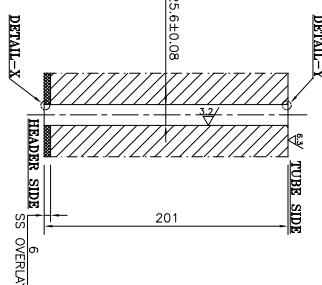


NOTES:-

1. FOR TUBE PLATE OVERLAY, REFER DRAWING NO. 3-16816-40047 FOR KAP-3&4 AND ONGOING PROJECTS.
2. FOR TUBE PLATE FORGING REFER DRG. NO. 2-16816-40037 FOR TAP-3&4 ONLY.
3. SPECIAL CARE REQUIRED FOR DRILLING OF DIA-10.3 HOLE TO AVOID BREAKING INTO TUBE HOLES.
3. DIA-5 FOR TARAPUR-3&4, DIA-6.5 FOR REST OF THE PROJECTS



ADDITIONAL INFORMATION  
STATUS OF DRAWING  
DISTRIBUTION OF PRINTS  
OC-1 STA-3  
RBM-4  
HOM-4

STATION NO. OF  
STATION/PROJECT OR STATION  
NAME OF CUSTOMER/PROJECT  
DATE OF ORDER/PRODUCT



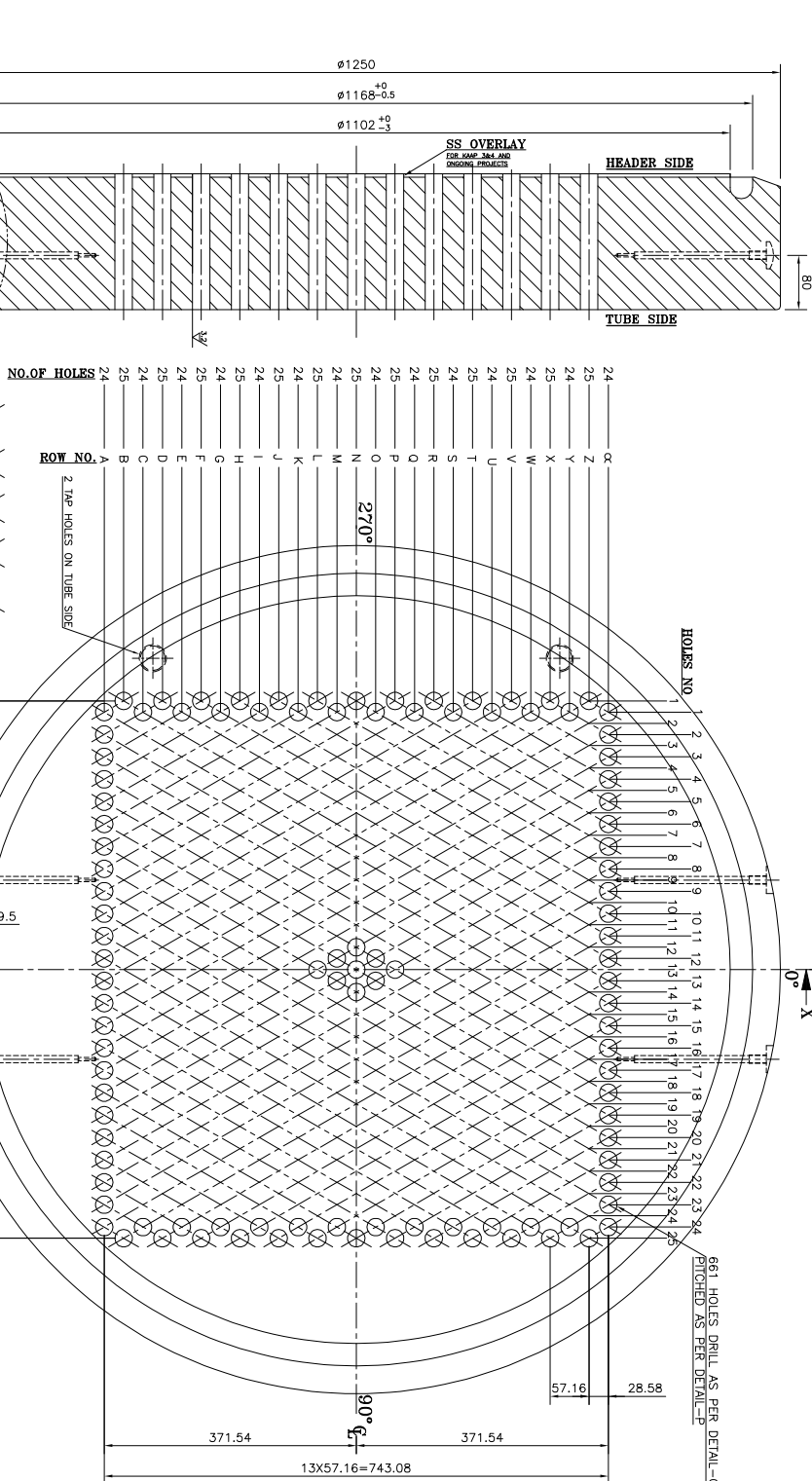
MSR FOR 500/700MTW

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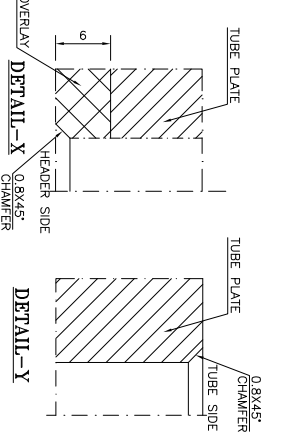
ITEM NO.	TOOL NO.	DESCRIPTION
001	1421636	PLAIN PLUG GAUGE FOR $\phi 25.6 \pm 0.08$
001	1421604	FORM TOOL FOR RADIUS-25
001	1421605	FORM TOOL FOR RADIUS-8
001	1421599	GUN DRILL DIA 25.58
001	1421600	GUN DRILL DIA 25.58
001	1421602	GUN DRILL DIA 10.3
001	1421601	SPECIAL DRILL SIZE 5.0 DIA 45MM WORKING LENGTH SHANK PORTION-10 DIA-315 LONG & 6 DIA. 50 LONG FOR HOLDING THE CHUCK
