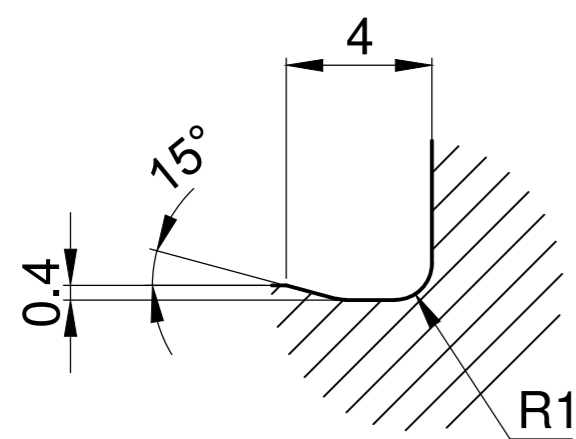
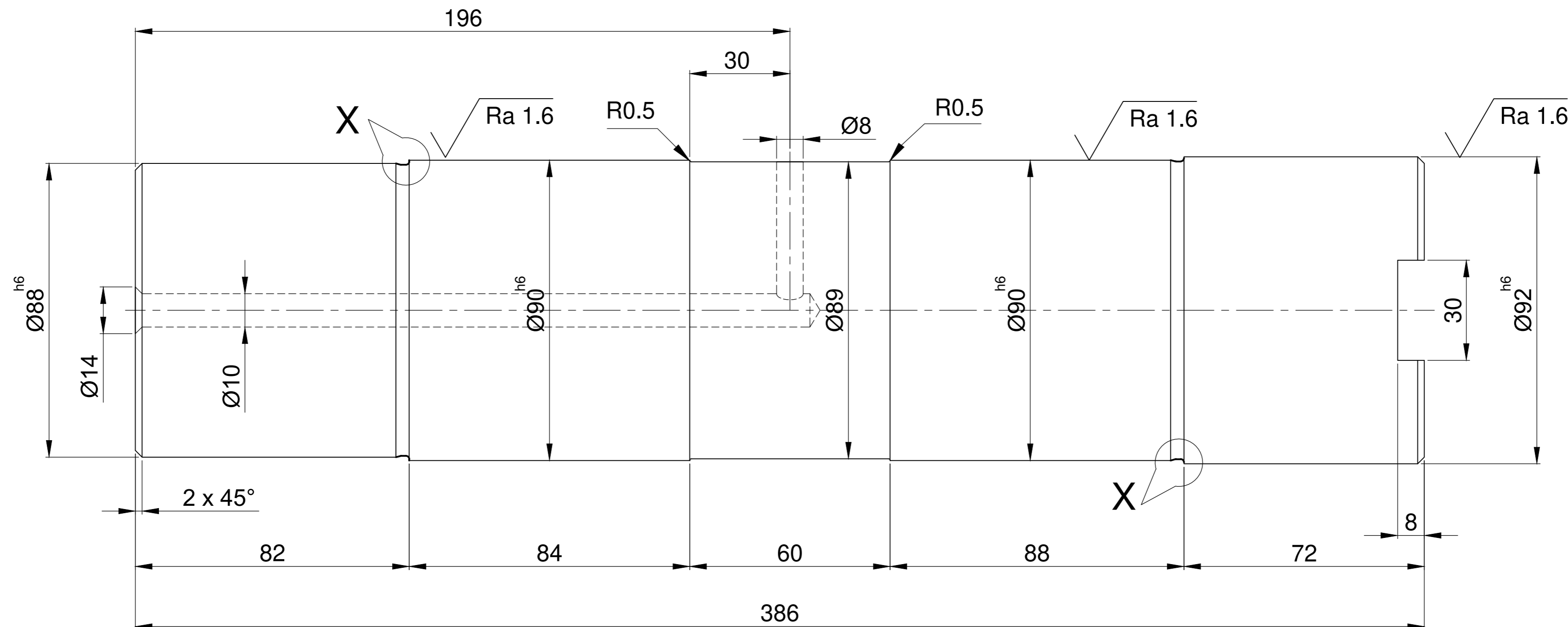


Ra 3.2 ( Ra 1.6 )

SIZE	DEVIATION
Ø88 <sup>h6</sup>	0 -0.019
Ø90 <sup>h6</sup>	0 -0.019
Ø92 <sup>h6</sup>	0 -0.019



DETAIL - X

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.

ITEM NO	DESCRIPTION	DRAWING NO	45C8	IS:1875	
			MATL CODE	UNIT WT	
			MATL SPEC	QTY	
EQPT: CROSS PIERCING AND ELONGATION					
Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME	SIGNATURE	DATE
		CHD	SSN.KUMAR/B.N	S.K.K. Kumar/B.N	10.07.18
		APPD	D.CHANDRASEKARAN	D. Chandrasekaran	10.07.18
DEPT	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
SSTP	Ø/M/#	1:1		0101056-42.000	32
CODE	IS: 2102			REF TO OLD DWG NO	
456					
TITLE			CARD CODE	DRAWING NO :	REV
CPE - SHAFT			U 01	2-7-1123-42-10156	00
3 ROLLER GUIDE					

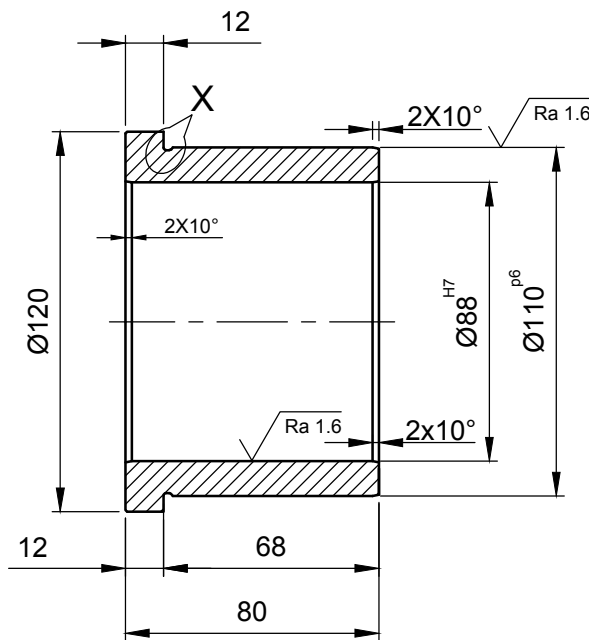
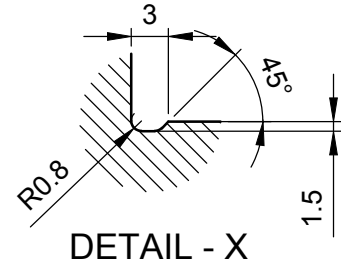
REV	DATE	ALTERED
01		CHECKED
		APPROVED

ALL DIMENSIONS ARE IN MM

REV	DATE	ALTERED
01		CHECKED
		APPROVED

$\sqrt{Ra\ 3.2}$  ( $\sqrt{Ra\ 1.6}$ )


$\varnothing 88^{H7}$	+0.035
	0
$\varnothing 110^{p6}$	+0.059
	+0.037



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.

ITEM NO	DESCRIPTION	DRAWING NO	45C8 IS:1875	UNIT WT
			MATL CODE	QTY
			MATL SPEC	

EQPT: CROSS PIERCING AND ELONGATION

	Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME	SIGNATURE	DATE
	DEPT	GRADE OF UNTOL. DIM	CHD	SSN.KUMAR /B.N	<i>SSN.Kumar/B.N</i>	12.11.18
	SSTP	IS: 2102	APPD	D.ABHIGNA	<i>D.Abhigna</i>	12.11.18
CODE	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO		ITEM	
456	1:2	1.98	REF TO OLD DWG NO		36	
TITLE			CARD CODE	DRAWING NO :		REV
CPE - COLLAR BUSH			U 01	4-7-1123-42-10446		00
TRG 2&3 ASSY.						

A4-SIZE

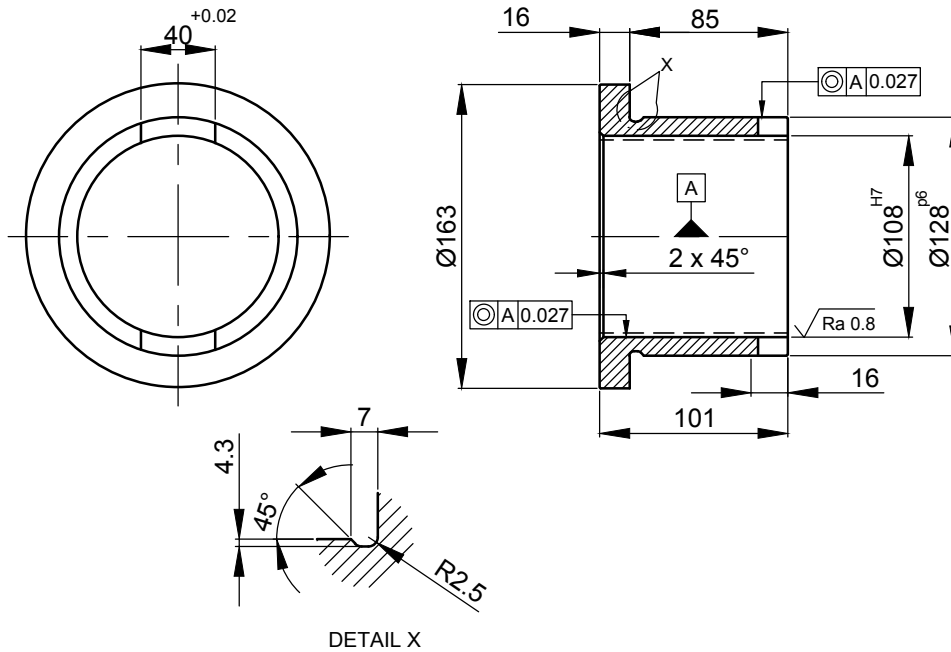
CORPORATE DRG ID:TP-DG-4-7-1123-42-10446/00

ALL DIMENSIONS ARE IN MM

REV	DATE	ALTERED
01		CHECKED
		APPROVED

$\sqrt{Ra\ 3.2}$  ( $\sqrt{Ra\ 0.8}$ )

$\varnothing 108^{H7}$	+0.035 0.000
$\varnothing 128^{p6}$	+0.068 +0.043



NOTE:

1. ALL UNSPECIFIED CHAMFERS TO 0.5 X 45°.
2. CASE HARDENED TO HRC 60±2.
3. SURFACE TO BE GROUND AFTER HARDENING CASE DEPTH 1.2 ±0.2mm.

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.

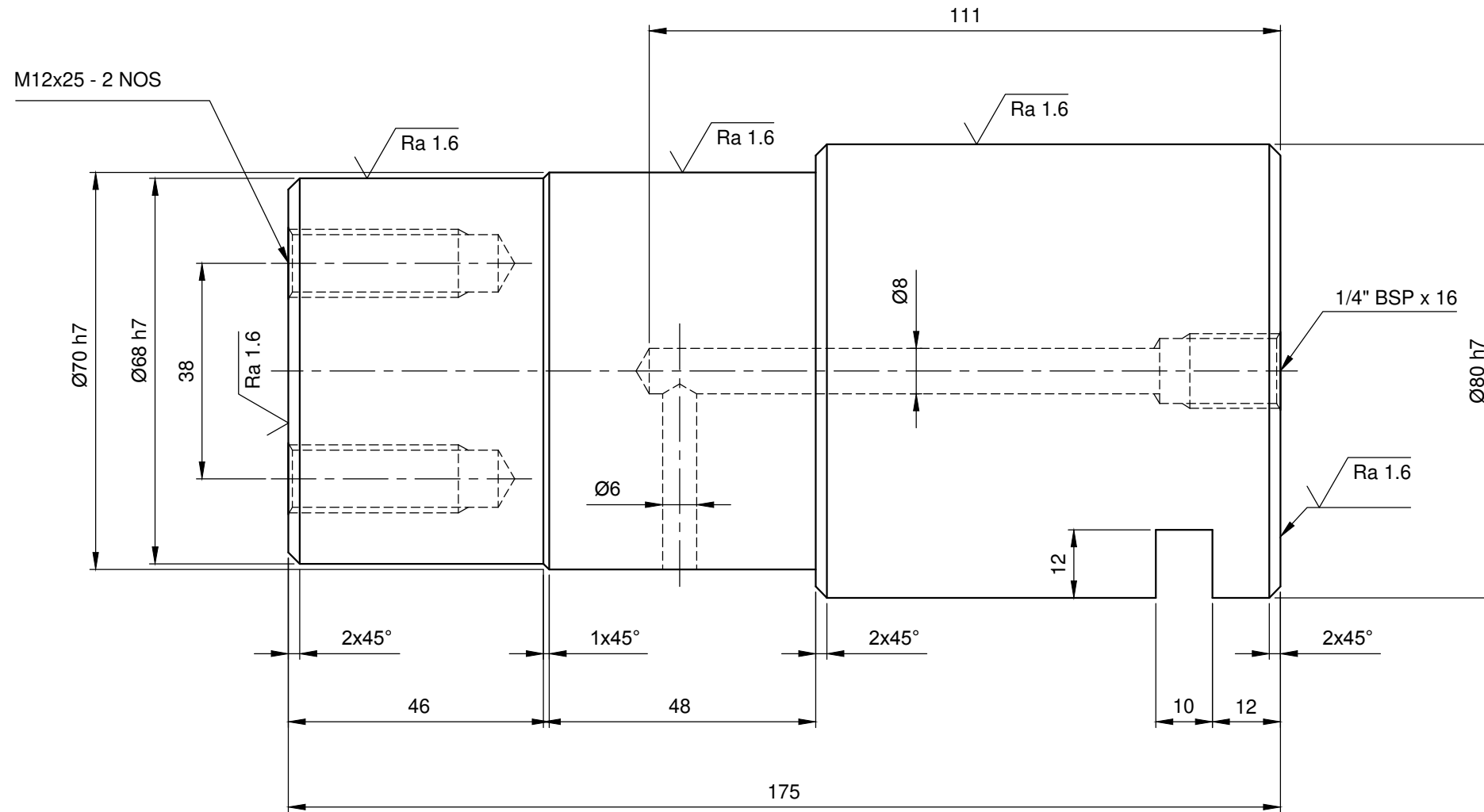
ITEM NO	DESCRIPTION	DRAWING NO	45C8	IS:1875	UNIT WT	QTY	
EQPT: CROSS PIERCING AND ELONGATION							
		Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME	SIGNATURE	DATE
DEPT		GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM	
SSTP	456	$\varnothing/M/\#$ IS: 2102	1:2	3.5	REF TO OLD DWG NO 0101056-42000	38	
TITLE				CARD CODE	DRAWING NO :	REV	
CPE - COLLAR BUSH TRG 2&3 ASSY.				U 01	4-7-1123-42-10447	00	

A4-SIZE

CORPORATE DRG ID:TP-DG-4-7-1123-42-10447/00

ALL DIMENSIONS ARE IN MILLIMETRES

DRAWING NO: 3-7-1123-42-10319



√ Ra 3.2 (√ Ra 1.6)

SIZE	DEVIATION
Ø80h7	+0.000 -0.035
Ø70h7	+0.000 -0.030
Ø68h7	+0.000 -0.030

NOTE :  
CASE HARDENED TO 60±2 HRC  
CASE DEPTH 0.8 ~ 1mm

REV	DATE	ALTERED
01	16.11.15	SSN.Kumar/ya.m
		CHECKED R.K.Singh
		APPROVED R.K.Singh

DISTANCE BETWEEN M12x25 DIMENSION 38 ADDED THREAD LENGTH 25 ADDED.

