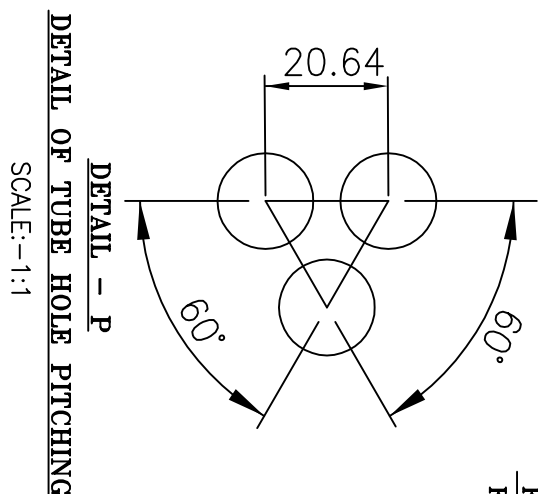
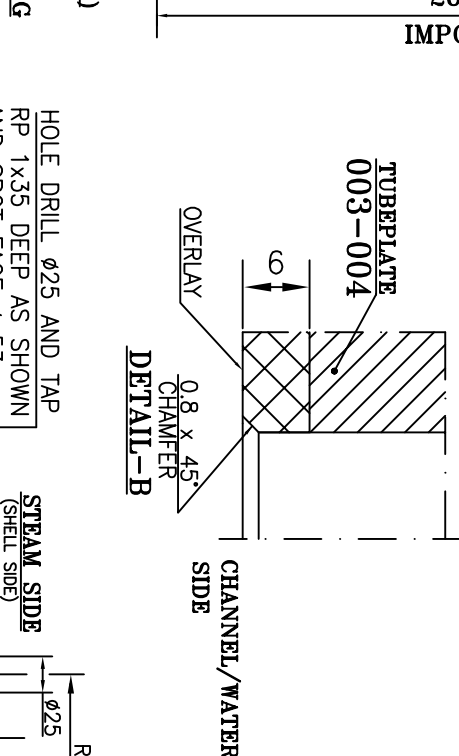
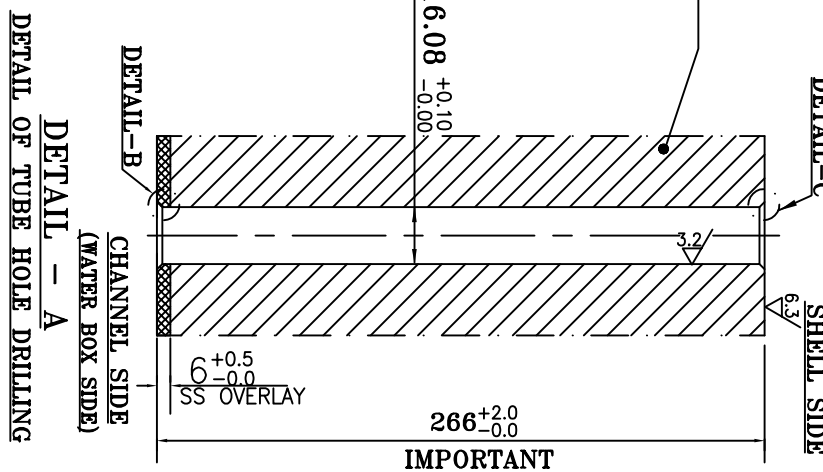
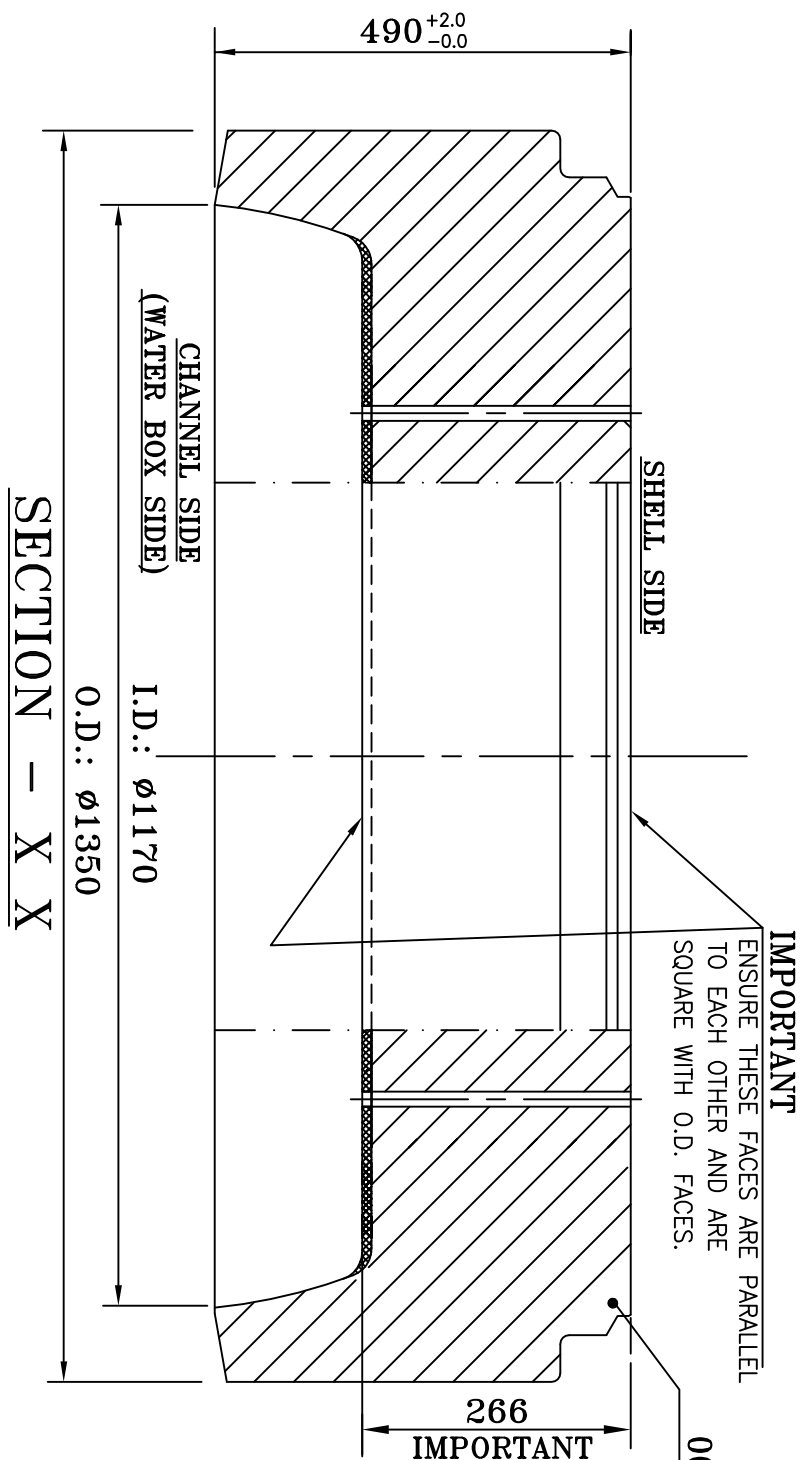
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1		2		3	
4		5		6	
7		8		9	