001	1421603	GUN DRILL BUSH DIA 10.3
001	1421684	PITCH PLATE FOR GUN DRILLING MACHINE (13X607)
001	1421685	ROUGHING REAMER FOR $\phi 25.6$
001	1421686	LOGAMENT GAUGE 33MM PITCH
001	1421687	RADIUS TOOL R5(CH)
001	1421688	UPPER LIMIT OF THE HOLE 25.85 DIA FOR PRODUCING TOOL FOR RECTIFICATION
001	1421689	FORM TOOL FOR RADIUS 20° X 36 LONG
001	1421690	TAPER SHANK END MILL $\phi 40$
001	1581032	CORING TEMPLATE FOR 20° CHAMFER
001	1581747	CHECKING TEMPLATE FOR RADIUS-25 GROOVE

NOTES:-

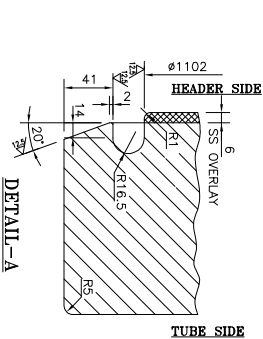
- FOR TUBE PLATE OVERLAY, REFER DRAWING NO. 3-16816-40047 FOR KAPP-3&4 AND ONGOING PROJECTS.
- FOR TUBE PLATE FORGING REFER DRG. NO. 3-16816-40047 FOR KAPP-3&4 AND ONGOING PROJECTS.
- FOR 16 CASE REQUIRED FOR MILLING OF DIA-10.3 HOLE TO AVOID BREAKING INTO TUBE HOLES.
- DIA-5 FOR TRAPUR-3&4, DIA-6.5 FOR REST OF THE PROJECTS.



DETAIL OF TUBE HOLE DRILLING



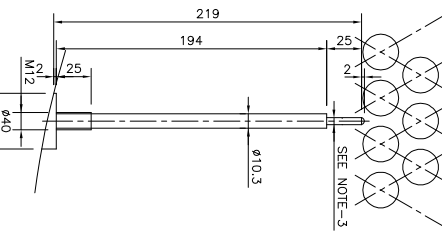
SECTION X-X



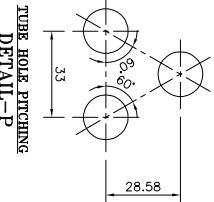
NO.OF HOLES

ROW NO.