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.

ITEM NO	DESCRIPTION	DRAWING NO	MATL CODE	UNIT WT
			16MnCr5	6
			MATL SPEC	QTY

EQPT: CROSS PIERCING AND ELONGATION - MAIN EQUIPMENT INCLUDING INLET PUSHER SIDE, OUTLET SIDE AND MB THRUST BLOCK

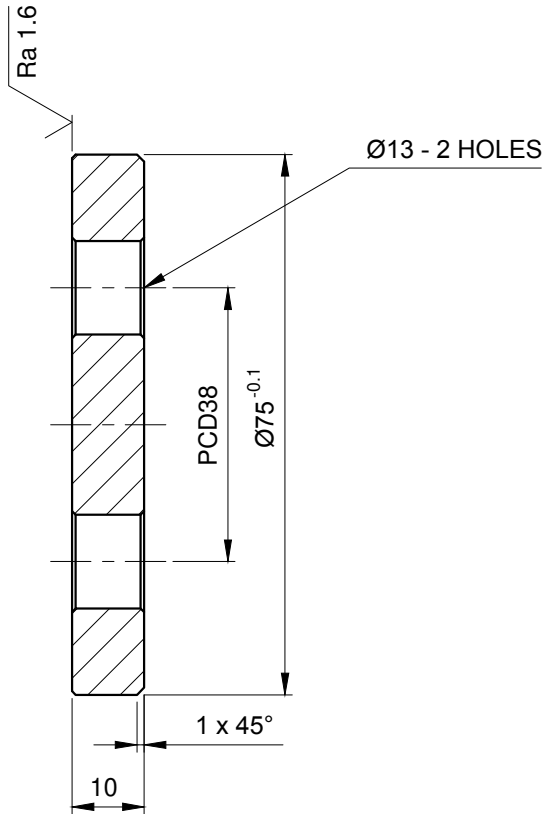
DRN	NAME	SIGNATURE	DATE
SSN.KUMAR /K.Nr	SSN.KUMAR /K.Nr	SSN.Kumar /K.Nr	11.09.15
CHD	R.K.SINGH	R.K.Singh	11.09.15
APPD	R.K.SINGH	R.K.Singh	11.09.15

DEPT	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
SSTP	IS: 2102	1:1	5.70	-	
CODE	456			REF TO OLD DWG NO	43
TITLE				DRAWING NO :	REV
CPE - PIN 3 ROLLER GUIDE ASSY.				3-7-1123-42-10319	01

ALL DIMENSIONS ARE IN MM



REV 01	DATE	ALTERED
		CHECKED
		APPROVED

$\sqrt{Ra\ 3.2}$  ( $\sqrt{Ra\ 1.6}$ )



NOTE:  
ALL UNSPECIFIED CHAMFERS ARE TAKEN AS 0.5 X 45°.

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.

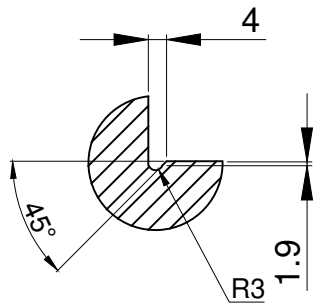
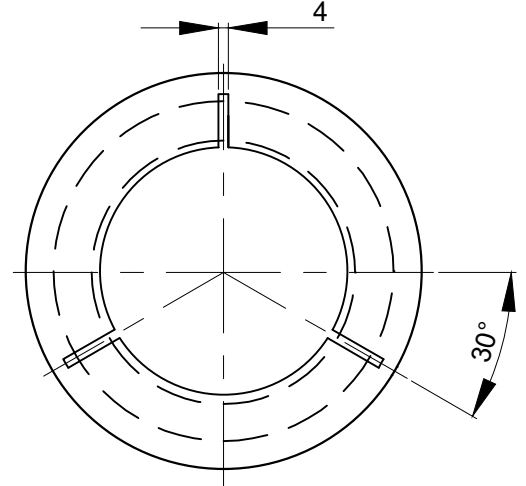
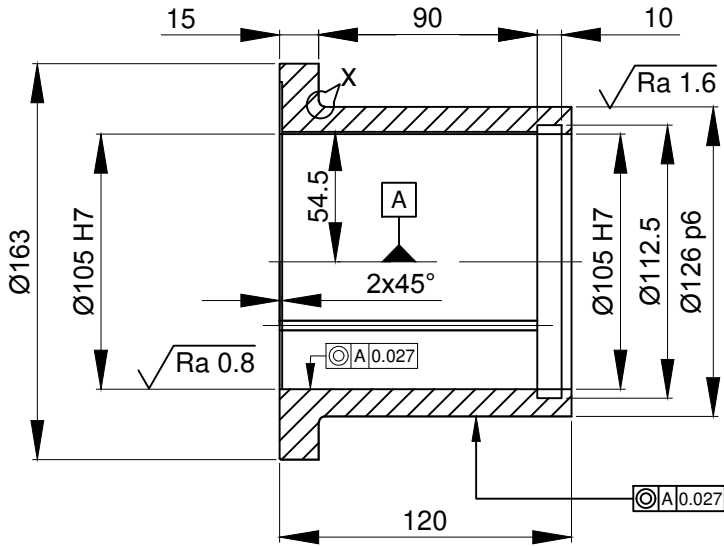
ITEM NO	RO 75 x 10 IS:1732	DRAWING NO	30C8 IS:1875	06		
	DESCRIPTION		MATL CODE	UNIT WT		
			MATL SPEC	QTY		
EQPT: CROSS PIERCING AND ELONGATION						
	Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME S.S.N.KUMAR/ A.S	SIGNATURE <i>S.S.N.Kumar/ A.S</i>	DATE 14/11/14
			CHD	R.K.SINGH	<i>R.K. Singh</i>	14/11/14
			APPD	G.LOGANATHAN	<i>G. Loganathan</i>	14/11/14
DEPT SSTP	GRADE OF UNTO. DIM		SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
CODE 456	$\phi/M/f$ IS: 2102		1:1	0.33	REF TO OLD DWG NO 0101056-43.000-04	110
TITLE			CARD CODE	DRAWING NO :	REV	
<b>CPE - END PLATE 3-ROLLER GUIDE</b>			U 01	<b>4-7-1123-43-10371</b>	00	

ALL DIMENSIONS ARE IN MM

REV 01	DATE	ALTERED
		CHECKED
		APPROVED

$\sqrt{Ra\ 3.2}$  ( $\sqrt{Ra\ 1.6}$   $\sqrt{Ra\ 0.8}$ )

$\varnothing 105^{H7}$	+0.035
	0.000
$\varnothing 126^{p6}$	+0.068
	+0.043



DETAILS X

NOTE :

1. ALL UNSPECIFIED CHAMFERS TO 0.5X45°
2. CASTING SHOULD BE FREE FROM HARMFUL INCLUSION & CRACKS

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.

ITEM NO	DESCRIPTION	DRAWING NO	GZ-CuSn12	UNIT WT
			MATL CODE	QTY
			MATL SPEC	

EQPT: **CROSS PIERCING AND ELONGATION**



Bharat Heavy Electricals Ltd  
SEAMLESS STEEL TUBE PLANT  
TIRUCHIRAPALLI - 620014

DRN	NAME <b>S.S.N.KUMAR/B.N</b>	SIGNATURE <i>S.S.N.Kumar/B.N</i>	DATE <b>30.06.18</b>
CHD	<b>D.CHANDRASEKAR</b>	<i>D. Chandrasekar</i>	<b>30.06.18</b>
APPD	<b>D.CHANDRASEKAR</b>	<i>D. Chandrasekar</i>	<b>30.06.18</b>

DEPT SSTP	GRADE OF UNTOL. DIM $\varnothing/M/\#$ IS: 2102	SCALE <b>1:2</b>	WEIGHT (Kg) <b>4.3</b>	REF TO ASSY DWG NO	ITEM
CODE 456				REF TO OLD DWG NO <b>0101056-42-000-03</b>	60

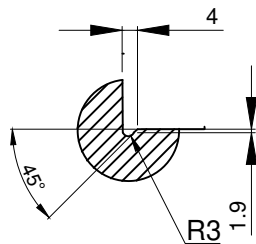
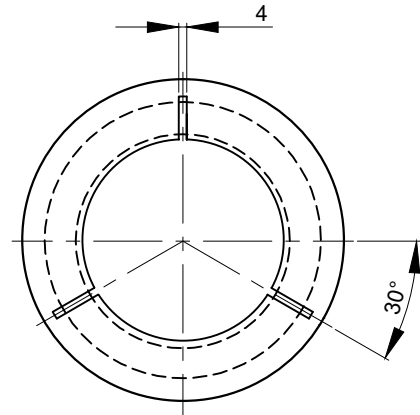
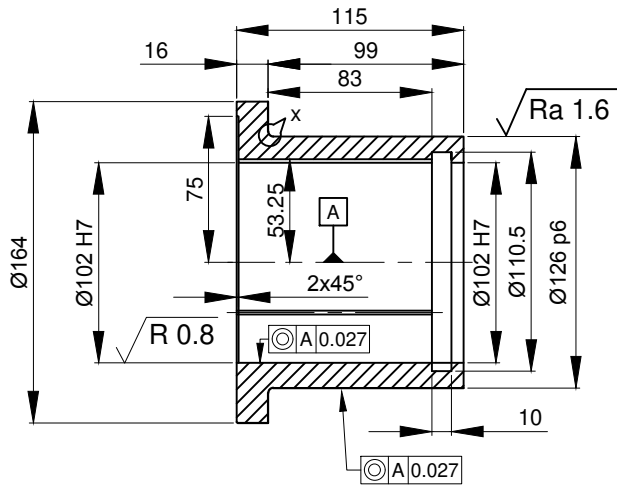
TITLE <b>CPE-COLLAR BUSH 3-ROLLER GUIDE-1</b>	CARD CODE U 01	DRAWING NO : <b>4-7-1123-42-10441</b>	REV <b>00</b>
--	-------------------	--	------------------

ALL DIMENSIONS ARE IN MM

REV	DATE	ALTERED
01		CHECKED
		APPROVED

$\sqrt{Ra\ 3.2}$  ( $\sqrt{Ra\ 1.6}$   $\sqrt{Ra\ 0.8}$ )

Ø102 <sup>H7</sup>	+0.035
	0.000
Ø126 <sup>p6</sup>	+0.068
	+0.043



DETAILS X

NOTE :

- 1.ALL UNSPECIFIED CHAMFERS TO 0.5X45°
- 2.CASTING SHOULD BE FREE FROM HARMFUL INCLUSION & CRACKS

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.

