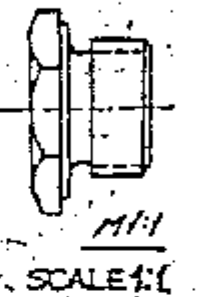
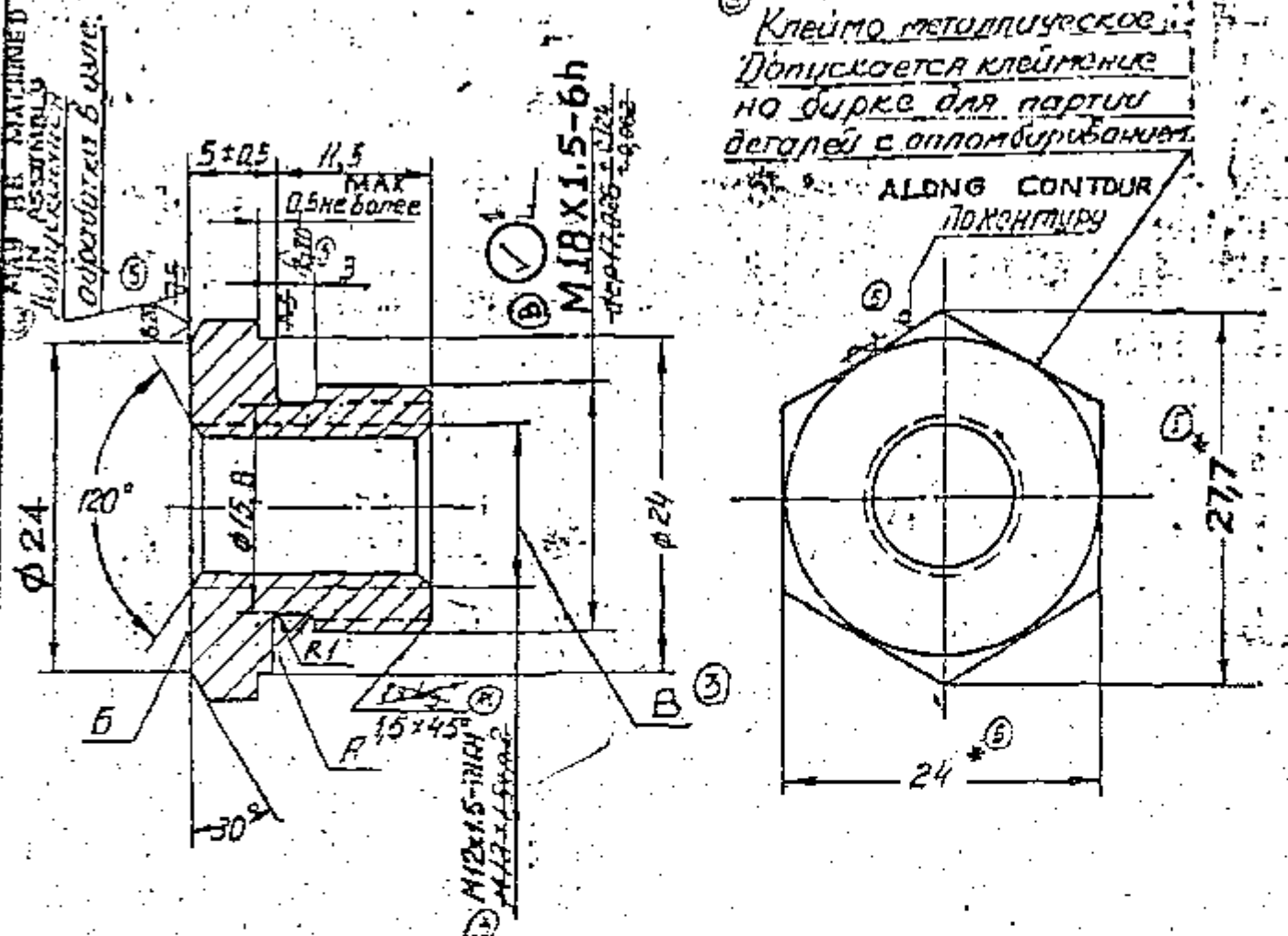


1-901-10E

TO BE PUNCHED, MARKING ON TAG FOR A BATCH OF COMPONENTS WITH PACKING AND SEALING IS PERMISSIBLE.