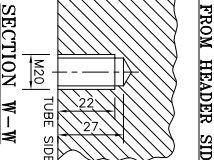
DETAIL-B (TYPICAL)



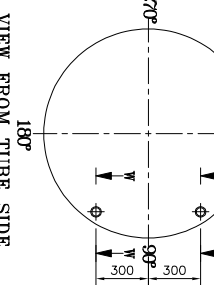
TUBE HOLE PITCHING



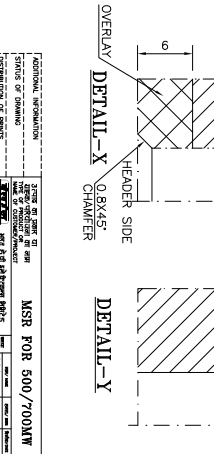
SECTION W-W



VIEW FROM TUBE SIDE

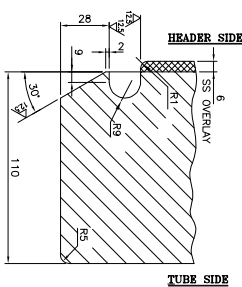


MSR FOR 500/700MM

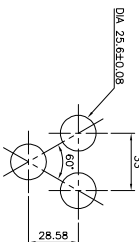


ITEM NO.	TOOL NO.	DESCRIPTION
001	1421636	PLAIN PLUG GAUGE FOR $\phi 25.6 \pm 0.08$
001	1421604	FORM TOOL FOR RADIUS-25
001	1421605	FORM TOOL FOR RADIUS-8
001	1421599	GUN DRILL DIA 25.58
001	1421600	GUN DRILL DIA 25.58
001	1421602	GUN DRILL DIA 10.3
001	1421601	SPECIAL DRILL SIZE 5.0 DIA 45MM WORKING LENGTH SHANK PORTION-10 DIA-315 LONG & 6 DIA. 50 LONG FOR HOLDING THE CHUCK
001	1421603	GUN DRILL BUSH DIA 10.3
001	1421684	PITCH PLATE FOR GUN DRILLING MACHINE (13X607)
001	1421685	ROUGHING REAMER FOR $\phi 25.6$
001	1421686	LOGAMENT GAUGE 33MM PITCH
001	1421687	RADIUS TOOL R5(CH)
001	1421688	UPPER LIMIT OF THE HOLE 25.85 DIA FOR PRODUCING TOOL FOR RECTIFICATION
001	1421689	FORM TOOL FOR RADIUS 20° X 36 LONG
001	1421690	TAPER SHANK END MILL $\phi 40$
001	1581032	CORING TEMPLATE FOR 20° CHAMFER
001	1581747	CHECKING TEMPLATE FOR RADIUS-25 GROOVE

0-16817-40006

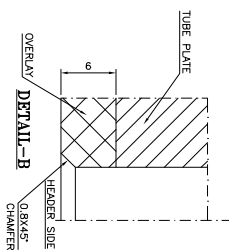


DETAIL--A

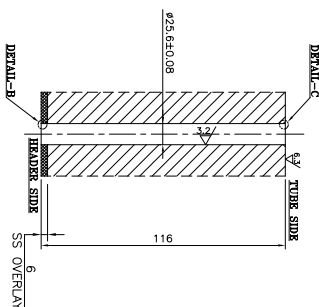


TUBE HOLE PITCHING  
DETAIL-P

DETAIL OF IT. NO. 01  
VIEW FROM HEADER SIDE



DETAIL-C



### DETAIL-A

#### DETAIL OF TUBE HOLE DRILLING

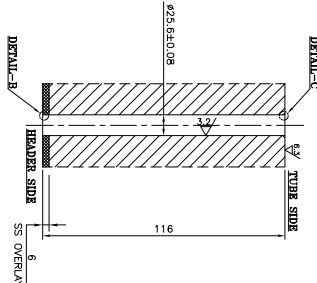
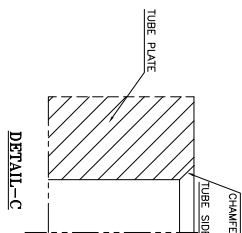
- NOTES:-**
1. FOR TUBE PLATE OVERLAY, REFER DRAWING NO. 3-16817-40031 FOR KAP-384 AND OUSING PROJECTS.
  2. FOR TUBE PLATE FORINGS, REFER Dwg. NO. 3-16817-40031.
  3. SPECIAL CASE PROVIDED FOR DRILLING OF DIA-10.3 HOLE TO AND BREAKING INTO TUBE HOLES.
  4. DIA-5 FOR TAP-384 DIA-6.5 FOR REST OF THE PROJECTS.
  5. MINIMUM LOCAMENT TO BE 6.3MM.