ITEM NO	DESCRIPTION	DRAWING NO	GZ-CuSn12	UNIT WT
			MATL CODE	QTY
			MATL SPEC	

EQPT: CROSS PIERCING AND ELONGATION

	Bharat Heavy Electricals Ltd		DRN	NAME	SIGNATURE	DATE
	SEAMLESS STEEL TUBE PLANT		CHD	S.S.N.KUMAR/ B.N	<i>S.S.N.Kumar/ B.N</i>	30.06.18
	TIRUCHIRAPALLI - 620014		APPD	D.CHANDRASEKAR	<i>D. Chandrasekar</i>	30.06.18

DEPT	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
SSTP	Ø/M/F	1:2	3.8	REF TO OLD DWG NO	61
CODE	IS: 2102			0101056-42-000-03	

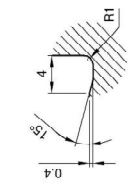
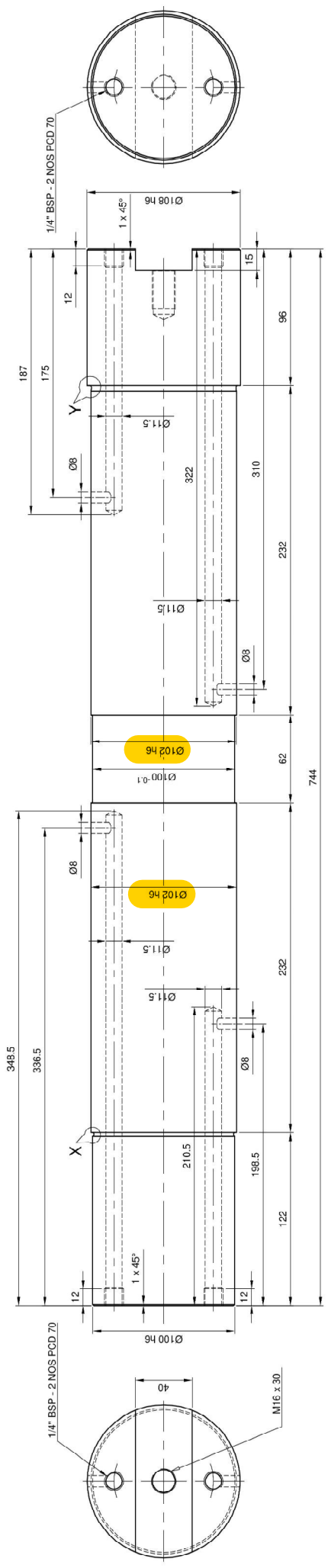
TITLE	CARD CODE	DRAWING NO :	REV
CPE-COLLAR BUSH 3-ROLLER GUIDE-1	U 01	4-7-1123-42-10442	00

DRAWING NO. 2-7-1123-43-10125

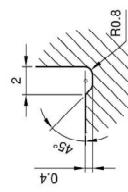
ALL DIMENSIONS ARE IN MILLIMETERS

√ Ra 3.2 (√ Ra 1.6)

SIZE	DEVIATION
Ø100 h6	0.000 -0.022
Ø102 h6	0.000 -0.022
Ø108 h6	0.000 -0.022



DETAIL Y



DETAIL X

NOTE:  
1. ALL SHARP CORNERS CHAMFERED TO 0.5 X 45°  
2. TEMPERING RANGE 150° - 200°C

PLUG G1/4"	0.013	0.013	0.013
01	RO 110 x 744	DESCRIPTION	DRAWING NO
ITEM NO			
MATL CODE	16MnCr5+TH	MATL SPEC	QTY
			47.2
			UNIT WT
			45

EQUIV. CROSS PIERCING AND ELONGATION		NAME		DATE	
Bharat Heavy Electricals Ltd		S.S.N.KUMAR/ AS		19/11/14	
SEAMLESS STEEL TUBE PLANT		R.K.SINGH		19/11/14	
TIRUCHIRAPALLI - 62007-4		G.L.GANATHAN		19/11/14	
DEPT	SCALE	REF TO ASSY DWG NO	REF TO STD DWG NO	ITEM	REV
406	1:2.5	47.3	0101036-43.000-03	45	02
TITLE		DRAWING NO :		REV	
CPE - SHAFT		2-7-1123-43-10125		02	
3-ROLLER ASSY					

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 OR PRESENTED TO THE INTEREST OF THE COMPANY.

REV	DATE	ALTERED BY	APPROVED BY	DATE	REV	REASON
01	25.02.19	S.S.N.Kumar	R.K.Singh	27/11/18	01	MISREAD WAS NOTED
						REVISED AS PER USER'S REQUEST

MISSING DIMENSION IS ADDED

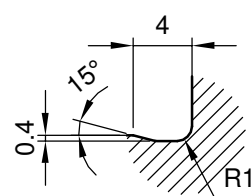
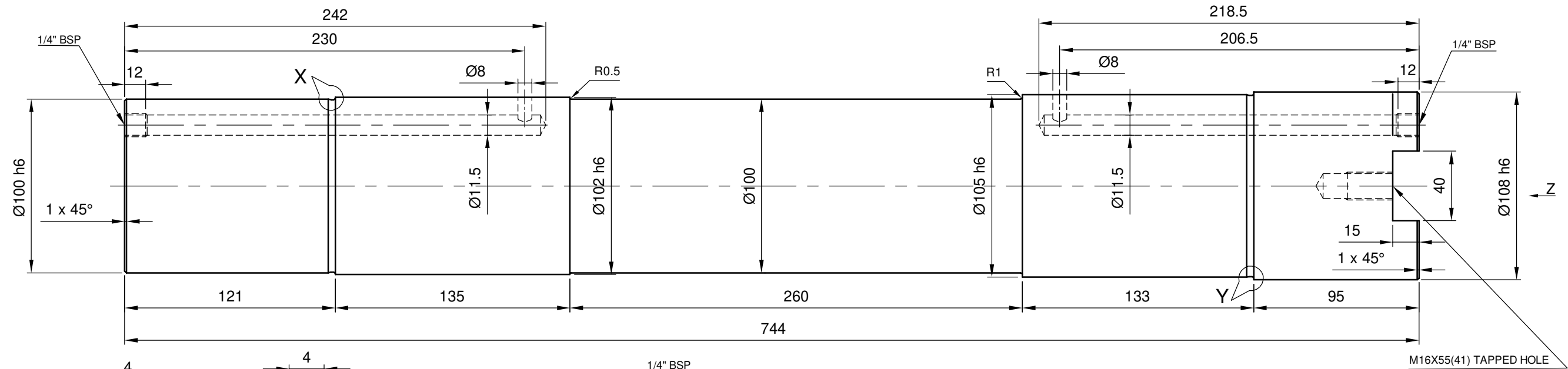
1 2 3 4 5 6 7 8 A B C D E F L

ALL DIMENSIONS ARE IN MILLIMETRES

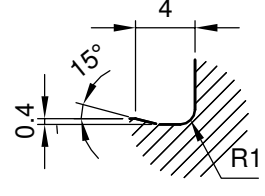
DRAWING NO: 3-7-1123-43-10261

√ Ra 3.2 (√ Ra 1.6)

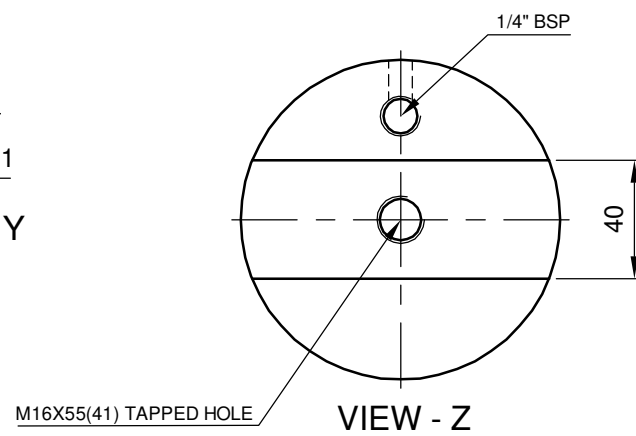
SIZE	DEVIATION
Ø100 h6	0.000 -0.022
Ø102 h6	0.000 -0.022
Ø105 h6	0.000 -0.022
Ø108 h6	0.000 -0.022



DETAIL - X



DETAIL - Y



VIEW - Z

- NOTE:
1. ALL SHARP CORNERS CHAMFERED TO 0.5 X 45°
  2. TEMPERING RANGE 150 - 200°C

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.

RO 110 x 744		16MnCr5+TH		02		
ITEM NO	DESCRIPTION	DRAWING NO	MATL CODE	UNIT WT		
			MATL SPEC	QTY		
EQPT: CROSS PIERCING AND ELONGATION						
	Bharat Heavy Electricals Ltd		NAME	SIGNATURE	DATE	
	SEAMLESS STEEL TUBE PLANT		DRN	S.S.N.KUMAR/ A.S	S.S.N.Kumar/ A.S	19/11/14
	TIRUCHIRAPALLI - 620014		CHD	R.K.SINGH	R.K. Singh	19/11/14
			APPD	G.LOGANATHAN	G.Loganathan	19/11/14
DEPT	SSTP	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
456		φ/M/F IS: 2102	1:2.5	47.0	REF TO OLD DWG NO 0101056-43.000-03	
TITLE			CARD CODE	DRAWING NO :	REV	
CPE - SHAFT 3-ROLLER GUIDE			U 01	3-7-1123-43-10261	01	

REV	DATE	ALTERED
01	26.02.19	P.P.N. Kumar/M.D CHECKED P.P.N. Kumar APPROVED D. Abhigna

MISSING DIMENSION 15 ADDED

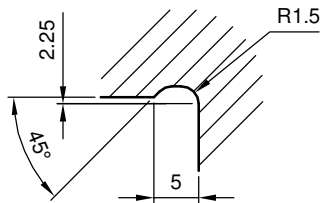
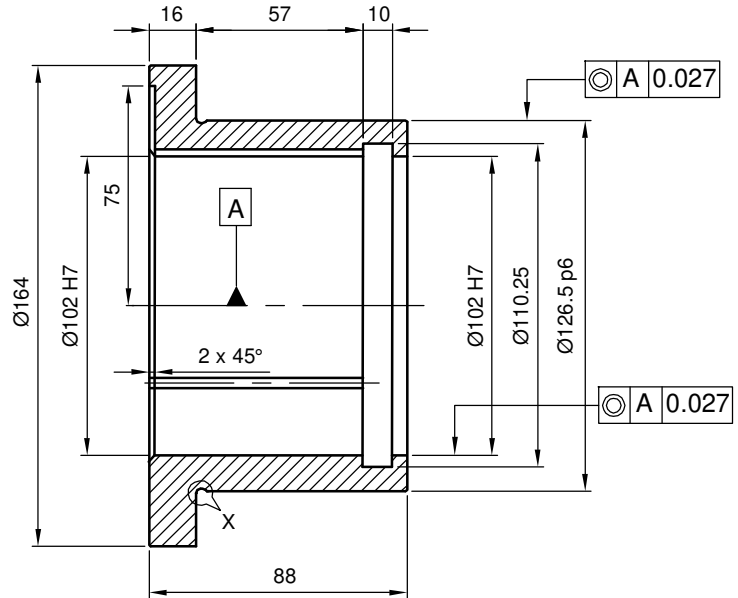
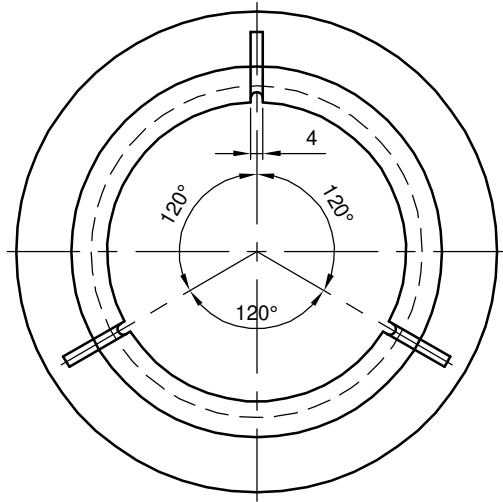
ALL DIMENSIONS ARE IN MM

REV	DATE	ALTERED	<i>S.S.N. Kumar/M.D</i>
01	06.03.19	CHECKED	<i>S.S.N. Kumar</i>
		APPROVED	<i>D. Abhighna</i>

√ Ra 3.2 (√ Ra 0.8)

BORE DIAMETER 102 H7 WAS Ø102.5 H7  
REVISED AS PER USER'S REQUEST

SIZE	DEVIATION
Ø102 H7	+0.035 0.000
Ø126.5 p6	+0.068 +0.043



DETAIL - X

NOTE:

1. ALL UNSPECIFIED CHAMFERS TO 0.5 X 45°.
2. CASTING SHOULD BE FREE FROM HARMFUL INCLUSION & CRACKS.

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.

ITEM NO	DESCRIPTION	DRAWING NO	GZ-CuSn12	01
			MATL CODE	UNIT WT
			MATL SPEC	QTY

EQPT: CROSS PIERCING AND ELONGATION



Bharat Heavy Electricals Ltd  
SEAMLESS STEEL TUBE PLANT  
TIRUCHIRAPALLI - 620014

DRN	NAME	SIGNATURE	DATE
	S.S.N.KUMAR/ A.S	<i>S.S.N. Kumar/ A.S</i>	12/11/14
	R.K.SINGH	<i>R.K. Singh</i>	12/11/14
	G.LOGANATHAN	<i>G. Loganathan</i>	12/11/14

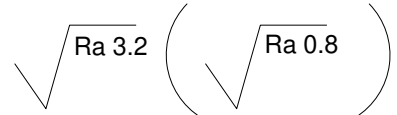
DEPT	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
SSTP	Ø/M/F	1:2	3.5	REF TO OLD DWG NO	49
CODE	IS: 2102			0101056-43.000-03	

TITLE	CARD CODE	DRAWING NO :	REV
<b>CPE - COLLAR BUSH 3-ROLLER GUIDE</b>	U 01	<b>4-7-1123-43-10349</b>	01

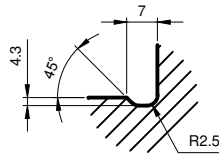
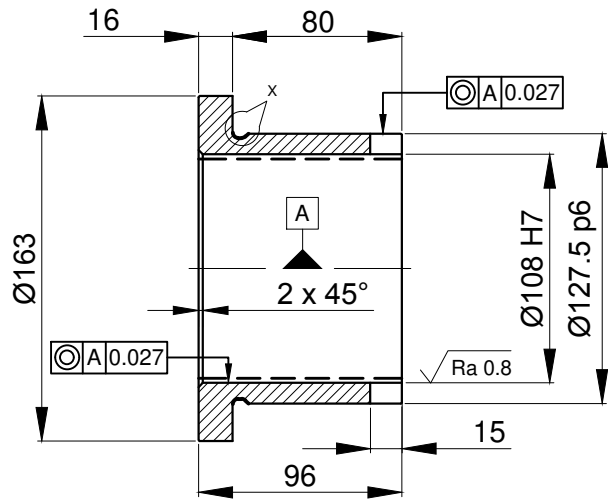
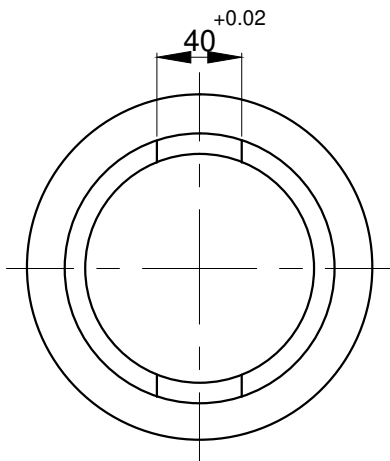
ALL DIMENSIONS ARE IN MM

REV	DATE	ALTERED	S.S.N.Kumar / B.N
01	02.04.18	CHECKED	D.chandrasekar
		APPROVED	D.chandrasekar

SIDE VIEW ADDED



SIZE	DEVIATION
Ø108 H7	+0.035 0.000
Ø127.5 p6	+0.068 +0.043




DETAILS X

NOTE:

1. ALL UNSPECIFIED CHAMFERS TO 0.5 X 45°.
2. CASE HARDENED TO HRC 60±2.
3. SURFACE TO BE GROUND AFTER HARDENING  
CASE DEPTH 1.2±0.2mm.