Клеймо металлическое  
Допускается клеймение  
но бирке для партии  
деталей с опломбированием



Inspection group V  
Tolerance on free dimensions are as per class 7 accuracy of OST 1010.  
Tech. Requirements for thread are as per standard 82021-00.  
End play on surface A relative to the axis of external thread should not exceed 0.1 mm on Ø 23. End play on surface B relative to the axis of internal thread should not exceed 0.15 mm on Ø 23. Thread dimensions are to be checked before coating, internal thread may not be coated. Sharp edges should be blunted, turning of face on Ø 26 C5 is permissible.  
Coating is Cd 9 Cr as per ~~U.S. 569-86~~ with hydrogen embrittlement removed.  
Alternate material-steel grades 40 and 50, Gost 1050-74

\*Dimensions for reference.

ALTERNATE MATERIAL: STEEL 080M40 (EN B)  
TO BS: 970 Pt. I-1983 OR 45 CB 70 15 :1570

COA(HV)5.07.50ZE Cb 306-01-36 \* CB-20-29-08-2  
COA(HV)5.07.504E Cb 306-02-36 CB-3329-01-11  
Cb 337-120 CB-3301-15-44  
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

D	9-6-09	3 <sup>rd</sup> ALTN. COMM. MINUTES POINT B. DT 27-2-09	EST. MASS 0,022 Kg	TO BE STAMPED ON MARKED WHERE INDICATED THUS # (111111)
C	9-9-08	USED ON NUMBER ADDED	ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE	
B	20-5-98	REPAIR SIZES ADDED	MATERIAL 24-5 GOST 8560-78 USED ON- CB 3301-15-30 *	
G		BK 82-207	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
A	25.12.08	AUTHY BK 65-141	TITLE: BUSH	
ISSUE	DATE	NATURE OF AMENDMENTS	U.S. CAT NUMBER DRAWING NUMBER	
E	5.3.14	Authy. Point No.11 of 7 <sup>th</sup> Alt. Comm. Meeting at EFA.	301-106-1	
ISSUE	DATE	NATURE OF AMENDMENTS	DATE 28-1-88	

EXPLANATORY NOTE:-

MATERIAL QUOTED :- HEXAGONAL BAR 24-5 GOST 8560-78.  
45- GOST 1051-73.

ALTERNATE MATERIAL QUOTED :- 40 AND 50 GOST 1050-74.

BRIGHT STEEL HEXAGONAL FROM GRADE 45 STEEL WITH WIDTH ACCROSS FLATS 24 mm; OF ACCURACY CLASS - 5 AS PER GOST 1051-73.

CHEMICAL COMPOSITION:-

GRADE OF STEEL	CONTENT OF ELEMENTS %							
	C	Si	Mn	Cr	P	S	Cu	Ni
40	0.37-0.45	0.17-0.37	0.50-0.80	0.25	0.035	0.040	0.25	0.25
45	0.42-0.50	0.17-0.37	0.50-0.80	0.25	0.035	0.040	0.25	0.25
50	0.47-0.55	0.17-0.37	0.50-0.80	0.25	0.035	0.040	0.25	0.25

MECHANICAL PROPERTIES:-

GRADE OF STEEL	TENSILE STRENGTH	YIELD POINT	ELONGATION	REDUCTION IN AREA	IMPACT STRENGTH
	kgf/cm <sup>2</sup>	kgf/mm <sup>2</sup>	%	%	kgf.m/cm <sup>2</sup>
40	58	34	19	45	6
45	61	36	16	40	5
50	64	38	14	40	4

REPAIR SIZE DIMENSIONS ARE ADDED BASED ON LETTER NO:

82847/OH/GAS/ED. DT: 27 MAR 95 AS FOLLOWS:

REPAIR SIZE DIMENSION ADDED WHERE INDICATED THUS: (B)