ITEM NO.	TOOL NO.	DESCRIPTION	TOOL LIST
001	1581481	FORM TOOL FOR ROUNDS 1-3	
001	1581482	FORM TOOL FOR ROUNDS 4-5	
001	1421539	DRILL DRILL DIA. 25.38	
001	1421500	DRILL DRILL DIA. 25.38	
001	1421538	PLAIN FILE DRILL FOR 42.54/0.08	
001	1421585	FLAT FILE FOR DRILLING MACHINIS(SHANK)	
001	1421584	ROUGHING REAMER FOR DIA. 25.6	
001	1421586	ISGMENT GAUGE 3.3MM PITCH.	
001	1421587	RADIUS TOOL .R5 (L.H.)	
001	1421588	UPPER LIMIT OF THE HOLE DIA 25.65 FOR PROCUING TOOL FOR RECTIFICATION	
001	1581483	NO GO UPERMENT GAUGE 6.3MM	
001	1581483	CORNS TEMPLATE FOR 30° CHAMFER	
001	1581484	CORNER TEMPLATE FOR ROUNDS 1-3 SHROU	

[illegible]

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[illegible][illegible][illegible]



ITEM NO., TOOL NO.		TOOL LIST
001	1541581	FORM TOOL FOR RADIOS-13
001	1541582	FORM TOOL FOR RADIOS-5
001	1421599	GAU DRILL DA 25.58
001	1421600	GAU DRILL BUSH DA 25.58
001	1421636	PLAN FILE GAU FOR #25.6X10.8
001	1421684	PLAT PLATE FOR GAU DRILLING MACHIN(3X65)
001	1421685	ROUGHING REAMER FOR DA 25.6
001	1421686	UGMENT GAUGE 3.34
001	1421687	RADIUS TOOL .65 (1/8")
001	1421688	UPPER LIMIT OF THE HOLE DA 25.65 FOR
001	1421691	PULLING TOOL FOR RECTIFICATION
001	1541601	NO GO UGMENT GAUGE 6.3MM
001	1541603	COPIING TEMPLATE FOR 30° CHAMFER
001	1541745	CHECKING TEMPLATE FOR RADIOS 13 SHROU

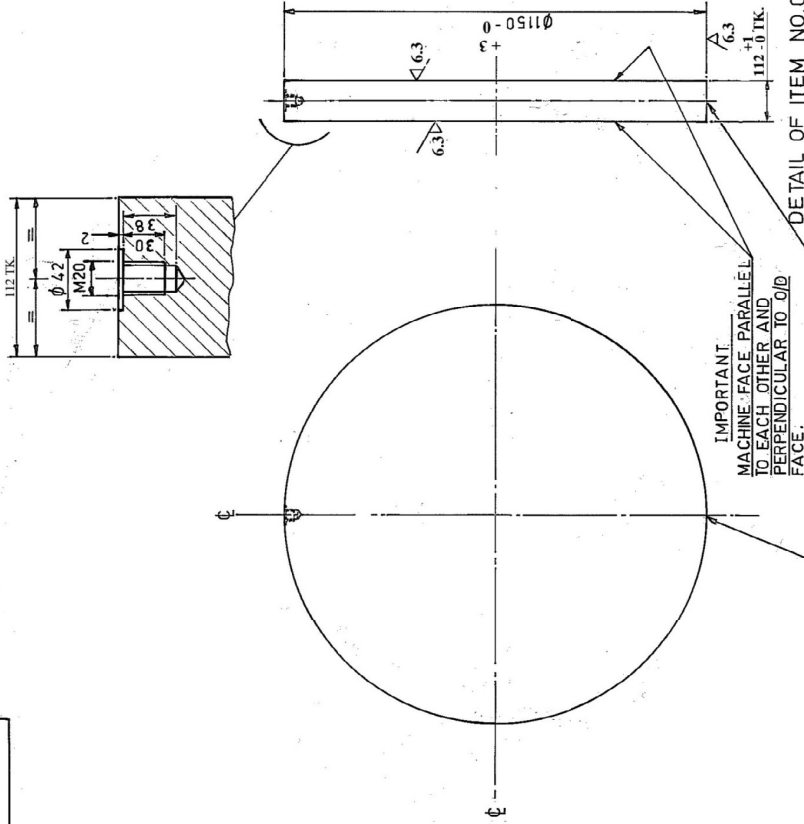
1. FOR TUBE PLATE OVERLAY, REFER DRAWING NO. 5-16817-10031 FOR KAPAS-84 AND ONSING PROJECTS.
2. 5-16817-10031 FOR PROSPECTOR BETER DRUG, NO. 20181-40016 FOR PROSPECTOR BETER DRUG.
3. SPECIAL CARE REQUIRED FOR DRILLING OF DIA-10.3 HOLE TO AHEAD PREPARING INTO TUBE HOLES.
4. 5-16817-10031-10031-10031 FOR REST OF THE PROJECTS.
5. MINIMUM LIGAMENT TO BE 6.3MM.