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.

ITEM NO	DESCRIPTION	DRAWING NO	MATL CODE	UNIT WT
			MATL SPEC	QTY
EQPT: CROSS PIERCING AND ELONGATION				
 Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME S.S.N.KUMAR/ A.S	SIGNATURE <i>S.S.N.Kumar / A.S</i>
		CHD	R.K.SINGH	<i>R.K. Singh</i>
		APPD	G.LOGANATHAN	<i>G. Loganathan</i>
DEPT SSTP	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO
CODE 456	$\phi / M / \#$ IS: 2102	1:2	3.5	REF TO OLD DWG NO 0101056-43000-03
TITLE <b>CPE - COLLAR BUSH 3-ROLLER GUIDE</b>			CARD CODE U 01	DRAWING NO : <b>4-7-1123-43-10344</b>
				ITEM 50
				REV 01

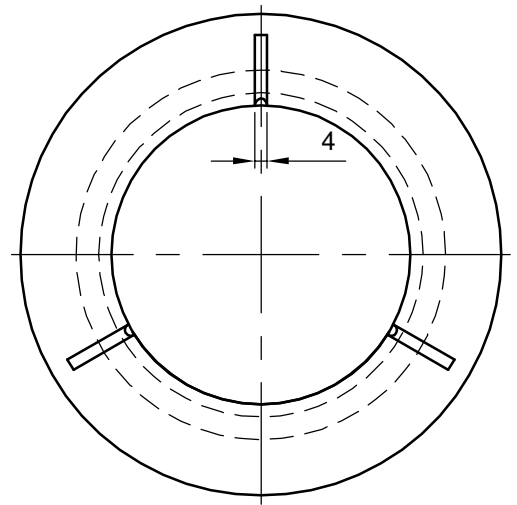
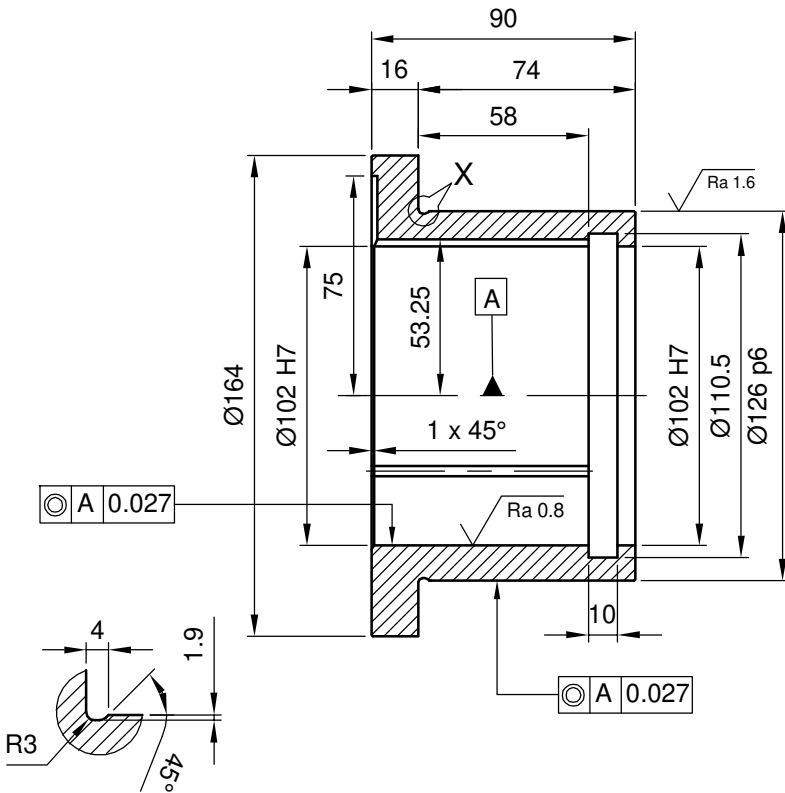
ALL DIMENSIONS ARE IN MM

REV 01	DATE 26.02.19	ALTERED <i>S.S.N. Kumar / M. D</i>
		CHECKED <i>S.S.N. Kumar</i>
		APPROVED <i>D. Abhighna</i>

BORE DIAMETER 102 H7 WAS Ø102.5 H7  
REVISED AS PER USER'S REQUEST

√ Ra 3.2 ( √ Ra 1.6 √ Ra 0.8 )

SIZE	DEVIATION
Ø102 H7	+0.035 0.000
Ø126 p6	+0.068 +0.043



DETAIL - X


NOTE:

1. ALL UNSPECIFIED CHAMFERS TO 0.5 X 45°.
2. CASTING SHOULD BE FREE FROM HARMFUL INCLUSION & CRACKS.

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.

ITEM NO	DESCRIPTION	DRAWING NO	GZ-CuSn12	01
			MATL CODE	UNIT WT
			MATL SPEC	QTY

EQPT: CROSS PIERCING AND ELONGATION

	Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME S.S.N.KUMAR/ A.S	SIGNATURE <i>S.S.N. Kumar / A.S</i>	DATE 11/12/14
			CHD	R.K.SINGH	<i>R. K. Singh</i>	11/12/14
			APPD	G.LOGANATHAN	<i>G. Loganathan</i>	11/12/14
DEPT SSTP	GRADE OF UNTOL. DIM Ø/M/F IS: 2102	SCALE 1:2	WEIGHT (Kg) 3.8	REF TO ASSY DWG NO		ITEM
CODE 456				REF TO OLD DWG NO 0101056-43.000-03		
TITLE <b>CPE - COLLAR BUSH 3-ROLLER GUIDE</b>			CARD CODE U 01	DRAWING NO : <b>4-7-1123-43-10345</b>		REV 01



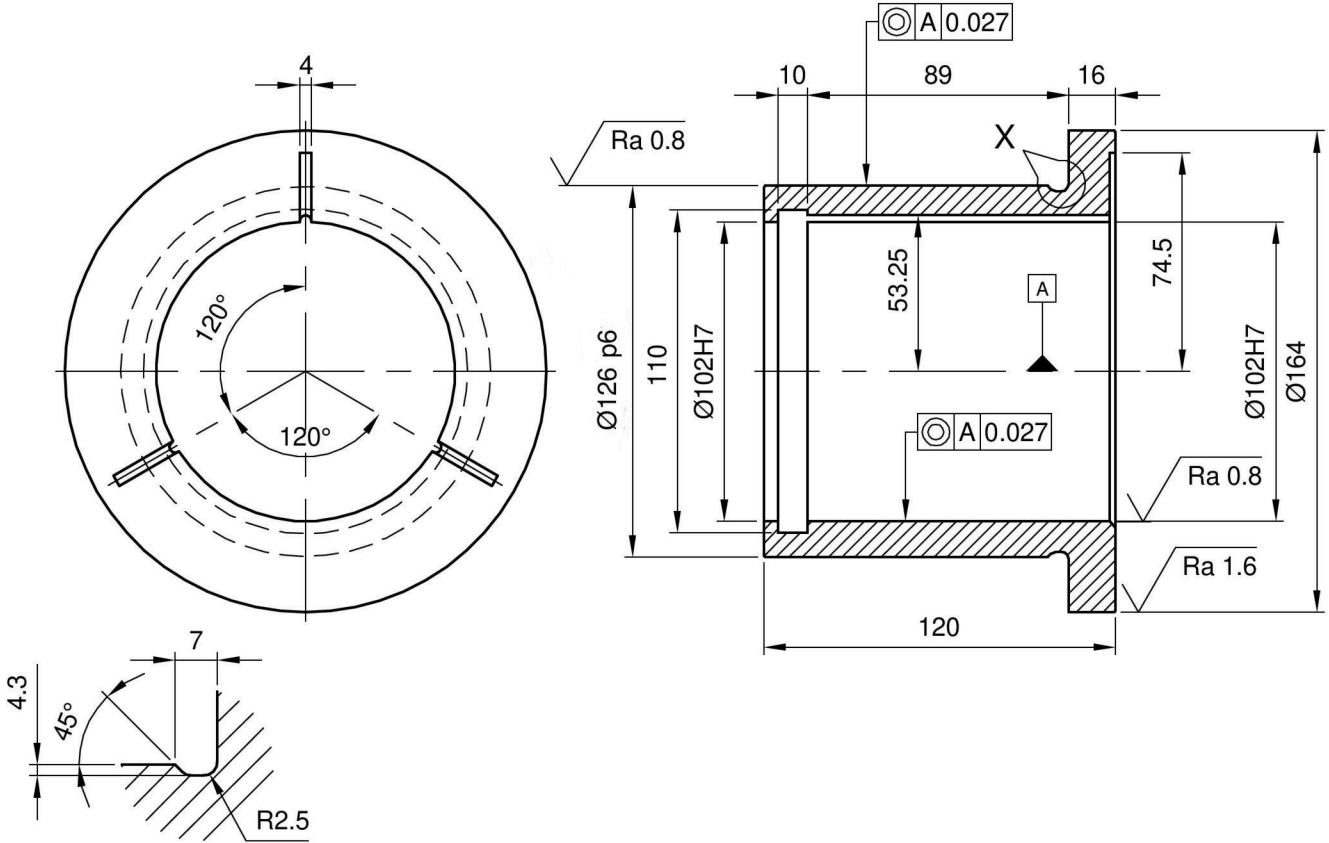
ALL DIMENSIONS ARE IN MM

REV 01	DATE 26.02.19	ALTERED <i>S.S.N. Kumar/M.D</i>
		CHECKED <i>S.S.N. Kumar</i>
		APPROVED <i>D. Abhigna</i>

BORE DIAMETER 102 H7 WAS Ø102.5 G7  
REVISED AS PER USER'S REQUEST

√ Ra 3.2 ( √ Ra 0.8 √ Ra 1.6 )

SIZE	DEVIATION
Ø102 H7	+0.035 +0.000
Ø126 p6	+0.068 +0.043



DETAIL - X

NOTE:

1. ALL UNSPECIFIED CHAMFERS TO 0.5 X 45°.
2. CASTING SHOULD BE FREE FROM HARMFUL INCLUSION & CRACKS.

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.

ITEM NO	DESCRIPTION	DRAWING NO	GZ-CuSn12	03
			MATL CODE	UNIT WT
			MATL SPEC	QTY

EQPT: CROSS PIERCING AND ELONGATION

 Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014	DRN	NAME S.S.N.KUMAR/ A.S	SIGNATURE <i>S.S.N. Kumar/ A.S</i>	DATE 14/11/14
	CHD	R.K.SINGH	<i>R.K. Singh</i>	14/11/14
	APPD	G.LOGANATHAN	<i>G. Loganathan</i>	14/11/14

DEPT SSTP	GRADE OF UNTOL. DIM Ø/M/F	SCALE 1:2	WEIGHT (Kg) 4.7	REF TO ASSY DWG NO	ITEM
CODE 456	IS: 2102			REF TO OLD DWG NO 0101056-43.000-03	55

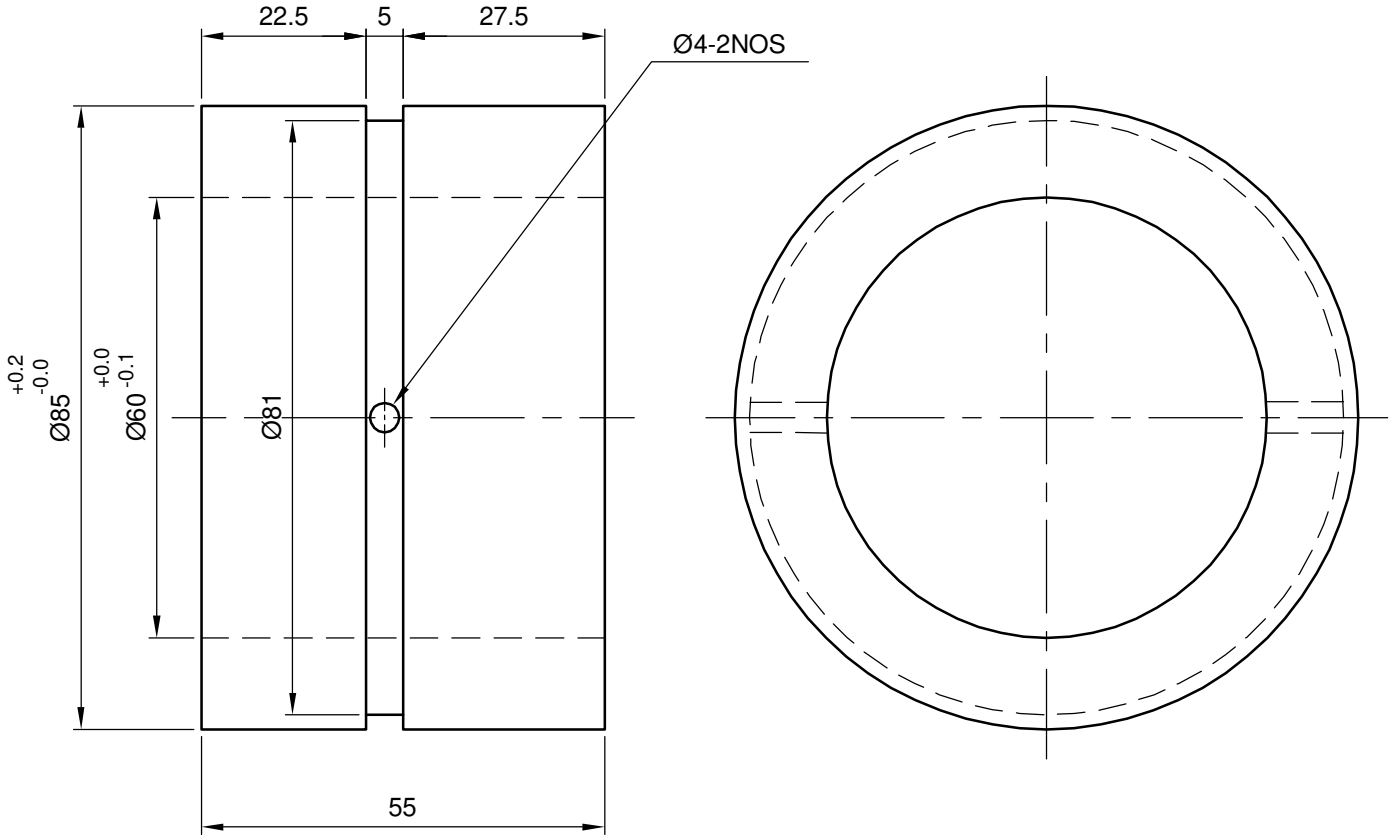
TITLE <b>CPE - COLLAR BUSH 3-ROLLER GUIDE</b>	CARD CODE U 01	DRAWING NO : <b>4-7-1123-43-10348</b>	REV 01
--	-------------------	--	-----------