I.B.R.		ADDITIONAL INFORMATION		Owner	
TOOL LIST		DRG. LIST No.4-17500-40106		Gujarat State Electricity Corporation Limited, Vadodara, India	
REF. DRG. No. 4-17500-40030		STATUS OF DRAWING		Owner's	
DISTRIBUTION OF PRINTS		W.O. No.12074-S-14139/40.65		steeg	
CODE-2 FBM-4 HCM-4		NAME OF CUSTOMER/PRODUCT		Bharat Heavy Electricals Ltd.	
REV. DATE		ALTERED		Bharat Heavy Electricals Ltd.	
CHECKED		DEPT		Bharat Heavy Electricals Ltd.	
APPROVED		CODE		Bharat Heavy Electricals Ltd.	
TUBE PLATE MACHINING		H.P. HEATER No.5.6&7		Bharat Heavy Electricals Ltd.	
2-17501-40559 00		H.P. HEATER No.5.6&7		Bharat Heavy Electricals Ltd.	
PUGH DRG. NO. 1		PUGH DRG. NO. 1		PUGH DRG. NO. 1	


- TECHNICAL REQUIREMENTS(TB)**
1. ALL WELD PREPARATIONS TO BE MAGNETIC CRACK DETECTION TESTED AS PER AA-0850185.
  2. ALL PREPARATIONS TO BE MADE BY MACHINING. MACHINE FINISH TO BE 6.3 MICRONS UNLESS OTHERWISE SPECIFIED.
  3. TOLERANCE ± 1 UNLESS OTHERWISE SPECIFIED.
  4. SURFACE TO BE COATED WITH INHIBITIVE OIL AS TEMPORARY RUST PROTECTION.
  5. ONLY 2 mm MACHINING ALLOWANCE PROVIDED ON THE SHELL SIDE FACE OF TUBEPLATE. MACHINE (IF REQUIRED) FOR SETTING THE TUBEPLATE DIMENSIONS FOR EDGE MACHINING. ELSE MACHINING OF TUBEPLATE FACE IS NOT REQUIRED.
  6. COUPLING ITEM 005 TO BE WELDED ON FINAL ASSEMBLY, TO FACILITATE HEATER ROLLING FOR WELDING.
  7. COUPLING ITEM 005 TO BE WELDED BY IIR QUALIFIED WELDERS ONLY & WELD DEPOSIT TO BE CHECKED BY MAGNETIC PARTICLE EXAMINATION, AS PER AA-0850185.
  8. ITEM 006 IS TEMPORARY BLANK FOR HYDRAULIC TEST, HENCE IIR INSPECTION IS NOT REQUIRED.
  9. TUBE HOLE DRILLING TOLERANCES: AS PER IEMA/HE-04012.
  10. FOR TUBE LAYOUT REFER DRG. No.3-17505-40395

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1632540/2023/HEP-HCM21100	
INVENTORY NO.	21.09.07 SIGN AND DA