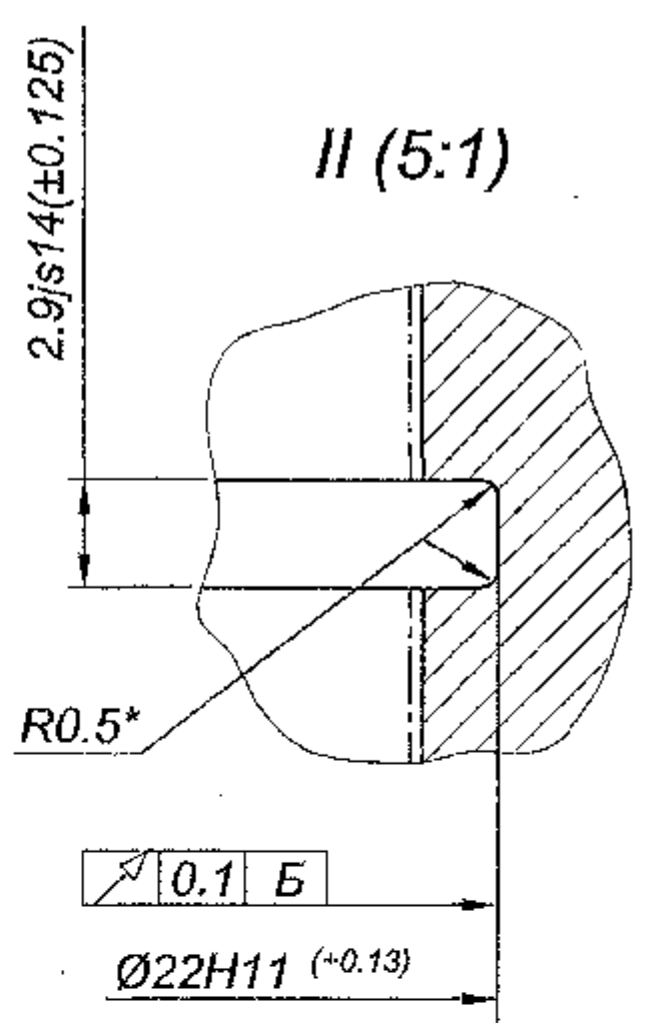
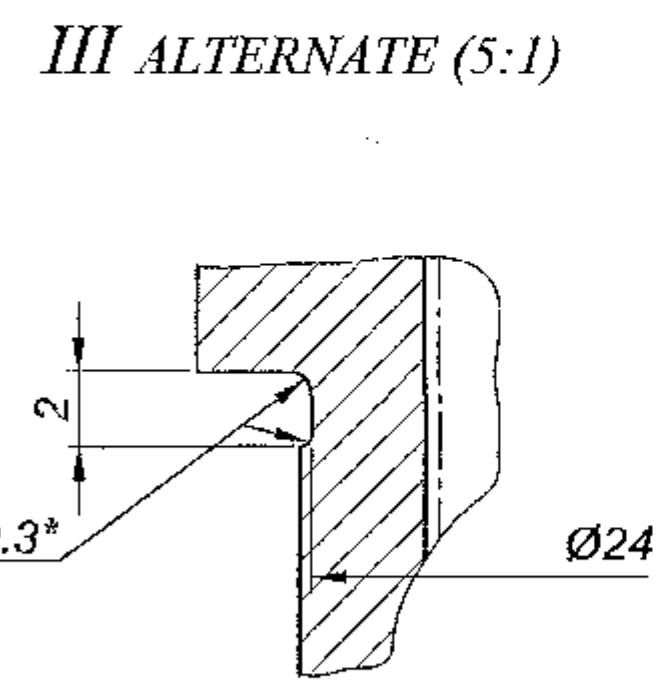
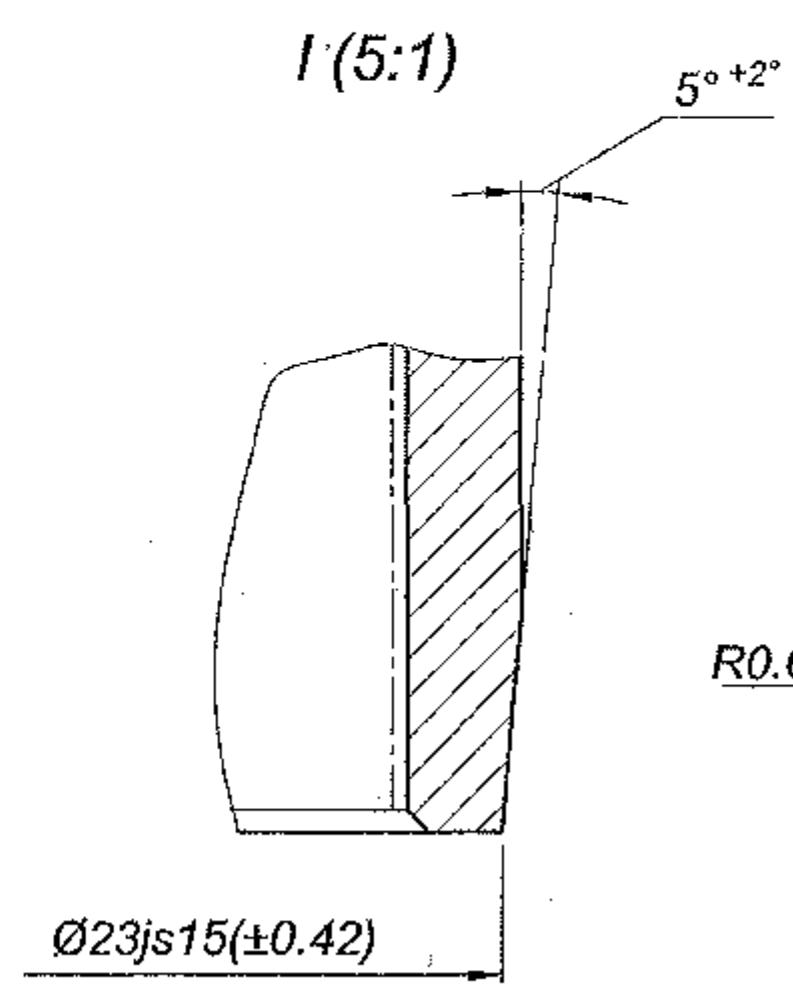