ALL DIMENSIONS ARE IN MM

REV	DATE	ALTERED	<i>S.P.N. Kumar/M.D</i>
01	26.02.19	CHECKED	<i>S.P.N. Kumar</i>
		APPROVED	<i>D. Abhighna</i>

BUSH DIMENSIONS REVISED AS PER USER'S REQUEST

✓ Ra 3.2



NOTE:

1. ALL UNSPECIFIED CHAMFERS TAKEN AS 0.5 X 45°.

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.

ITEM NO	DESCRIPTION	DRAWING NO	PCuSn10 IS:28	04
			MATL CODE	UNIT WT
			MATL SPEC	QTY

EQPT: CROSS PIERCING AND ELONGATION



Bharat Heavy Electricals Ltd  
SEAMLESS STEEL TUBE PLANT  
TIRUCHIRAPALLI - 620014

DRN	NAME	SIGNATURE	DATE
CHD	S.S.N.KUMAR/ A.S	<i>S.P.N. Kumar/ A.S</i>	22/11/14
APPD	R.K.SINGH	<i>R.K. Singh</i>	22/11/14
	G.LOGANATHAN	<i>G. Loganathan</i>	22/11/14

DEPT	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
SSTP	Ø/M/F	1:1	1.20	REF TO OLD DWG NO	59
CODE	IS: 2102			0101056-43.000-03	

TITLE	CARD	DRAWING NO :	REV
<b>CPE - BUSH</b>	CON	47-123-43-10356	01
<b>3-ROLLER GUIDE</b>	U		

**CORPOR**

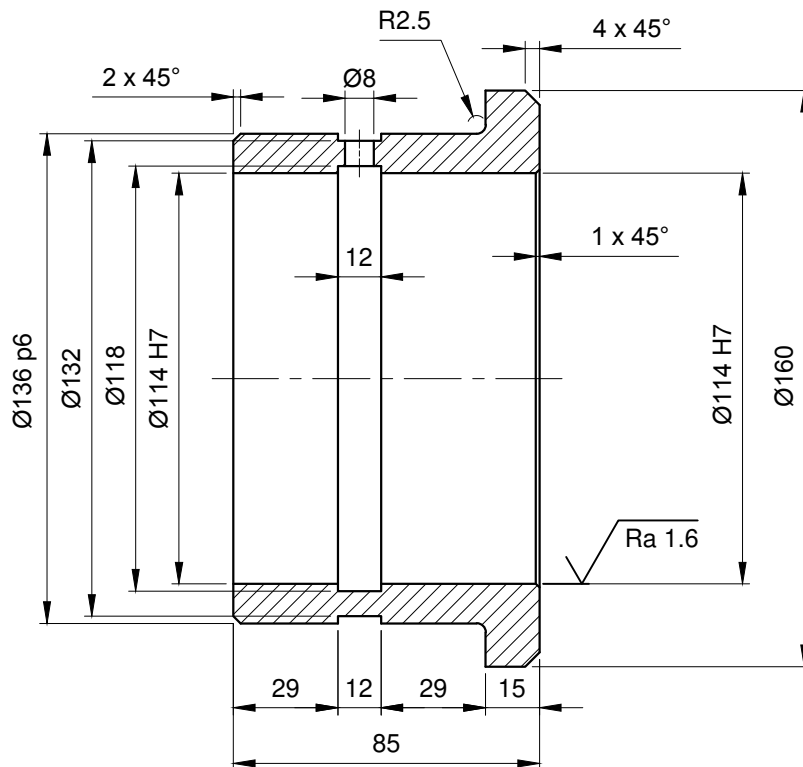
A-SIZE

ALL DIMENSIONS ARE IN MM

REV 01	DATE	ALTERED
		CHECKED
		APPROVED

$\sqrt{Ra\ 3.2}$  ( $\sqrt{Ra\ 1.6}$ )


SIZE	DEVIATION
$\varnothing 114\ H7$	+0.035 0.000
$\varnothing 136\ p6$	+0.068 +0.043

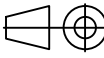


CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

ITEM NO	RO 160 x 85 IS:1732	DRAWING NO	42Cr4Mo2 IS:5517	03
	DESCRIPTION		MATL CODE	UNIT WT
			MATL SPEC	QTY

EQPT: CROSS PIERCING AND ELONGATION

 <b>Bharat Heavy Electricals Ltd</b> SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014	DRN	NAME S.S.N.KUMAR/ A.S	SIGNATURE <i>S.S.N.Kumar/ A.S</i>	DATE 07/11/14
	CHD	R.K.SINGH	<i>R.K. Singh</i>	07/11/14
	APPD	G.LOGANATHAN	<i>G. Loganathan</i>	07/11/14

DEPT SSTP	GRADE OF UNTOL. DIM $\varnothing/M/\#$ IS: 2102		SCALE 1:2	WEIGHT (Kg) 3.6	REF TO ASSY DWG NO	ITEM
CODE 456					REF TO OLD DWG NO 0101056-43.000-03	85

TITLE <b>CPE - COLLAR BUSH 3-ROLLER GUIDE</b>	CARD CODE U 01	DRAWING NO : <b>4-7-1123-43-10367</b>	REV 00
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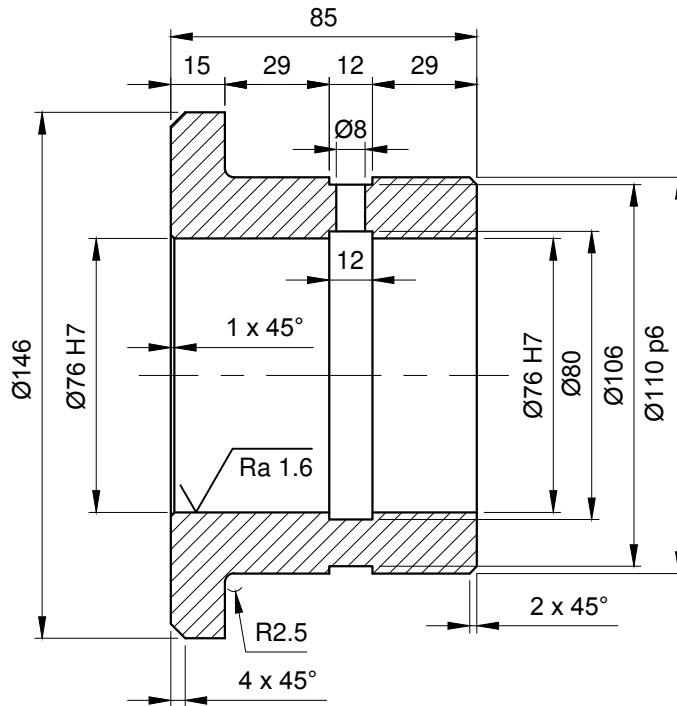
A4-SIZE

ALL DIMENSIONS ARE IN MM

REV 01	DATE	ALTERED
		CHECKED
		APPROVED

$\sqrt{Ra\ 3.2}$  ( $\sqrt{Ra\ 1.6}$ )


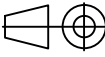
SIZE	DEVIATION
Ø76 H7	+0.030 0.000
Ø110 p6	+0.059 +0.037



NOTE:

1. ALL UNSPECIFIED CHAMFERS TO 0.5 X 45°.

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.

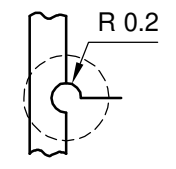
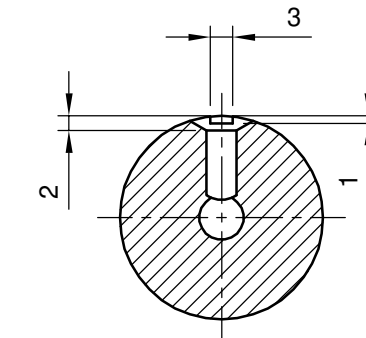
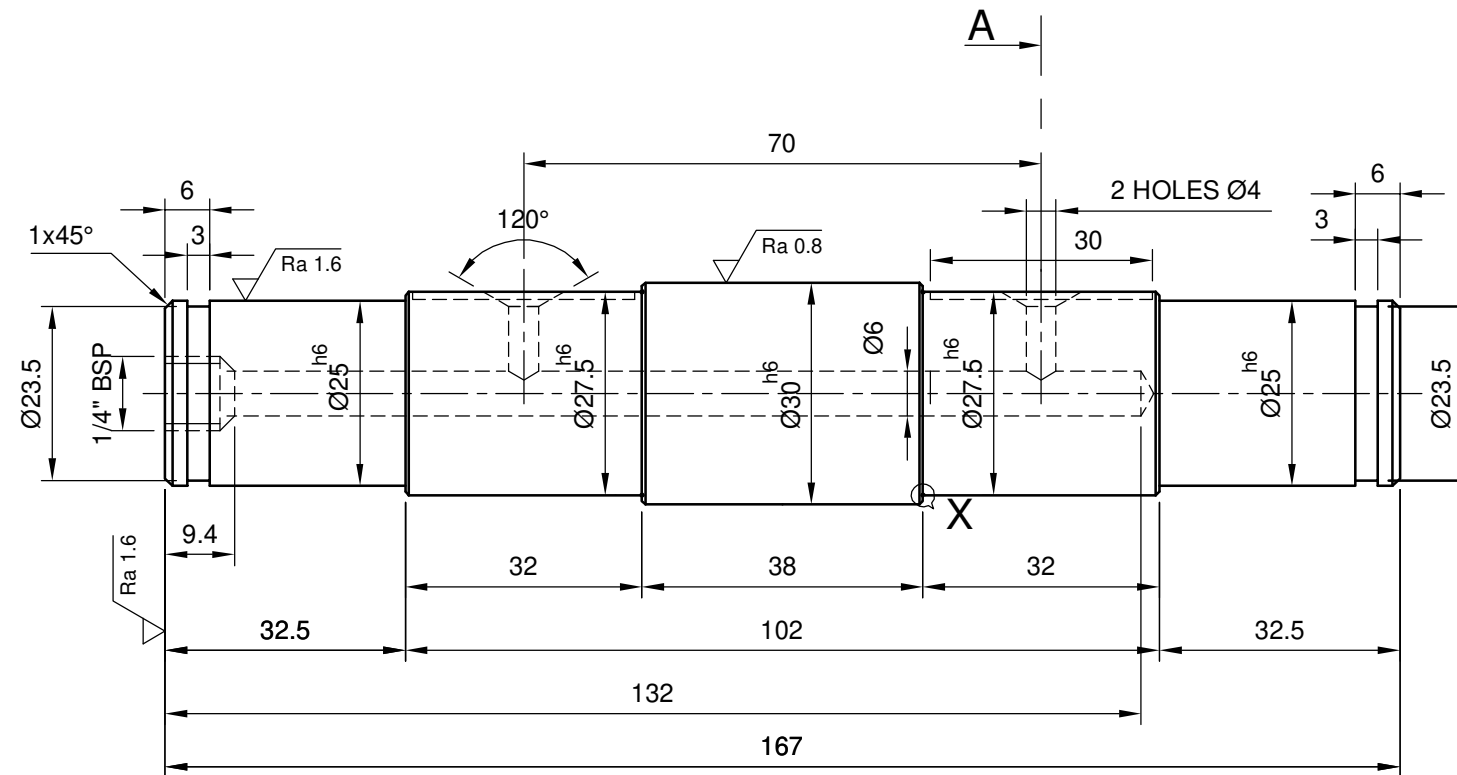
				42Cr4Mo2 IS:5517		03	
ITEM NO	DESCRIPTION	DRAWING NO		MATL CODE		UNIT WT	
				MATL SPEC		QTY	
EQPT: CROSS PIERCING AND ELONGATION							
		Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME	SIGNATURE	DATE
				CHD	R.K.SINGH	<i>R.K. Singh</i>	10/11/14
				APPD	G.LOGANATHAN	<i>G. Loganathan</i>	10/11/14
DEPT	GRADE OF UNTOL. DIM		SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO		ITEM
SSTP	$\phi/M/F$ IS: 2102		1:2	3.6	REF TO OLD DWG NO		86
CODE					0101056-43.000-03		
TITLE				CARD CODE	DRAWING NO :		REV
CPE - COLLAR BUSH				U 01	4-7-1123-43-10347		00
3-ROLLER GUIDE							

