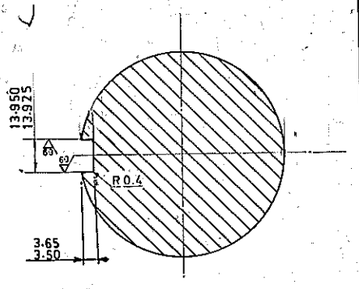
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm.)

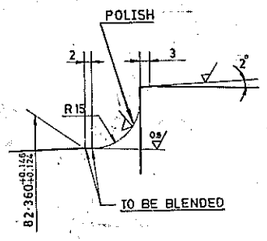
DRG. NO. 1 439 41 28 001

GAUGE LIST					
LIMIT	NOM	SYMBOL	TOOL NO.	IT. NO.	TYPE
23+60+740/+0·2-0·2			1574078	001	LENGTH
115+237/+0·15/+0·0 72/+0·1/-0·1			1574079	001	LENGTH

TOOL LIST		
IT.No	TOOL NO.	DESCRIPTION.
001	1574075	PROTOTYPE SHAFT PE & CE ROUGH
001	1574076	PROTOTYPE SHAFT PE & CE FINISH
001	1574077	THREAD CKG. GAUGE M75 X 2 P
001	1574080	LENTH GAUGE 42+60+45+37
001	1574081	TAPER CKG GAUGE 1 IN 19.2 ON DIA.
~~001~~	~~1574082~~	~~DRILL JIG FOR 64 HOLES~~
001	1574083	DRILL JIG FOR ALL HOLES WITH ONE HOLE OF 4 DIA
001	1574400	LENGTH GAUGE 'L' TYPE FOR 317 MM.



SECTION C-C



DETAIL 'F'

NOTES :-

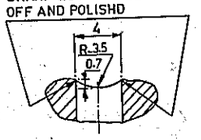
1. SHAFT IS TO BE HARDENED & TEMPERED.
2. THE FOLLOWING MARKS ARE TO BE STAMPPED ON SHAFT END.
   (a) MANUFACTURER'S MARK
   (b) MONTH / YEAR OF MANUFACTURE.
   (c) SERIAL NO.
3. ALL SHARP CORNERS TO BE REMOVED ALL RADII AND SHOULDERS TO BE MACHINED WITHN ± 0·5
4. ULTRASONIC TEST & MAGNETIC PARTICLE TEST SHOULD BE DONE TO AA 085011 B CATAGORY 2
5. CHEMICAL COMPOSITION (%) OF THE SHAFT IS AS UNDER.
   C = 0.25 TO 0.35 , S = 0.03 MAX.
   Si = 0.15 TO 0.35 , Ni = 2.50 TO 3.50
   Mn = 0.35 TO 0.60 , Cr = 2.50 TO 3.50
   P = 0.03 MAX. , Mo = 0.50 TO 0.70
6. THE SHAFT SHOULD CONFIRM TO MECHANICAL PROPERTIES AS GIVEN BELOW.

YIELD POINT KG.F/MM²	TENSILE STRENGTH KG.F/MM²	ELONGATION %	REDUCTION OF AREA %	CHARPY IMPACT VALUE KG.F/MM²	HARDNESS HB
80 MIN.	100 MIN.	15 MIN.	45 MIN.	8	285 TO 352