VAR01 QTY: NOS HPH # 6	VAR00 QTY: NOS HPH # 5	REMARKS	VAR. ITEM ND.	DESCRIPTION	STD	DRAWING ND.	VAR. ITEM ND.	MATL. CODE IT.ND.	MATL. CODE M/C	UNIT	UNIT QTY.	ZONE
04	04	Ø 70	006	BLANK 12 TK.	1	SEE TR # 8	001	AA1011808099	—	KG	0.37	
04	04	—	005	COUPLING S.W. 25NB ANSI 6000#		4-17501-40340	001	IS 2062 Gr-A (AA10108)	A	NO	0.750	
01	—	—	004	TUBE PLATE: HPH#6 (OVERLAYED M/C)		3-17501-40856	001		A	NO	2918	
—	01	—	003	TUBE PLATE: HPH#5 (OVERLAYED M/C)		3-17501-40856	001		A	NO	2861	
✓	—	—	002	TUBE PLATE (HPH#6)					A	NO	2923	
—	✓		001	TUBE PLATE (HPH#5)					A	NO	2866	
VAR01 QTY: NOS HPH # 6	VAR00 QTY: NOS HPH # 5	REMARKS	VAR. ITEM ND.	DESCRIPTION	STD	DRAWING ND.	VAR. ITEM ND.	MATL. CODE IT.ND.	MATL. CODE M/C	UNIT	UNIT QTY.	ZONE

I.B.R.		ADDITIONAL INFORMATION		उत्पाद को प्रकार या श्रेष्ठ/परिचयना को नाम TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	
TOOL LIST		STATUS OF DRAWING		छात्रीसागर रायच विद्युत मंडल	
REF. DRG. No. 4-17500-40030		W.O.No.12068-S-14139		पूव. पी. वीट्‌रुई २१०० मी. बा. विरावा	
DISTRIBUTION OF PRINTS		CDE-2 FBM-4 HCM-4		छात्रीसागर रायच विद्युत मंडल	
		भारत हेवी इलेक्ट्रिकल्स लिमिटेड भोपाल BHARAT HEAVY ELECTRICALS LTD. BHOHAL		पूव. पी. वीट्‌रुई २१०० मी. बा. विरावा	
				छात्रीसागर रायच विद्युत मंडल	
				पूव. पी. वीट्‌रुई २१०० मी. बा. विरावा	
				छात्रीसागर रायच विद्युत मंडल	
				पूव. पी. वीट्‌रुई २१०० मी. बा. विरावा	
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				पूव. पी. वीट्‌रुई २१०० मी. बा. वि	

**(TECHNICAL REQUIREMENTS)**

1. ALL WELD PREPARATIONS TO BE MAGNETIC CRACK DETECTION TESTED AS PER AA-0850185.
2. ALL PREPARATIONS TO BE MADE BY MACHINING. MACHINE FINISH TO BE 6.3 MICRONS UNLESS OTHERWISE SPECIFIED.
3. TOLERANCE  $\pm$  1 UNLESS OTHERWISE SPECIFIED.
4. SURFACE TO BE COATED WITH INHIBITIVE OIL AS TEMPORARY RUST PROTECTION.
5. ONLY 2 mm MACHINING ALLOWANCE PROVIDED ON THE SHELL SIDE FACE OF TUBEPLATE. MACHINE (IF REQUIRED) FOR SETTING THE TUBEPLATE DIMENSIONS FOR EDGE MACHINING. ELSE MACHINING OF TUBEPLATE FACE IS NOT REQUIRED.
6. COUPLING ITEM 005 TO BE WELDED ON FINAL ASSEMBLY, TO FACILITATE HEATER ROLLING FOR WELDING.
7. COUPLING ITEM 005 TO BE WELDED BY IBR QUALIFIED WELDERS ONLY & WELD DEPOSIT TO BE CHECKED BY MAGNETIC PARTICLE EXAMINATION, AS PER AA-0850185.
8. ITEM 006 IS TEMPORARY BLANK FOR HYDRAULIC TEST, HENCE IBR INSPECTION IS NOT REQUIRED.
9. TUBE HOLE DRILLING TOLERANCES: AS PER ISMA/HE-04012.
10. FOR TUBE LAYOUT REFER DRG. No.3-17505-40295

REV	DATE	ALTERED CHECKED APPROVED	આવકોડ DEPT M AA-0230208	ગુણ SCALE 1:5	જાક(કે. ટી.) WEIGHT (KGS) -	સ્ટેટ, ડ્રો. નો સંજ્ઞા REF. TO ASSY. DRG. -	ITEM NO. નં. ટી. 002	નાં સંજ્ઞા નં. ટી. 008
			શીટ/ટાઇટલ H.P. HEATER No.586	ગ્રાહક નામ/ડ્રોઇંગ નં. 2-17501-40560		ગ્રા/રેવ. 00		
			ટ્યુબ પ્લેટ મશીનિંગ TUBE PLATE MACHINING					
			ગ્રાહક નં./શીટ નં. 1	પ્રવેશ નં. સંજ્ઞા/ડ્રો. શીટ 1				