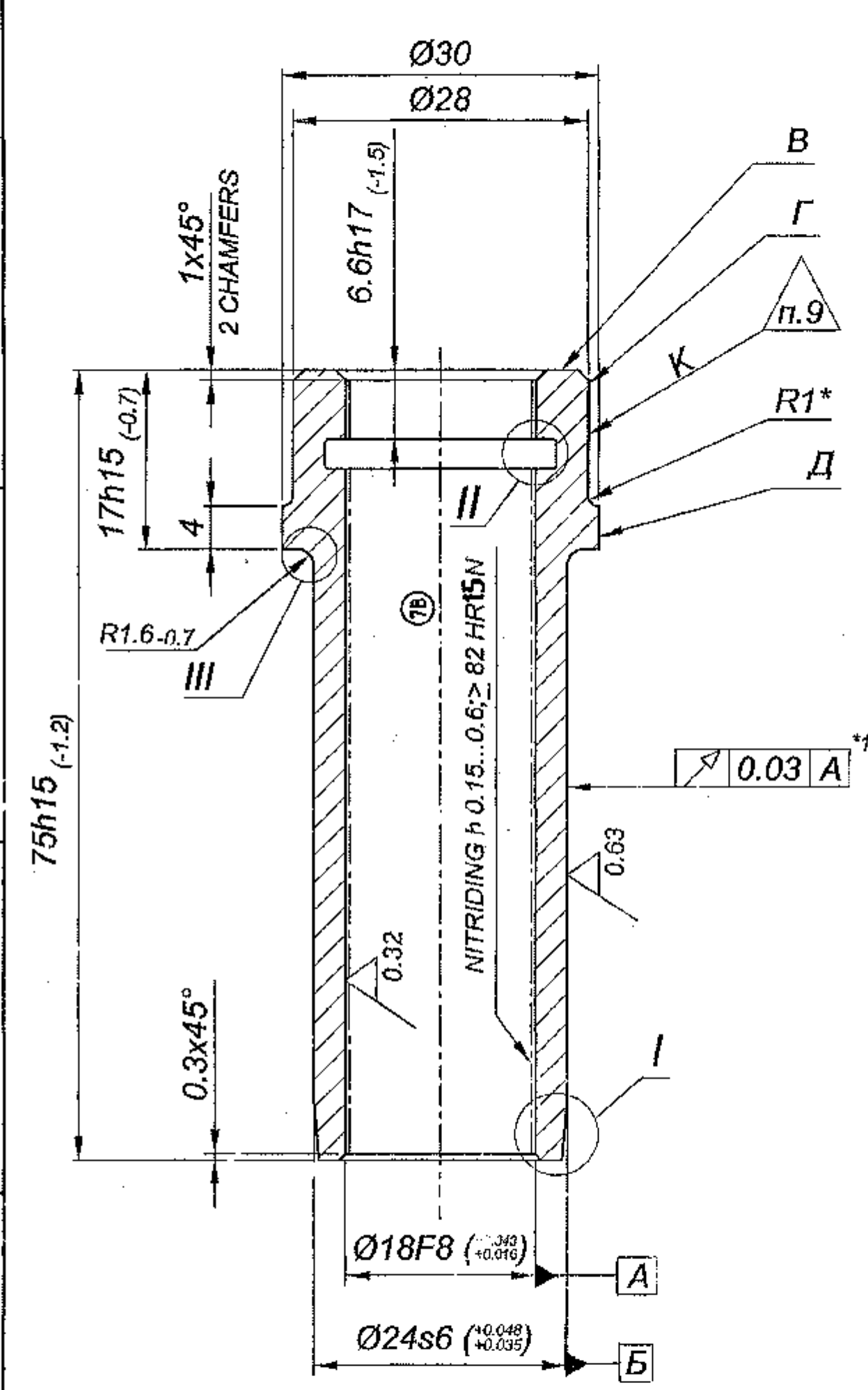
S/N	R	REMARKS
1	M20x1.5-6h	ALL OTHER CONDITIONS AS PER STD DRG. MARK REPAIR SIZE