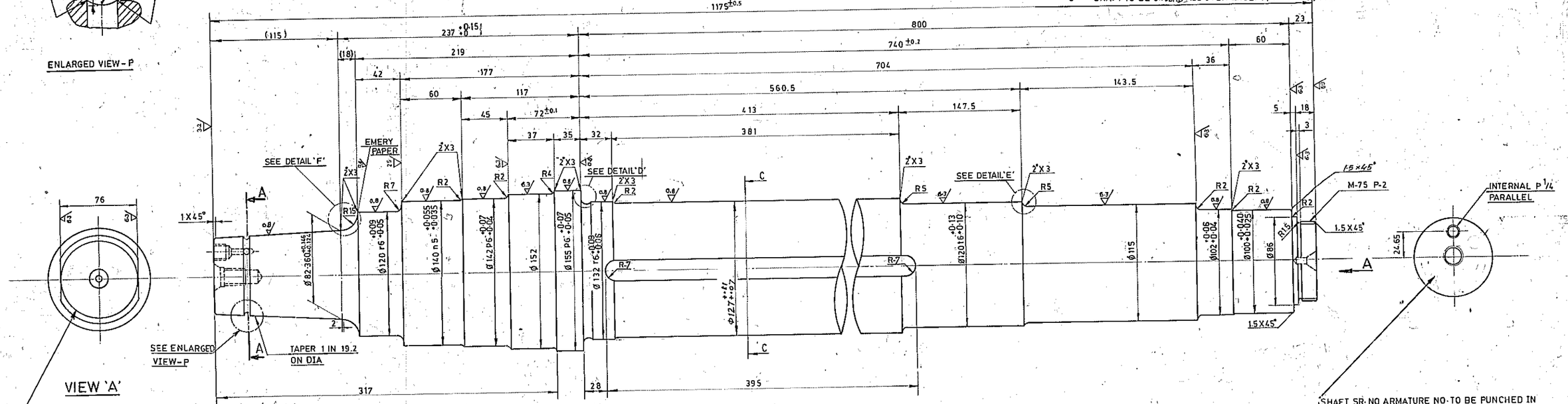
~~7. ALTERNATELY MATERIAL TO BP 10590~~

8. SHAFT TO BE GROUND ALL OVER EXCEPT Ø152 AND Ø115

SHARP EDGES TO BE ROUND OFF AND POLISHD



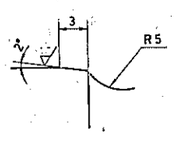
ENLARGED VIEW - P



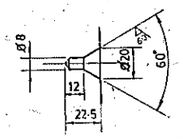
VIEW 'A'

SHAFT SR. NO ARMATURE NO. TO BE PUNCHED IN 5 MM LETTERS HEIGHT

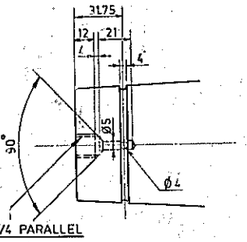
HEAT NO. FOR INDENTIFICATION, SERIAL NO. SUPPLIERS MONOGRAM & MONTH YEAR TO BE PUNCHED IN 5 MM LETTER ON THIS FACE.



DETAIL 'E'

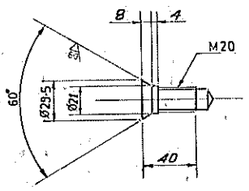


DETAIL OF CENTRE HOLE (COMM SIDE)

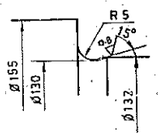


INTERNAL P 1/4 PARALLEL

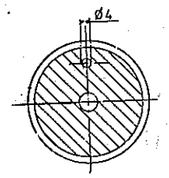
DETAIL OF SHAFT END (PINION SIDE)



DETAIL OF CENTRE HOLE (PINION SIDE)



DETAIL 'D'



SECTION AA

001	SEE NOTE 7		001	ARMATUR SHAFT Ø160x1180					N/A	KG	185		
VAR 00	REMARKS	VAR NO.	ITEM NO.	DESCRIPTION	STD.	DRAWING NO.	IT. NO.	BP 10590 MATL. CODE	C/A	UNIT	UNIT WT.	GS	ZONE
							VAR	MATL. SPECN.			QTY.		

ADDITIONAL INFORMATION

STATUS OF DRAWING

DISTRIBUTION OF PRINTS
TME-1, TXM-3, TNX-1

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT: TM 4303 AZ 25 KV BG AC Emu

BHARAT HEAVY ELECTRICALS LIMITED BHOPAL

	NAME	SIGN.	DATE	NO. OF VAR.
DRN.	V.R.D		21-3-89	00
CHD.	S.K.D		21-3-89	
APPD.	A.K.D		21-3-89	

REV	DATE	ALT	R.B.V.
09	6-10-97	CKD.	
08	16-7-97	CHD	
07	29-5-97	CHD	
06	13-3-97	CHD	
05	21-6-96	CKD	
04	22-3-96	CKD	
03	14-1-96	CHD	
2	26-8-93	CKD	
1	7-2-90	CHECKED	

IN TOOL LIST. TOOL NO. 1574400 WAS NOT ON. (TCM-252 S.NO.23)

IN SEC-CC KEY WAY DIM. 13·950 WAS 13·925 AND 20 -0·052 -0·074. DIM 3·65/3·50 WAS NOT ON. DIM. 123+8·2 WAS ON. R7 WAS R10. DIMN. 127 +1·3 +1·1 WAS 127 ±0·1 ENLARGED VIEW - P WAS NOT ON.

D-10 DIM 317 WAS 325

IN BOM IT. 001 BP 10590 WAS TIS G 4103. NOTE 7 WAS ON. VIEW OF CENTRE HOLE OF SIDE. DIM 40·4, 8.2 Ø 21 WERE 35, 3·5, 6·5 Ø 20

TL NO. 1574078 WAS ON. (TCM 243)

GAUGE LIST & TOOL LIST WERE NOT ON TCM 241 S NO 35 TO 43)

NOTES :- 1, 3, 4, 7, 8 MODIFIED SECTION 'B-B' WAS NOT ON. DRG UPDATED.

DIMN. Ø 127 +1·086 +1·053 WAS 130 +1·086 +1·068 (D/17)

IN NOTE 5 CHEMICAL COMPOSION % P = 0·03 WAS P - 0·05

DEPT. CODE	GRADE OF UN. TOL. DRAWING	SCALE	WEIGHT (kg.)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS
TME 405		1:2	105·0	1 439 4128 003	001	001

TITLE: SHAFT

CARD CODE | DRAWING NO. 1 439 41 28 001 | REV. 09

SHEET NO. 01 NO. OF SHEETS 01

SIZE A1

SES BPL

S120-3034 REF. DRG. NO.

INVENTORY NO. SIGN. & DATE

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