# TUBE PLATE MACHINING

H.P. HEATER No.5&6

ମହାବଳୀ

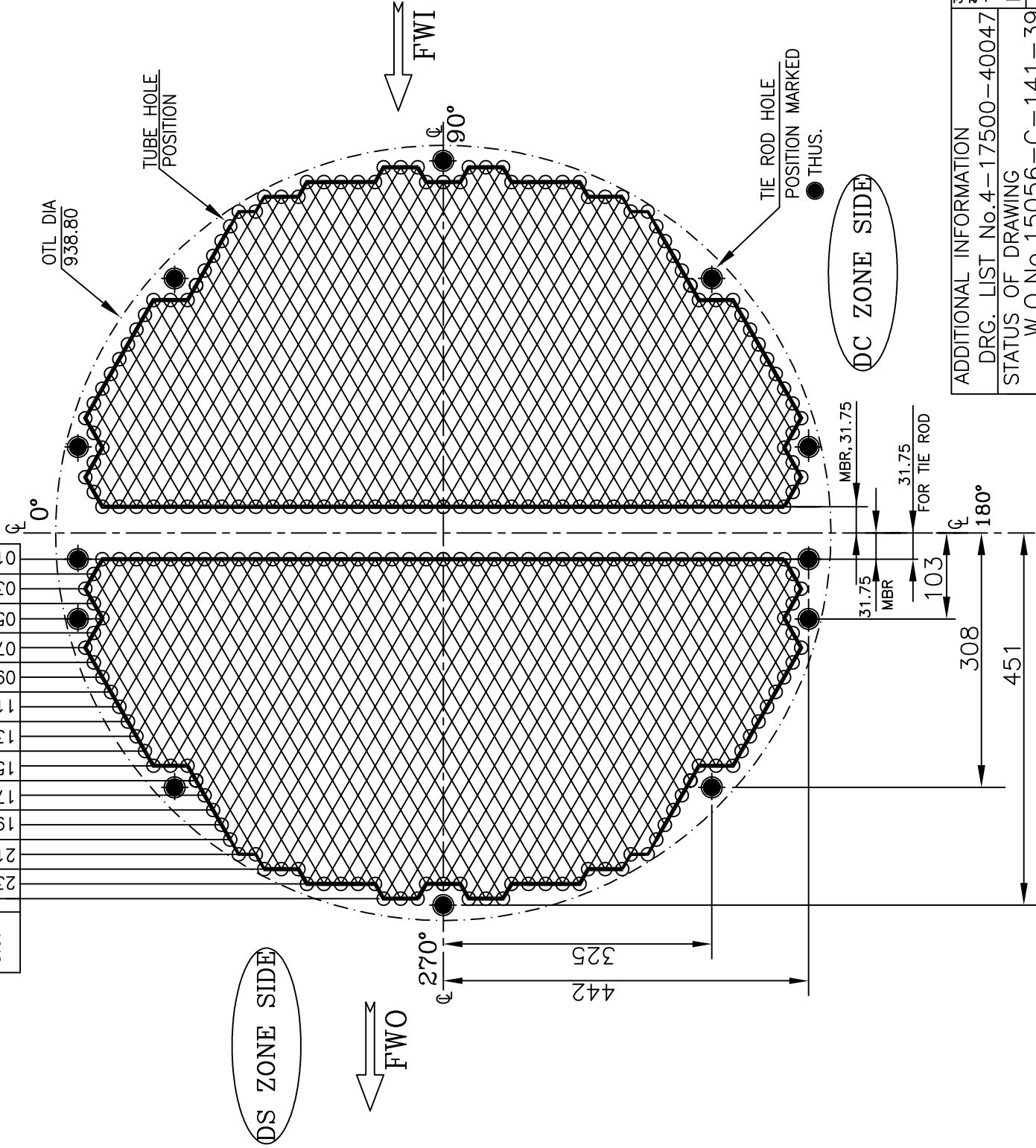
सूक्ष्म क./DRAWING NO.

2-17501-40560 00

पृष्ठ/REV

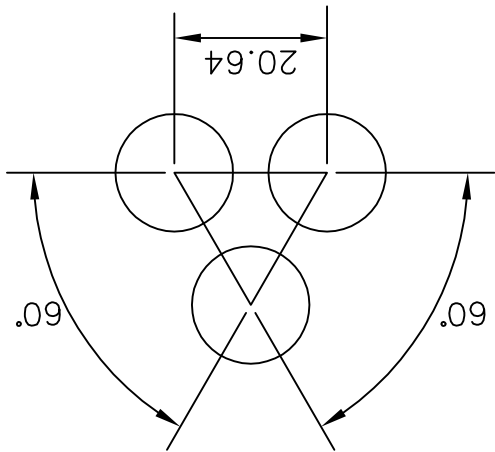
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IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN THE WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

No. OF HOLES	ROW No.
06	24
17	23
22	22
25	21
26	20
27	19
28	18
29	17
30	16
35	15
36	14
37	13
38	12
39	11
40	10
41	09
42	08
43	07
44	06
45	05
46	04
47	03
48	02
49	01



TUBE LAYOUT  
(VIEW LOOKING FROM SHELL SIDE)

TUBE LAYOUT PARTICULARS	
TUBE SIZE (OD)	15.875
No. OF TUBES	812-U
No. OF TUBE HOLES	1624
TUBE PITCH	20.64
MIN. MEAN BEND RADIUS	31.75
O.T.L.(FOR REF.ONLY)	Ø938.80
SHELL ID	Ø1200
OVERLAY DIA	Ø1010
DIA OVER TIE ROD	Ø938.80
TIE RODS-Nos.xDIA	12xØ20



TUBE HOLE PITCHING

[PG-1]