ALL DIMENSIONS ARE IN MILLIMETRES

DRAWING NO: 3-7-1125-21-10114

√ Ra 3.2 ( √ Ra 0.8 √ Ra 1.6 )

Nominal size	Tolerance field	Deviation
Ø25	h6	-0.000 -0.013
Ø27.5	h6	-0.000 -0.013
Ø30	h6	-0.000 -0.016



SECTION - AA

DETAIL - X  
SCALE 1:10

REV	DATE	ALTERED	CHECKED	APPROVED
02	28.03.16	S.P.N. Kumar / y.s.m	R.K. Singh	R.K. Singh

MISSING DIMENSION OF CIRCLIP GROOVE Ø23.5 ADDED

REV	DATE	ALTERED	CHECKED	APPROVED
03	25.03.19	S.P.N. Kumar / M.D	S.P.N. Kumar	D. Abhighna
01	19.08.2015	S.P.N. Kumar / K.Nr	R.K. Singh	S. Loganathan

1/4" BSP WAS G 1/4 REVISED AS PER USER'S REQUEST

Ø27.5 h6 WAS Ø30 h6 REVISED AS PER USER'S REQUEST

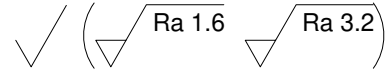
CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

ITEM NO	DESCRIPTION	DRAWING NO	42CrMo4	
			MATL CODE	UNIT WT
			MATL SPEC	QTY
EQPT: POSITIONING ROLLER CONVEYOR , CRMPING LINE AND CRIMPING PRESS WITH FACILITIES				
Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014	DRN	S.S.N.KUMAR / R.V	SIGNATURE	DATE
	CHD	G.LOGANATHAN	S. Loganathan	28.11.13
	APPD	M.Chandrakumar	M. Chandrakumar	28.11.13
DEPT	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO
SSTP	φ/M/F	1:1	0.771	2-7-1125-21-10103
CODE	IS: 2102			REF TO OLD DWG NO
456				-
TITLE			CARD CODE	REV
CRP - LINKS CONNECTING SHAFT			U 01	03
			DRAWING NO : 3-7-1125-21-10114	

ALL DIMENSIONS ARE IN MM

REV 01	DATE 19.08.2015	ALTERED <i>S.P.N. Kumar / K.Nr</i>
		CHECKED <i>R.K. Singh</i>
		APPROVED <i>S. Loganathan</i>

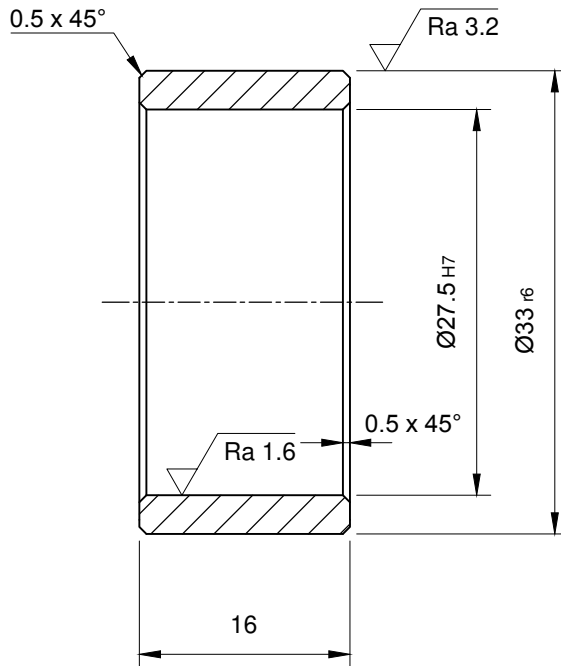
Ø27.5 H7 WAS Ø30 H7 REVISED AS PER USER'S REQUEST






REV 02	DATE 28.03.16	ALTERED <i>S.P.N. Kumar / Y.P.M</i>
		CHECKED <i>R.K. Singh</i>
		APPROVED <i>R.K. Singh</i>

Nominal size	Tolerance field	Deviation
Ø27.5	H7	+0.021 +0.000
Ø33	r6	+0.050 +0.034

MATL. SPEC. SS304 WAS CUSn8Zn4 IS 306 REVISED AS PER USER'S REQUEST.

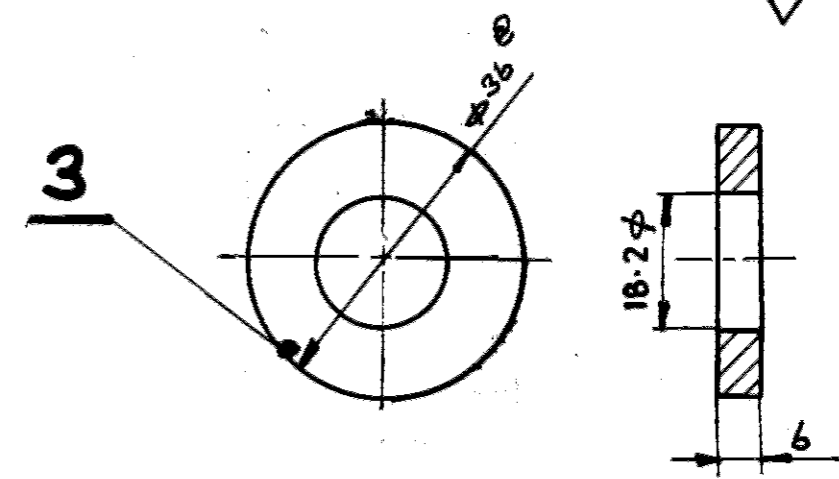
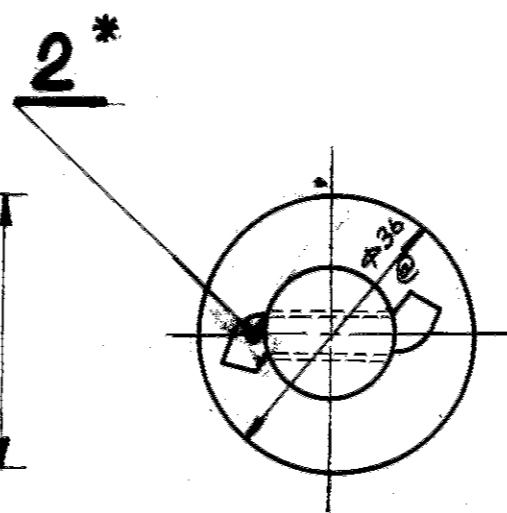
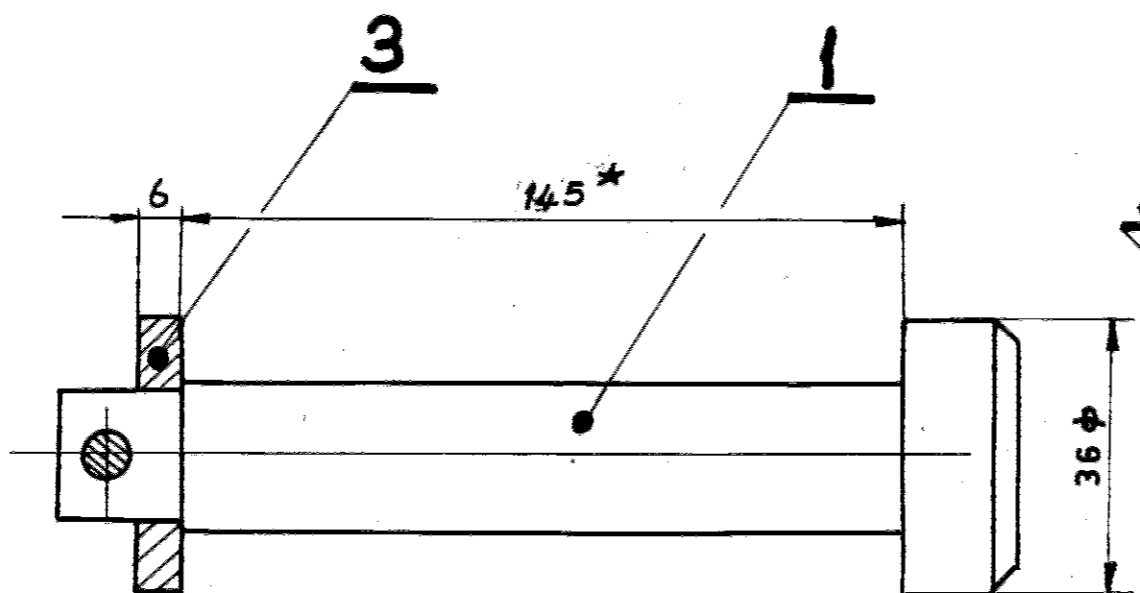


CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

				SS304			
ITEM NO	DESCRIPTION	DRAWING NO		MATL CODE		UNIT WT	
				MATL SPEC		QTY	
EQPT: POSITIONING ROLLER CONVEYOR , CRIMPING LINE AND CRIMPING PRESS WITH FACILITIES							
 Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME S.S.N.KUMAR / R.V	SIGNATURE <i>S.P.N.kumar/R.V</i>	DATE 28.11.13		
		CHD	G.LOGANATHAN	<i>S. Loganathan</i>	28.11.13		
		APPD	M.CHANDRAKUMAR	<i>M. Chandrakumar</i>	28.11.13		
DEPT SSTP	GRADE OF UNTOL. DIM		SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM	
CODE 456	 IS: 2102		2:1	0.032	2-7-1125-21-10103	4	
TITLE			CARD CODE		REF TO OLD DWG NO		
<b>CRP - BUSH FOR INNER / OUTER LINKS</b>			U 01		DRAWING NO :		REV
					<b>4-7-1125-21-10244</b>		02

05-229/C

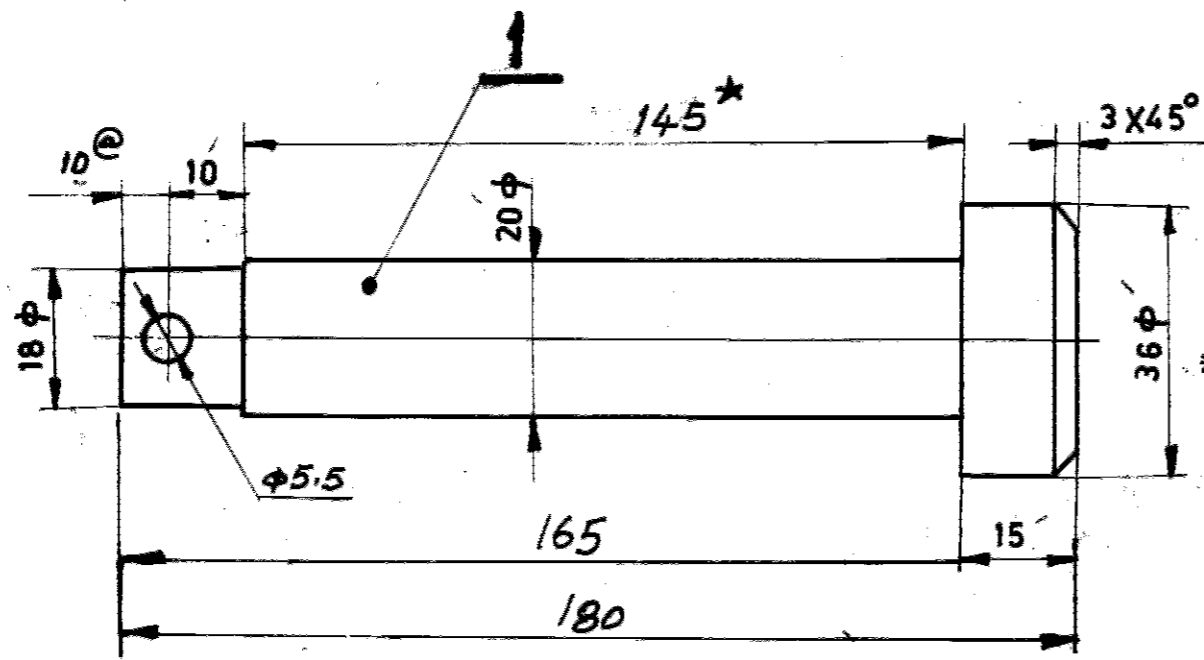
CAUTION THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LTD. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.



\* ITEM NO.2 TO BE BENT AT ASSY.

NOTE:- THIS DRAWING SUPERSEEDS

DRAWING NO: 4-7-1150-04-01758 R1



CHEMICAL COMPOSITION FOR AISI 310.