COMMON TO V-92S2 & UTD-20 ENGINES

A-2

DRAWING NUMBER  
**306-17-12**

SHEET No. 1 OF 1



1. Inspection group IV as per technical requirements (TT-11).
2. Alternate material is Steel 38X2MIOA GOST 4543-71; Steel 38XA GOST 4543-71.
3. Hardness before Nitriding 26...35 HRC<sub>s</sub>.
4. Nitriding allowance is allowed.
5. Unspecified limit deviations of dimensions are  $H14, h14, \pm IT14$ .
6. Traces from toolmarks are allowed on surfaces B and Г.
7. Surface 'Д' is not to be machined.
8. Coating by Sulphate as per instruction ИЛ 228-76.
9. Stamp by electro-chemical method as per instruction PM-32 or by electro-etching method.
10. \*Dimensions to be ensured with tool.
11. \*1 Check the part before removing from the mandrel.
12. It is allowed to check the hardness of Nitrided surface in sample.

7A EQUIVALENT MATERIAL  
STEEL 817M40 (EN24) TO BS:9701  
40 Ni 8 Cr 4 Mo 3 S : 1570

PILOT SAMPLE SHOULD BE APPROVED BY A I T S P BEFORE BULK PRODUCTION.

EST. WT. (kg) 0.136	TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	

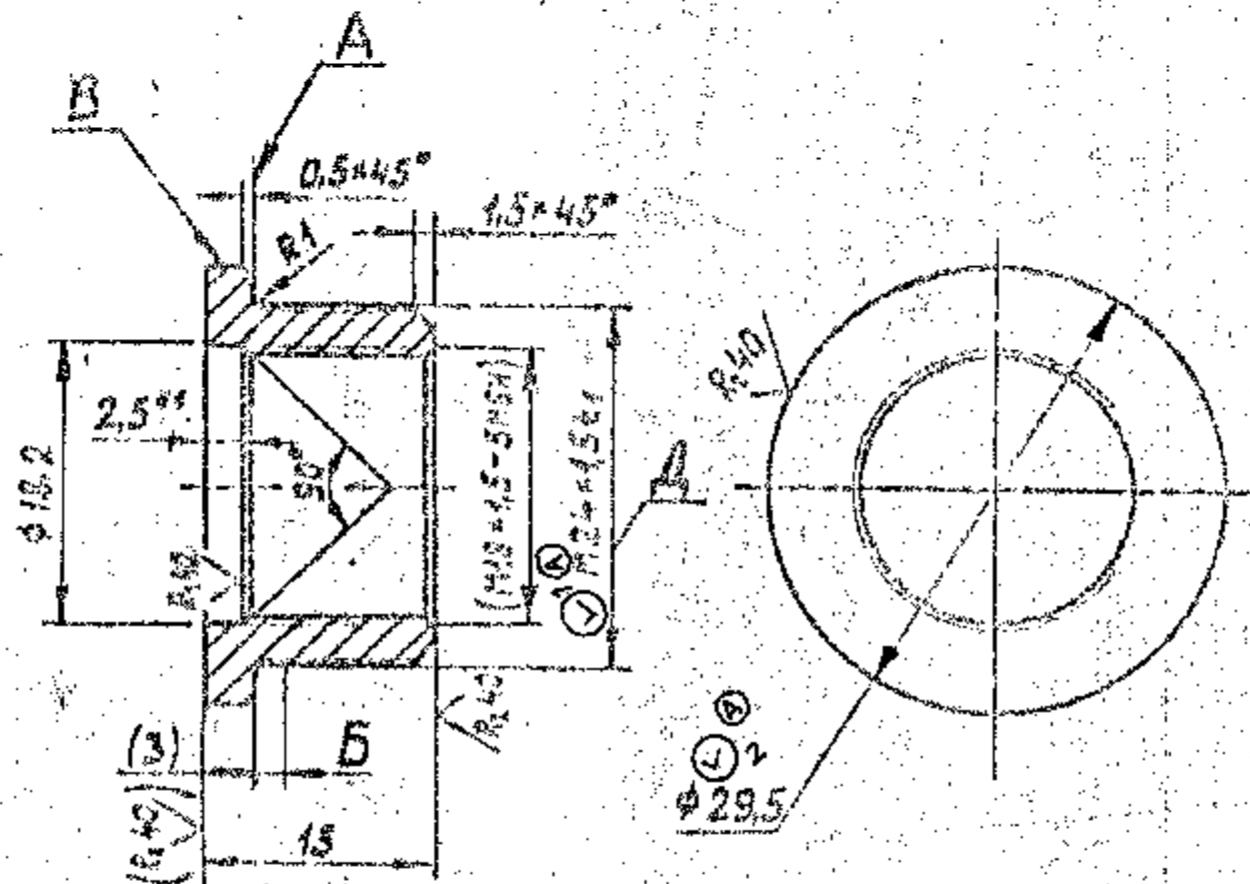
DRN	CHD	APFD	DATE	MATERIAL:- ROUND 30-412 GOST 7417-75 38XC-B GOST 1051-73	USED ON:- СБ 306-01-36 СБ 306-02-36
7B	11.04.14	8 <sup>th</sup> ALT. COMM. MTG. MIN POINT. No. 11 Dt. 20.2.14	7A	15-7-10	4 <sup>th</sup> ALT. COMM. Mtg. MINUTES POINT No. 10 Dt 26-10-09