H.P.HEATER No.5		210 MW BOKARO 'B' T.P.S, UNIT-2	
M/s DAMODAR VALLEY CORPORATION(DVC)		M/s DAMODAR VALLEY CORPORATION(DVC)	
BHARAT HEAVY ELECTRICALS LTD. BHOPAL	DRN.	NAME / SIGN.	DATE
	CKD.	M.L.THAWANI	03.03.06
	APPD.	SAXENA S.	04.03.06
		TAURANI M.L.	04.03.06
DEPT. CDE		SCALE	REF. TO ASSY. DRG.
411		N.T.S.	1-17505-40200
ZONE SHELL I.D. CORRECTED.			2-17505-40273
REV. DATE		MAHENDRA	06.07.13
01		PAWAN RAI	06.07.13
ZONE SHELL I.D. CORRECTED.		SAXENA S.	06.07.13
INVENTORY NO.		3-17505-40395 01	
SIGN. & DATE		3-17505-40395 01	
REF. DRG. NO.		3-17505-40395 01	
SIGN. & DATE		3-17505-40395 01	





Sr. No.	Component & Operation	Characteristic	Class	Type of check	Quantum of check	Reference Document	Acceptance Norms	Format of Record	Inspection Agency				Remarks
									P	W	R	H	
1	2	3	4	5	6	7	8	9	10				11

1	Identification of Tube Plates and co-relation	Identification	Major	Co-relation of Tube sheet with dispatch note	100%	Approved Drawing	Approved Drawing	Material identification report	3	3	2		
2	Tube plate drilling.	Centre line and angle marking on tube sheet			100%	Approved Drawing	Approved Drawing	Inspection report	3	3	2		
	Tube plate drilling.	Tube plate Setting on deep hole drilling machine. Orientation and flatness check	Major	Set up on machine, Measurement / Visual	Drilling sequence	Approved Drawing	Approved Drawing	Inspection report	3	3	-		
		Spotting	Major	Tube layout check	100%	Approved Drawing	Approved Drawing	Inspection report	3	3,2			
		Drilling of tube sheet	Major	Operation	100%	Approved Drawing	Approved Drawing	Inspection report	3	3	-		
		Hole dia, ligament	Major	Go-No go gauging 100%	100%	Approved Drawing	Approved Drawing	Inspection report	3	2*, 3	2		
		Hole size, Ligament from Both side (Drill side and opposite side) , surface finish,	Major	Measurement	5 % Tube plate Holes	Approved Drawing	Approved Drawing	Inspection report	3	2*, 3	2		*All control holes (2% of tube plate holes) shall be witnessed by BHEL/BHEL TPI .

बी.एच.ई.एल., भोपाल / B.H.E.L., BHOPAL

एच. सी. एम. विभाग / HCM DIVISION  
भोपाल / B.H.E.L., BHOPAL

1632540/2023/HEP-HCM21100

## QAP FOR DRILLING OF Tube holes in SS Overlayed Tube Plates

QA PLAN NO.

QAX/TH/1659

Date

11.08.2023

Rev.

00

Page No.

2 of 3



## Operations for Drilling of Tube Plates as per Approved Drg.


Sr. No.	Component & Operation	Characteristic	Class	Type of check	Quantum of check	Reference Document	Acceptance Norms	Format of Record	Inspection Agency				Remarks
									P	W	R	H	
1	2	3	4	5	6	7	8	9	10				11

	drilling			Measurements			Approved drawing	n report					
4	Tube Holes chamfer making details	Chamfer	Major	Visual	100 %	Approved Drawing	As per approved Drawing.	Inspection report	3	2,3	2,3		All control holes (2% of tube plate holes) shall be witnessed by BHEL/BHEL TPI
5	Cleaning of holes & preservation of Tube plate with protective cover. Wooden Packing.	Cleaning of holes from both sides.	Major	Visual	100 %	Approved Drawing	Approved Drawing	Release Note	3	2,3			
6	Documentation	Page Numbering and Indexing of all documents as per QAP clauses	Major	Visual	100 %	Approved Drawing	Approved Drawing	Release Note	3	2,3			

## ABBREVIATIONS :

- 1 Customer  
 2 BHEL/BHEL TPI  
 3 Sub-Vendors / Sub-Vendors Authorised agency for imported material  
 4 External laboratory / sub-vendor  
 P Performed by :  
 H Hold point : This activity shall be kept under hold till Report/ shipping release note is signed or written waiver is obtained from the agency responsible for this stage

  
 जितेन्द्र सिंह / JITENDRA SINGH  
 प्रबंधक / Manager  
 क्यू टी. एच. / QA & QC  
 बी.एच.ई.एल., भोपाल / BHEL, BHOPAL

  
 पंकज निमजे / PANKAJ NIMJE  
 उप महाप्रबंधक / DGM  
 क्यू टी. एच. विभाग / HCM Division  
 बी.एच.ई.एल., भोपाल / BHEL, BHOPAL



1632540/2023/HEP-HCM21100

QAP FOR DRILLING OF Tube holes in SS Overlayed Tube Plates

QA PLAN NO.

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Rev.

00

Page No.

3 of 3

## Operations for Drilling of Tube Plates as per Approved Drg.

Sr. No.	Component & Operation	Characteristic	Class	Type of check	Quantum of check	Reference Document	Acceptance Norms	Format of Record	Inspection Agency				Remarks
									P	W	R	H	
1	2	3	4	5	6	7	8	9	10				11

(Customer / its Authorised Representative).

W Witness point: Witness points are critical steps in manufacturing and examination / inspection / testing. Where the supplier is obliged to notify in sufficient advance of the start of the operation / test so that it may be witnessed. The Supplier may proceed with the work past a witness point, if the customer or its authorised representative is not available at the appointed time.