C	Mn	Si	S	P	Ni	Cr.
0,25 MAX.	2,0 MAX.	1,5 MAX.	0,030 MAX.	0,030 MAX.	19,0-22,0	24,0-26,0

3	ROUND φ36x102					0,04
2	ROD φ5x602					0,009
1	ROUND φ36x185.2					0,53
ITEM NO.	DESCRIPTION	DRAWING NO.	MATL CODE	UNIT WT	MATL SPEC	QTY

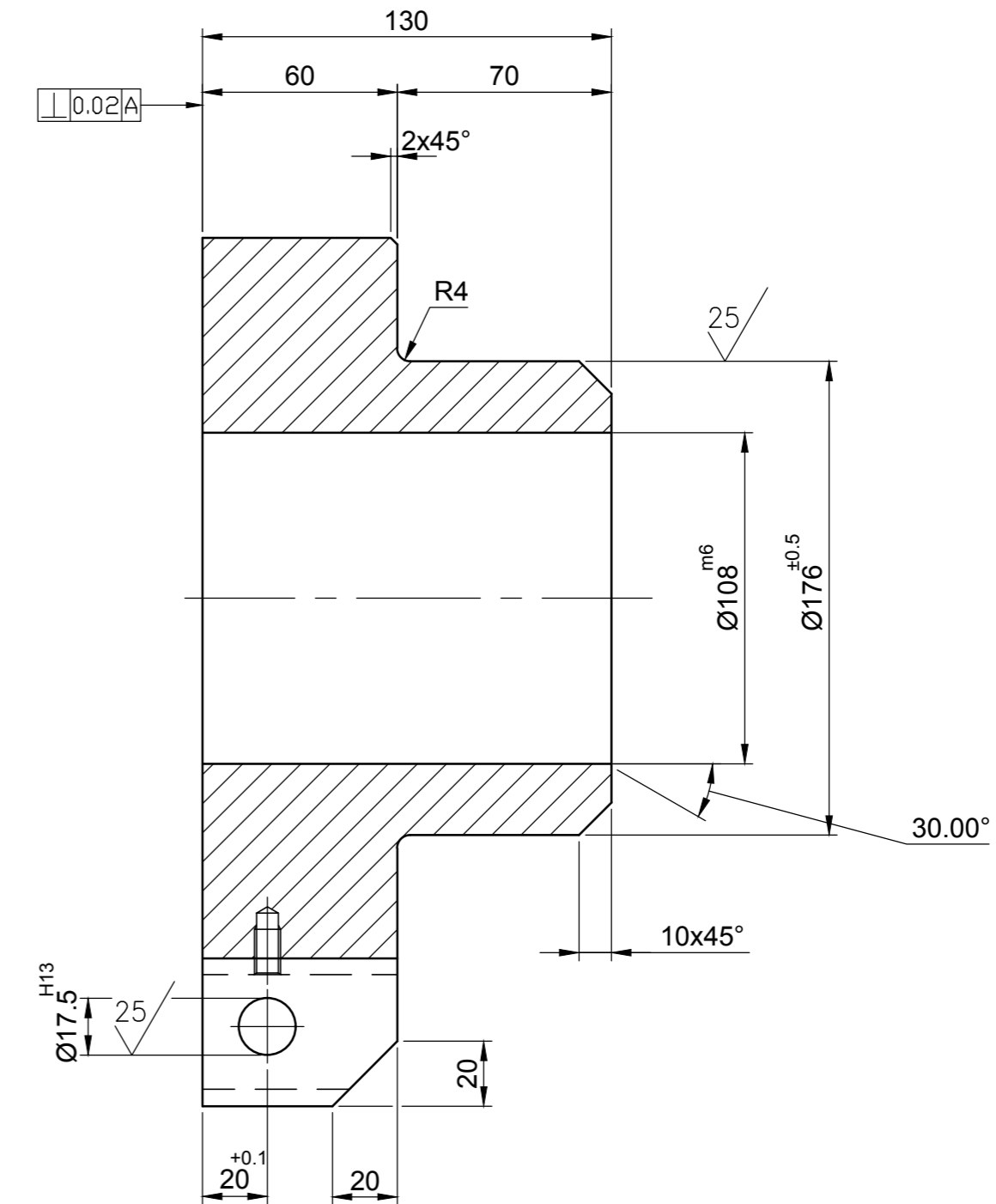
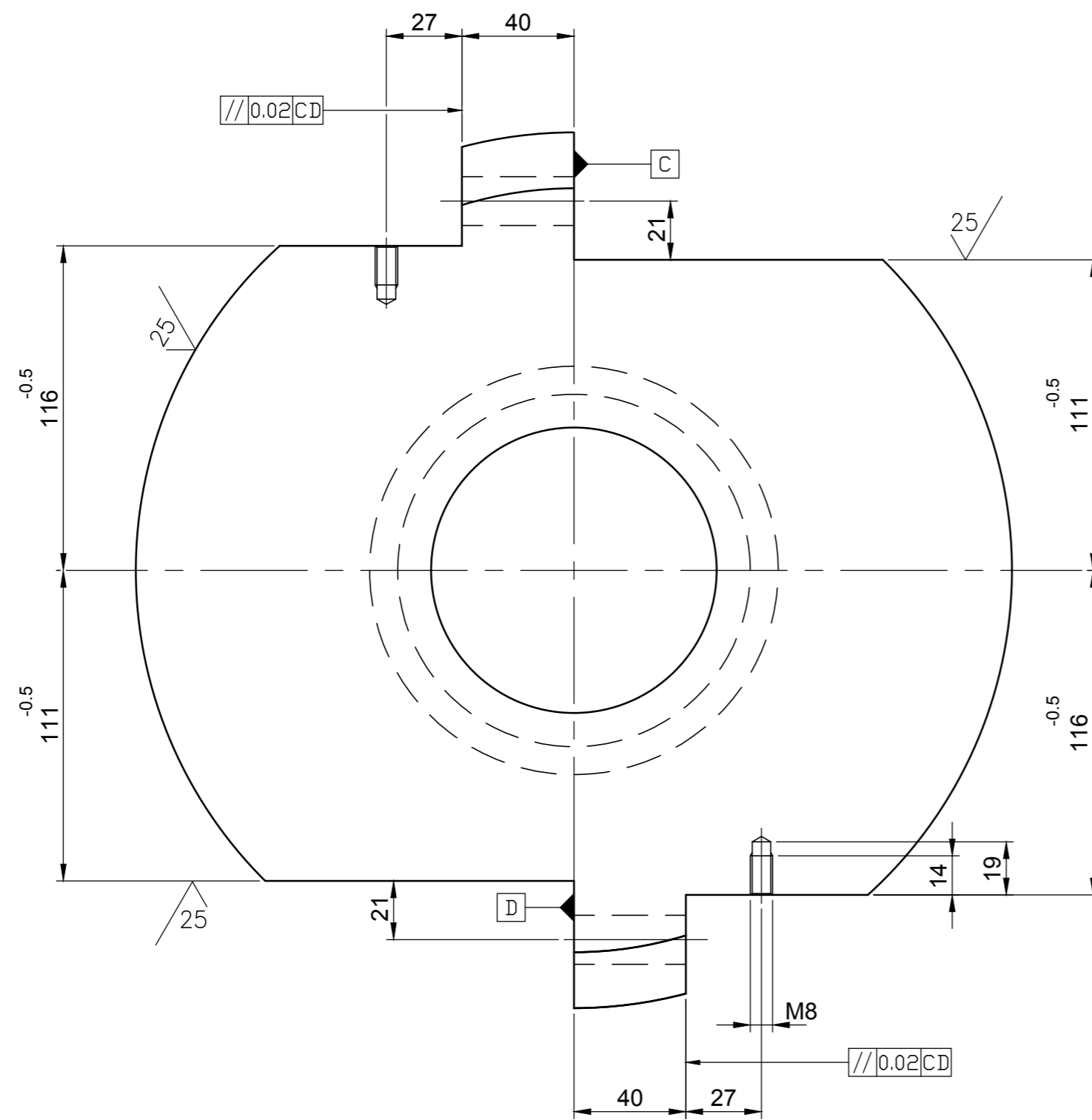
EQPT: WALKING BEAM FURNACE

	<b>Bharat Heavy Electricals Ltd.,</b>		DRN	NAME	SIGN	DATE	NO. OF
	SEAMLESS STEEL TUBE PLANT		CHD	J. J. J.		6-12-88	ITEMS
	TIRUCHIRAPALLI-620 014		APPD			9-04-87	

REV 03	DATE 20-09-89	ALTERED G. Rajendran	REV 02	DATE 24-08-89	ALTERED S. Narayan	REV 01	DATE 9-1-89	ALTERED H. Rajhans
* LENGTH OF ITEM NO. 2 WAS 40 AND WAS WROUGHT		CHECKED: J. J. J.	* DIMENSION 145 WAS 120 @		CHECKED S. Narayan	DIMENSIONS 120 & 10 WERE 96 & 6 RESPECTIVELY WASHER φ36 WAS SA 36		

DEPT	GRADE OF UNTO. DIM	SCALE	WEIGHT (kg)	REF TO ASSY / OLD DRG	ITEM NO.
	C/M/F	1:1	0,58	0-7-1150-04-00270 7621/641-3	4
TITLE	CARD CODE	DRAWING NO.	REV		
<b>PIN</b> (WALKING BEAM LIFTING MECHANISM)	U 01	3-7-1150-04-01410	03		

Ø108 <sup>m6</sup>	-0.006
	-0.028
Ø17.5 <sup>H13</sup>	-0.27
	0



\* Manufacturing Instructions  
SN 200

NOTE: 1. ALL SHARP CORNERS CHAMFERED TO 0.6x45°

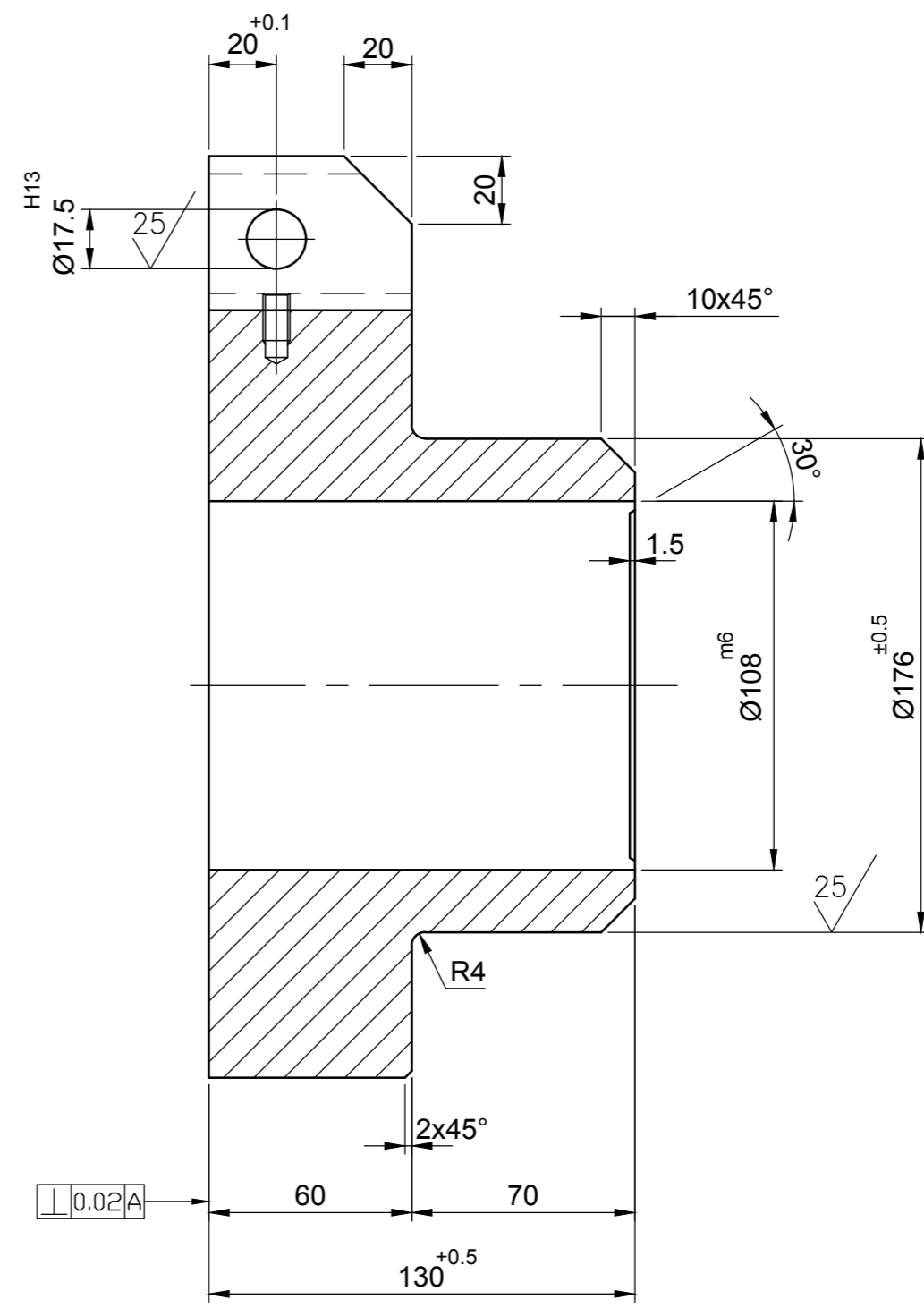
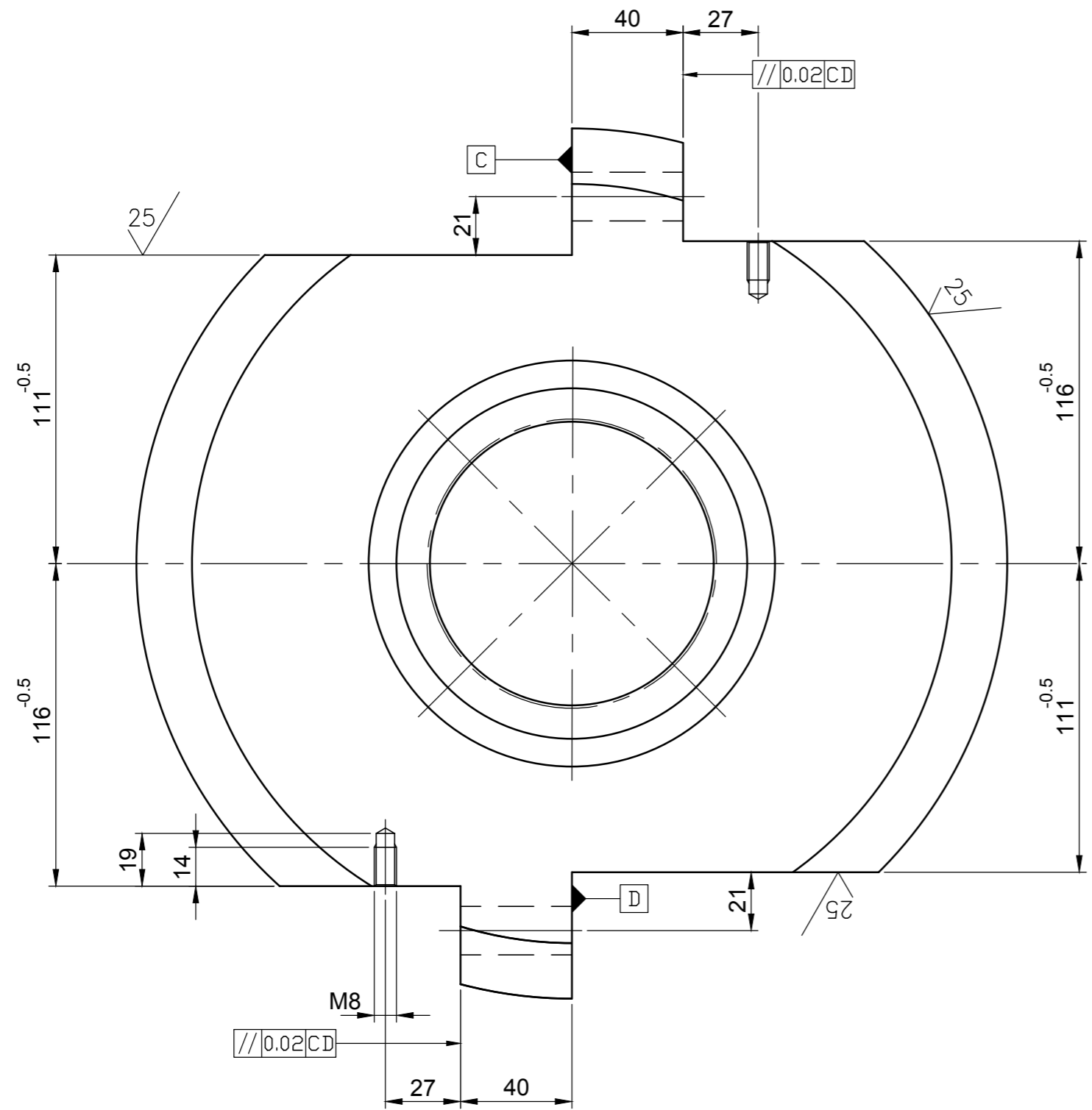
REV	DATE	ALTERED	BY
01	20.11.18	CHECKED	S.N. Kumar
		APPROVED	D. Abhigna