[illegible][illegible]



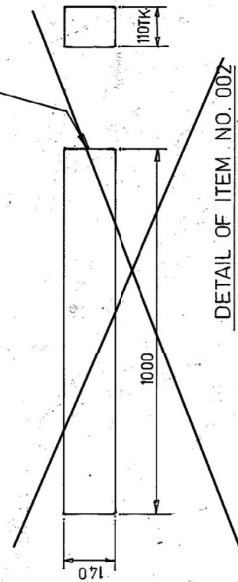
**NOTES:—**

1. ALL TECHNICAL AND TESTING REQUIREMENTS SHALL BE AS PER THE MATERIAL SPECIFICATION SA266 Gr.2 TO ASME SEC.II PART-A;LATEST.
2. TEST PIECE FOR MECHANICAL AND CHEMICAL TESTING SHALL BE INTEGRAL WITH THE BASE MATERIAL AND SHALL BE AS PER THE MATERIAL SPECIFICATION ONLY.
3. TEST PIECE SHALL BE OF SAME HEAT LOT AND FORGED IN THE SAME MANNER. TEMPORARY RUST PREVENTIVE TO BE APPLIED AFTER MACHINING OF TUBE PLATE FORGING
4. INSPECTION BY M/S BHEL IA AND M/S NPCIL AS PER THE APPROVED QA PLAN.
5. FOR DETAIL QUALITY REQUIREMENTS, BHEL APPROVED QAP TO BE FOLLOWED IN CASE OF CONFLICTS BETWEEN THIS DRAWING AND QAP, BHEL APPROVED QAP SHALL GOVERN FINALLY.



DETAIL OF ITEM NO. 001

7. PURCHASE FORGING NO.  
TO BE STAMPED HERE



DETAIL OF ITEM NO. 002

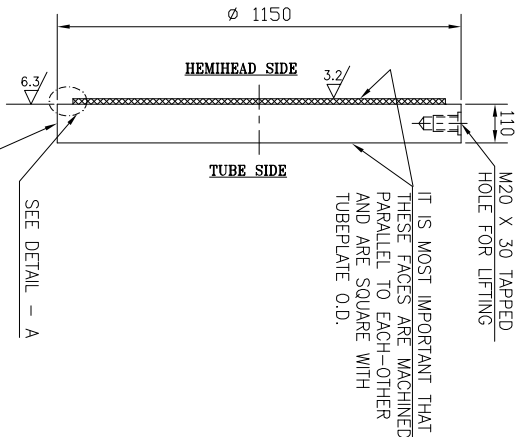
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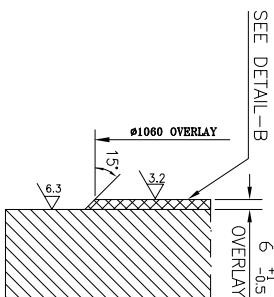
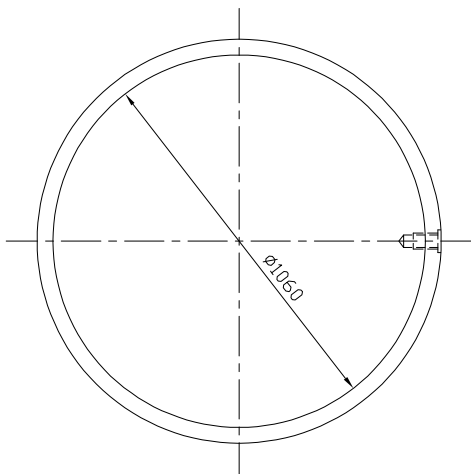
1C00F-21891-3 IN STD