R Document Review : Review / Verification of documents carried out by agency for compliance and acceptance.

LPE Liquid Penetrant Examination

## DEFINITIONS :

Critical The characteristic of a component, process or operation failure of which will surely cause operating failure

:

Major The characteristic of a component, process or operation whose failure may cause operating failure which cannot be readily corrected at site or cause Substandard performance, increased erection and maintenance cost, reduced life or seriously affect the aesthetics.

:

Minor The characteristic of a component, process or operation whose failure neither materially reduce the usability of the product in operation, nor does it affect the aesthetics.


:

Note: Latest revision of documents shall be applicable for QAP.

जितेन्द्र सिंह / VINOD PATNAIK

जितेन्द्र सिंह / JITENDRA SINGH  
प्रबंधक / Manager  
CLP / DTH (QA & QC)

पंकज निमजे / PANKAJ NIMJE  
प्रबंधक / DGM  
CLP / DTH Division

HEP-HCM21100		
	HEAT EXCHANGER & CONDENSER MANUFCATURING DIVISION BHEL BHOPAL	Document No.
		Document no. HCM-211-08-2023-01
Technical Specification for Drilling of Tube holes in SS-Overlaid Tube plates		

1. Scope: Drilling, tapping and chamfering and deburring of tube holes in SS-overlaid forged carbon steel tube plates. Drilling to be done on CNC deep Hole Drilling machine using **BTA/Gun Drills**.
2. Material of construction: SS-overlaid CS Tubeplates


Base Plate: Carbon steel forging to SA 350 Grade LF2 class 1

Overlay material: Stainless Steel, SS-304

3. Salient Details

SI No.	Identification	Unit	HP 5/6/7 (Ukai & Korba)
1	Tube Plate thickness	mm	266 (+2.0/-0.0)
2	Tube plate diameter	Mm	1350
3	No of tube holes		1624
4	Tube hole size	Mm	16.08 (+0.10/-0.00)
5	No of Tie Rod holes	Mm	12
6	Tie Rod holes size	Mm	M20X32 Deep
7	Tube Pitch	Mm	20.64X60 triangular as per Detail P of Drg
8	Hole finish	Microns	3.2
9	Chamfer of tube holes both form shell side & tube side face		Yes, as per detail B & C in the Drg.
10	Tube holes & Chamfer details		AS per Drg. No 21750140560 Rev 00 Drawing Item 01, 02, & Drg NO 21750140559 Rev 00 Drawing Item 1,2, & 7. Tube layout Drg. 31750540395 Rev 00.
11	Drilling of Holes for Seating of Coupling		Hole Drill Dia 25 Mm and TAP Rp 1 X 35 Deep.
12	Quantity	Nos	10 (Splitting will be done among L1 & L2 bidders in the ratio of 60:40)

4. Vendor to ensure adherence to latest revisions of drawing and QAP before start of Manufacturing.
5. Protection & Wooden Packing:

HEP-HCM21100		Document No.
	HEAT EXCHANGER & CONDENSER MANUFCTURING DIVISION BHEL BHOPAL	Document no. HCM-211-08-2023-01
Technical Specification for Drilling of Tube holes in SS-Overlayed Tube plates		

After drilling & inspection tube plate shall be protected by applying light oil based rust Preventive. Wooden packing to be done after drilling.

#### 6. Inspection

- Each tube plate shall be subjected to inspection by BHEL/BHEL appointed inspection agency.

#### 7. Issue of the tube plate by BHEL for drilling at vendor work

- Tube plates (10nos.) with SS overlay and face machined condition, shall be issued by BHEL.
- each tube plate will have unique PF number as a minimum for identification & correlation with. Inspection reports.
- free issue tube plate forging shall be released with 'A' from under CEX rule - 4(5)(X).

#### 8. Transportation:

Vendor to arrange to & fro transportation of tube plates.

#### 9. Delivery schedule:

Delivery shall be 08 weeks after issue of tube plates from BHEL works. This includes transportation time (Both To & Fro) in final delivery. Vendor to pick material within 15 days from the date of intimation from BHEL.

#### 10. Deduction rate of GST on SWARF shall be as indicated in item material description note.

#### 11. Each item of PO shall be weighed (by CRX) before dispatch and this weight shall be mentioned (item wise) in store receipt Voucher (SRV).

#### 12. Difference in weight of forging & drilled tube plate shall be considered as scrap. Cost of scrap shall be deducted at the prevailing rates which is presently RS39/-per Kg.


#### 13. Tube plate will be issued from HCM division after cladding. A form under CEX Rule-4(5) (A). Tube plate would be in ready for drilling condition.

#### 14. Tube layout Drawing 31750540395 shall be same for all indent qty. Drilling of 1624 holes of dia 16.08(+0.1/0.0) and 12 holes M20X32 deep and Hole Drill dia 25 mm and Tap Rp 1 X35 Deep as per below Tube Plate Drawing no to be followed.