TOLERANCE Ø108 m6 WAS H6  
REVISED AS PER USER'S  
REQUEST

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.	ITEM NO	DESCRIPTION	DRAWING NO	42Cr4Mo2 IS: 5517	
				MATL CODE	UNIT WT
				MATL SPEC	QTY
EQPT: STRETCH REDUCING MILL					
Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014	DRN	NAME	SIGNATURE	DATE	
	CHD	SSN.KUMAR/KY	<i>S.N. Kumar/Ky</i>	06.01.17	
	APPD	M.CHANDRAKUMAR	<i>M. Chandrakumar</i>	06.01.17	
DEPT	SSSTP	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO
456		Ø/M/£ IS: 2102	1:2	34	REF TO OLD DWG NO
TITLE			CARD CODE	DRAWING NO :	REV
SRM - COUPLING HALF1 (NEW DESIGN)			U 01	2-7-1155-07-10146	01
IN PUT DRIVE ASSY-EVEN No STAND-SRM300					

3.2/25

Ø108 <sup>m6</sup>	-0.006
	-0.028
Ø17.5 <sup>H13</sup>	-0.27
	0



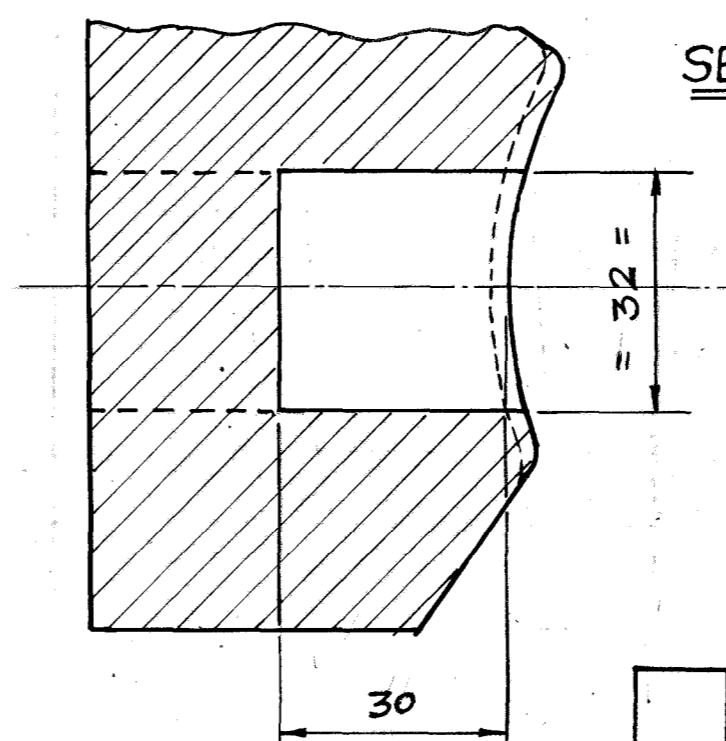
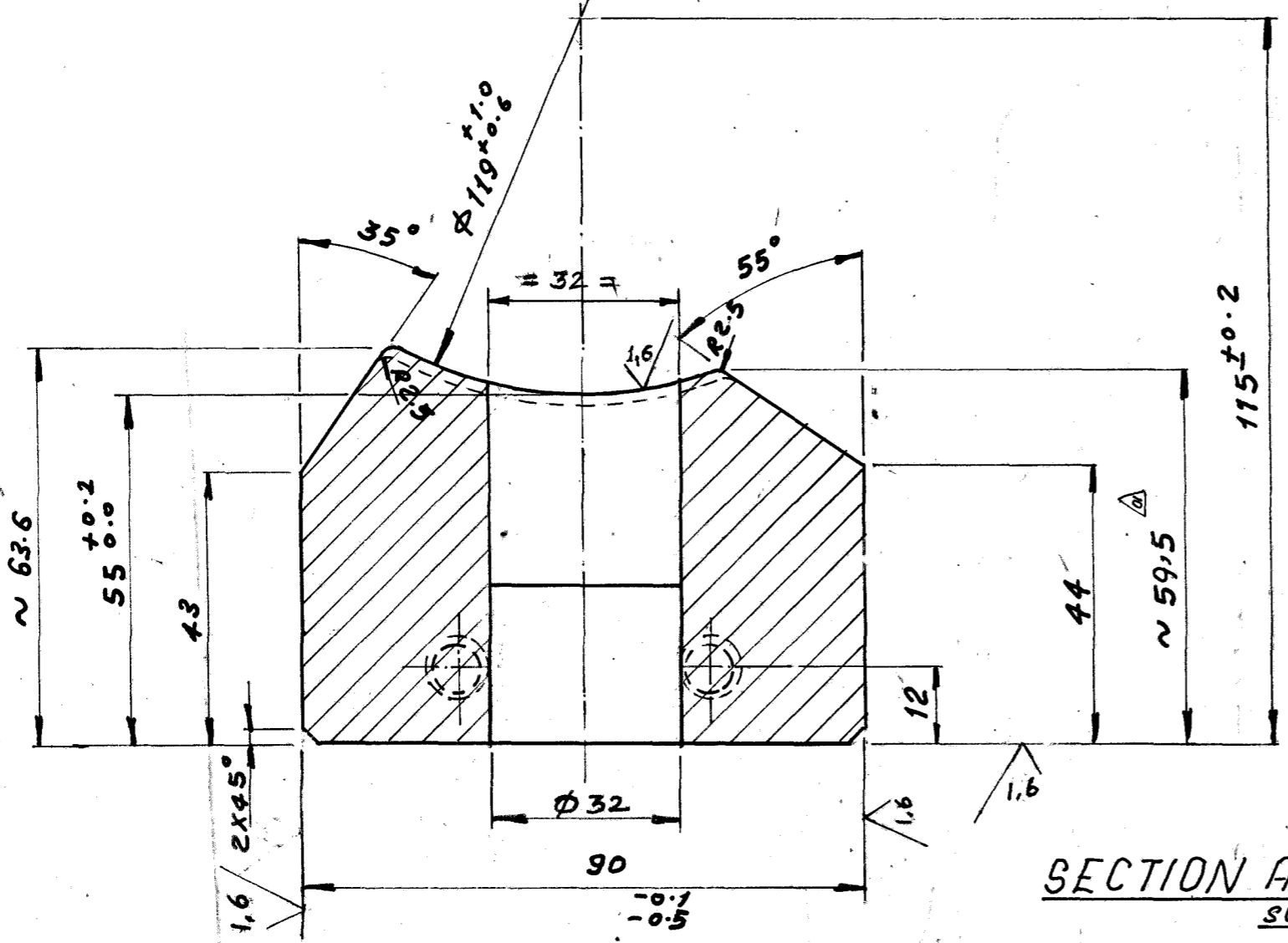
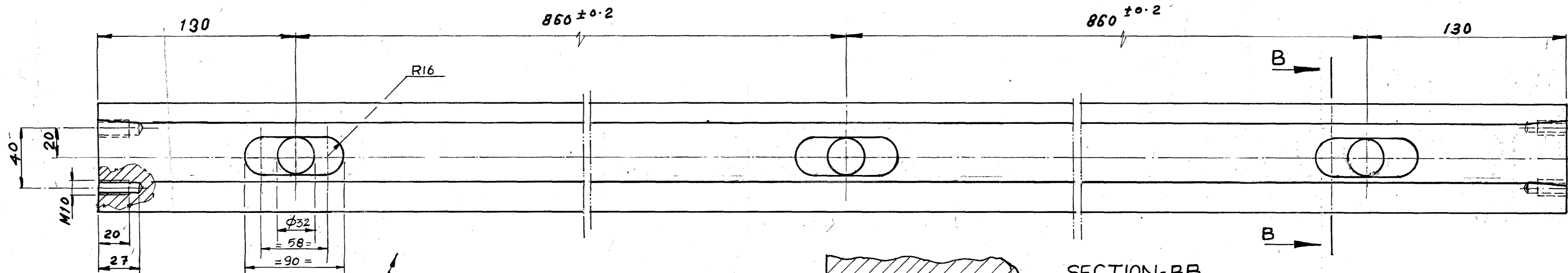
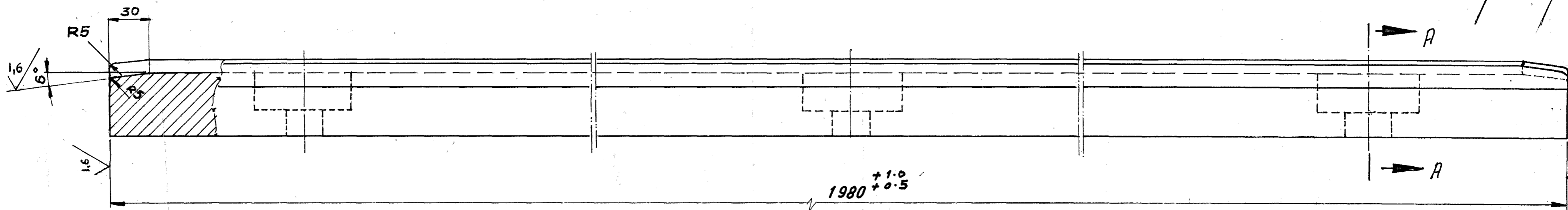
\* Manufacturing Instructions  
SN 200

NOTE: 1. All SHARP CORNERS CHAMFERED TO 0.6x45°

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.	ITEM NO	DESCRIPTION	DRAWING NO	MATL CODE	UNIT WT
				MATL SPEC	QTY
	EQPT: STRETCH REDUCING MILL				
	Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014				
REV 01	DATE 20.11.18	ALTERED / CHECKED / APPROVED	SSSTP	GRADE OF UNTOL. DIM	SCALE
		S.N. Kumar / B.N. / S.N. Kumar / D. Abhigna	456	φ/M/F IS: 2102	1:2
TOLERANCE Ø108 m6 WAS H6 REVISED AS PER USER'S REQUEST			WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
			34	REF TO OLD DWG NO	
TITLE: SRM - COUPLING HALF3 FOR INPUT DRIVE ASSY (NEW DESIGN) (SRM 300 - ODD No. STAND)				CARD CODE	REV
				U 01	01
				DRAWING NO :	
				2-7-1155-07-10145	

05-228 / C

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SECTION AT-AA  
SCALE 1:1

SECTION-BB

REV. DATE		3.11.95		ALTERED <i>[Signature]</i>		CHECKED <i>[Signature]</i>		APPD. <i>[Signature]</i>		ITEM NO.	DESCRIPTION	DRAWING NO.	MATL CODE	UNIT WT	
02		18-8-84		ALTERED <i>[Signature]</i>		CHECKED <i>[Signature]</i>		APPD. <i>[Signature]</i>		EQPT: PUSH BENCH	Bharat Heavy Electricals Ltd., SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI-620 014	DRN NAME <i>[Signature]</i>	DATE 29/1/77	NO. OF ITEMS	
REV. DATE		18-8-84		ALTERED <i>[Signature]</i>		CHECKED <i>[Signature]</i>		APPD. <i>[Signature]</i>		DEPT	GRADE OF UNTOOL. DIM C/M/F	SCALE 1:2.5 (1:1)	WEIGHT (kg) 76	REF TO ASSM / OLD DRG 0115005-60002	ITEM NO.
ZONE		DIMN - 59,5 WAS 56,5		TITLE (BOTTOM) GUIDE STRIP FOR [118 MANDREL & SHAFT GUIDE]		CARD CODE U 01		DRAWING NO. 2-7-1127-06-01548.02		REV. NO. 02					