TECHNICAL REQUIREMENTS (TR)

- OVERLAY SHALL BE DONE USING STAINLESS STEEL ELECTRODE ER 309L FOR FIRST LAYER AND ER 308L FOR SUBSEQUENT LAYERS AS SHOWN IN DETAIL-B, FOR OVERLAY FOLLOW APPROVED PROCEDURES.
- WELD OVERLAY TO BE CHECKED BY ULTRASONIC EXAMINATION. ACCEPTANCE STANDARD FOR ULTRASONIC EXAMINATION: CALIBRATION TO BE DONE BY 3 mm DIA. HOLE AND SIGNAL LEVEL TO BE ADJUSTED TO 75% HEIGHT OF C, R, T. SCREEN. INDICATIONS GREATER THAN REFERENCE SIGNALS ARE NOT ACCEPTABLE.
- AFTER OVERLAY DEPOSIT ON TUBE PLATE TO BE CHECKED BY D.P. TEST AS PER APPENDIX-8 OF ASME SEC.III DIV.1:2010 A11.
- MACHINING OF WELD DEPOSIT TO BE DONE AFTER OVERLAYING. FURTHER MACHINING SHALL BE DONE AS PER M/C-ING DRAWING.
- ALL MACHINED SURFACE (EXCL. OVERLAY SURFACE) TO BE PROTECTED BY APPLYING ONE COAT OF RUST INHIBITIVE OIL TO AA 55153.

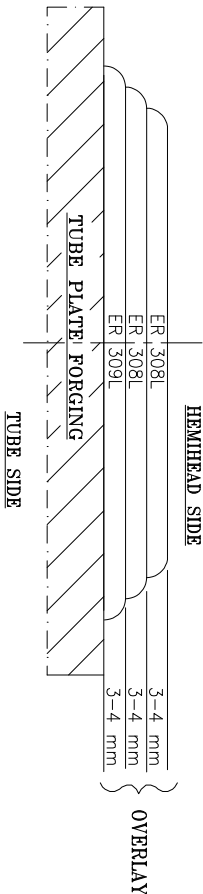


SEE DETAIL - A  
STAMPING, FORGING No., PF No etc.  
STAMPED HERE, TO BE RETAINED FOR  
IDENTIFICATION.



DETAIL -A

M/C AFTER OVERLAY



DETAIL -B

REV	DATE	ALTERED	REV	DATE	ALTERED
CHECKED			CHECKED		
APPROVED			APPROVED		

REV	DATE	ALTERED	REV	DATE	ALTERED
CHECKED			CHECKED		
APPROVED			APPROVED		

REV	DATE	ALTERED	REV	DATE	ALTERED
CHECKED			CHECKED		
APPROVED			APPROVED		

REV	DATE	ALTERED	REV	DATE	ALTERED
CHECKED			CHECKED		
APPROVED			APPROVED		

REV	DATE	ALTERED	REV	DATE	ALTERED
CHECKED			CHECKED		
APPROVED			APPROVED		

DISTRIBUTION OF PRINTS  
CODE-1 FBM-4

HOM-4

AREA OF CLADDING CHANGED FROM  
RECTANGULAR TO CIRCULAR



भारत हेवी इलेक्ट्रिकल्स लि.  
भारत भारती  
BHARAT HEAVY ELECTRICALS LTD.  
BHEPAL

भारत हेवी इलेक्ट्रिकल्स लि.  
भारत भारती  
BHARAT HEAVY ELECTRICALS LTD.  
BHEPAL

SCALE 1:10

TUBE PLATE OVERLAY  
FOR STAGE-I REHEATER

3-16817-40031 01