Sl no	Heater Type	Project	Tube plate Drawing No	Qty
1	HPH # 5	Korba	21750140560	2
2	HPH # 6	Korba	21750140560	2
3	HPH # 5	Ukai	21750140559	2
4	HPH # 6	Ukai	21750140559	2
5	HPH # 7	Ukai	21750140559	2



1632540/2023/HEP-HCM21100

HEP-HCM21100		Document No.
	<b>HEAT EXCHANGER &amp; CONDENSER MANUFACTURING DIVISION BHEL BHOPAL</b>	<b>Document no. HCM-211- 08-2023-01</b>
<b>Technical Specification for Drilling of Tube holes in SS-Overlaid Tube plates</b>		

15. After drilling de-burring has to be done.
16. QAP No QAX/TH/1659 with Latest Revision Shall be applicable.
17. Final inspection to be done by BHEL/BHEL appointed third party inspection agency, inspection fees to be borne by BHEL.
18. To and fro transportation is in supplier's scope.


PRE-QUALIFICATION REQUIREMENT FOR TUBE PLATES DRILLING


S.No.	DESCRIPTION	Requirement	Bidder's Response
01.	In house facility of CNC Deep Hole Drilling Machine Type suitable for Drilling of Tube of hole of Dia. 16.08(+0.1-0.00), of thickness 266 mm in good working condition suitable for drilling Dia 1350 Tube plates as per Drawing.	Vendor to submit machine details mentioning Make and Its Capacity:	Vendor to confirm & Provide document.
2.0	Experience certificate less than 5 Years old	Vendor to Provide PO copy executing CNC drilling of Minimum 500 Holes of thickness Minimum 268 mm. Vendor to provide documentary proof as invoice copy/LR/Challan/end user certificate co-relating with PO copy.	Vendor to confirm & Provide document.

1. After satisfactory, fulfilment of the all the above criteria/requirement, offer shall be considered for further evaluation as per NIT and all other terms of the tender.
2. All documentary evidences along with this PQR shall be duly signed and stamped by authorized person.
3. BHEL reserves the right to verify the information submitted by the vendor. In-case any information is found to false or incorrect the offer /Purchase order shall be rejected at any stage.

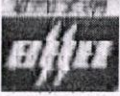
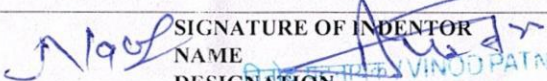


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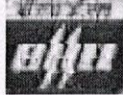
  
 विनोद पाटनायक / VINOD PATNAIK  
 उप प्रबंधक / Dy. Manager  
 एच.सी.एम. विभाग (HCM Division)  
 बी.एच.ई.एल., भोपाल / BHEL, BHOPAL  
 Checked by


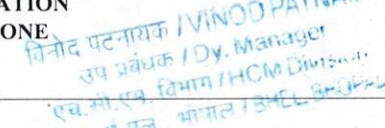
  
 पंकज निमजे / PANKAJ NIMJE  
 उप महाप्रबंधक / DGM  
 एच.सी.एम. विभाग (HCM Division)  
 बी.एच.ई.एल., भोपाल / B.H.E.L., BHOPAL



<b>A-FORM</b>  <b>FORM NO BP-0021</b>	<b>BHARAT HEAVY ELECTRICALS LIMITED - BHOPAL</b> <b>MM DEPARTMENT</b> <b>ESTIMATE SHEET FOR ISSUE OF MATERIAL/COMPONENTS FROM BHEL</b> <b>CHECKLIST</b>	<b>A-FORM NO : A211B55</b> <b>REV NO : 0</b> <b>A-FORM DATE 17-AUG-23</b> <b>DATE : 24-AUG-23</b> <b>PAGE : 1 / 2</b>							
<b>DEPARTMENT : 211 PROJECT : M/S C.S.P.G.C.L PO NO : A211B55 END PRODUCT : CS TUBE PLATE</b> <b>INDENT NO : 221130053 WORK ORDER NO : 12074S11840 PO DATE : DELY REQD : 25102023</b> <b>INDENT DATE : 17082023 MATERIAL ISSUE DIV : 211 SUPP CODE : SUPP NAME :</b>									
<b>DETAILS OF FINISHED GOODS</b>									
A-SLNO	PO IT NO	PI IT NO	QUANTITY REQUIRED	UNIT	SHOP NO	DEST CD	COST CD	H.CELL	
DESCRIPTION OF SUB-ASSEMBLY/ITEM & WEIGHT/VOLUME/AREA									
<b>FREE ISSUE MATERIAL PER UNIT OF FINISHED GOODS</b>									
MATL CODE	QTY PSL UNIT	PSL UNIT	RATE PSL UNIT	TOTAL MATL TO BE ISSUED	ISSUE PSL/ UNIT WIP	SMIV/ PPMIV NO	MATERIAL VALUE	TARRIF HEAD	MATL ISSUE QTY
DESCRIPTION OF FREE ISSUE MATERIAL AND WEIGHT /VOLUME/AREA									
	1	0	1		2.000	NO	211	211	211
DRILLING TUBE PLATE HP 5 SA 350 1.0000 NO 1292344.000 2.00 NO WIP 2584688.000 1.0000 TUBE PLATE FORGING TO SA 350 LF2 CLASS -1, ITEM 001 OF DRG.3-17505-40957 REV.00 R.WT-2861 KG EACH F.WT-2171 KG EACH APPROX. (SCRAP RATE 39 RS PER KG)									
	2	0	1		2.000	NO	211	211	211
DRILLING TUBE PLATE HP 6 SA 350 1.0000 NO 1292344.000 2.00 NO WIP 2584688.000 1.0000 TUBE PLATE FORGING TO SA 350 LF2 CLASS -1, ITEM 001 OF DRG.3-17505-40957 REV.00 R.WT-2880 KG EACH F.WT-2190 KG EACH APPROX (SCRAP RATE 39 RS PER KG)									
	3	0	1		2.000	NO	211	211	211
DRILLING TUBE PLATE HP 7 SA 350 1.0000 NO 1292344.000 2.00 NO WIP 2584688.000 1.0000 TUBE PLATE FORGING TO SA 350 LF2 CLASS -1, ITEM 001 OF DRG.3-17505-40957 REV.00 R.WT-2918 KG EACH F.WT-2228 KG EACH APPROX. (SCRAP RATE 39 RS PER KG)									
	4	0	1		2.000	NO	211	211	211
DRILLING TUBE PLATE HP 5 SA 350 1.0000 NO 1342255.000 2.00 NO WIP 2684510.000 1.0000 TUBE PLATE FORGING TO SA 350 LF2 CLASS -1, ITEM 001 OF DRG.3-17505-40959 REV.00 R.WT-2861 KG EACH F.WT-2171 KG EACH APPROX. (SCRAP RATE 39 RS PER KG)									
	5	0	1		2.000	NO	211	211	211
DRILLING TUBE PLATE HP 6 SA 350 1.0000 NO 1342255.000 2.00 NO WIP 2684510.000 1.0000 TUBE PLATE FORGING TO SA 350 LF2 CLASS -1, ITEM 001 OF DRG.3-17505-40959 REV.00 R.WT-2918 KG EACH F.WT-2228 KG EACH APPROX. (SCRAP RATE 39 RS PER KG)									
<b>1 MATERIAL TO BE ISSUED ON :-</b> FREE ISSUE BASIS <b>2. TRANSPORT TO BE PROVIDED BY :-</b> SUPPLIER <b>3. EXCISE DUTY ON ISSUE MATL TO BE BORNE BY :-</b> SUPPLIER <b>4. SCRAP TO BE RETURNED :-</b> NO <b>5 INVARIABLY ISSUE WT. TO BE RECORDED ON SMIV/PMIV</b>			<b>SIGNATURE OF INDENTOR</b>  <b>NAME</b> VINOD PATNAIK <b>DESIGNATION</b> प्रबंधक / Dy. Manager <b>TELEPHONE</b> एच.सी.एम. विभाग / HCM Division बी.एच.ई.एल. भोपाल / BHEL, BHOPAL			<b>SIGNATURE OF ASC EXECUTIVE</b> <b>NAME</b> <b>DESIGNATION</b> <b>TELEPHONE</b>			



<b>A-FORM</b>  <b>FORM NO BP-0021</b>	<b>BHARAT HEAVY ELECTRICALS LIMITED - BHOPAL</b> <b><u>MM DEPARTMENT</u></b> <b><u>ESTIMATE SHEET FOR ISSUE OF MATERIAL/COMPONENTS FROM BHEL</u></b> <b><u>CHECKLIST</u></b>	<b>A-FORM NO</b> : A211B55 <b>REV NO</b> : 0 <b>A-FORM DATE</b> 17-AUG-23 <b>DATE</b> : 24-AUG-23 <b>PAGE</b> : 2 / 2						
<b>A-SLNO      PO IT NO      PI IT NO      QUANTITY REQUIRED      UNIT      SHOP NO      DEST CD      COST CD      H.CELL</b>								
<b>DESCRIPTION OF SUB-ASSEMBLY/ITEM &amp; WEIGHT/VOLUME/AREA</b>								
<b><u>FREE ISSUE MATERIAL PER UNIT OF FINISHED GOODS</u></b>								
<b>MATL CODE</b>	<b>QTY PSL UNIT</b>	<b>PSL      RATE PSL UNIT      UNIT</b>	<b>TOTAL MATL TO BE ISSUED</b>	<b>ISSUE PSL/ UNIT      WIP</b>	<b>SMIV/ PPMIV NO</b>	<b>MATERIAL VALUE</b>	<b>TARRIF HEAD</b>	<b>MATL ISSUE QTY</b>
<b>DESCRIPTION OF FREE ISSUE MATERIAL AND WEIGHT /VOLUME/AREA</b>								
<b>REMARKS</b> -----NA----- <b>TOTAL NO OF CANCEL ITEM</b> 0						<b>AFORM TOTAL</b> 13123084.000		

<b>1 MATERIAL TO BE ISSUED ON :-</b>	<b>FREE ISSUE BASIS</b>	<b>SIGNATURE OF INVENTOR</b> 		<b>SIGNATURE OF ASC EXECUTIVE</b> 
<b>2. TRANSPORT TO BE PROVIDED BY :-</b>	<b>SUPPLIER</b>	<b>NAME</b>		<b>NAME</b>
<b>3. EXCISE DUTY ON ISSUE MATL TO BE BORNE BY :-</b>	<b>SUPPLIER</b>	<b>DESIGNATION</b>		<b>DESIGNATION</b>
<b>4. SCRAP TO BE RETURNED :-</b>	<b>NO</b>	<b>TELEPHONE</b>		<b>TELEPHONE</b>
<b>5 INVARIABLY ISSUE WT. TO BE RECORDED ON SMIV/PMIV</b>				

RPT-101