SCALE:- 2 : 1				CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DIMENSIONS IN mm				TITLE: <b>VALVE GUIDE</b>	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69				D S CAT NUMBER	
ALL THREADS TO CONFORM TO				DRAWING NUMBER <b>306-17-12</b>	
ISSUE	DATE	NATURE OF AMENDMENTS			

DRG.INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 7

F-3  
93  
166  
SIZE A2

7-51-902

2.5 (M)



1. ALTERNATE MATERIAL IS BRONZE OF THE FOLLOWING GRADES:  
 Bp AX 9-4, Bp AX-MU10-3-105, GOST 18175-78 AND BRASS  
 AC 59-1, GOST 15527-70.
2. REQUIREMENTS PLACED UPON CASTING ARE AS PER TTM 55-78.
3. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS:  
 FOR HOLES - AS PER A<sub>7</sub>  
 SHAFTS - AS PER B<sub>7</sub>  
 OTHERS - AS PER CM<sub>7</sub>.
4. IT IS PERMITTED TO PERFORM EXTERNAL DIAMETER OF HEAD B WITH TOLERANCE B<sub>0</sub> (-0.04) AND SURFACE ROUGHNESS R<sub>a</sub>.
5. RUN OUT OF SURFACE A IN RESPECT TO AXIS OF ANGLE DIAMETER OF EXTERNAL THREAD AS PER DIAMETER OF 26mm SHOULD NOT EXCEED 0.05mm.
6. CHATTER MARKS ON THE FIRST THREAD FROM THE DEAD ARE PERMITTED.
7. NO THREAD OR FLATTENED THREAD IS ALLOWED ON SECTION B EQUAL TO 2mm MAX AND MAJOR DIAMETER OF THREAD ON THIS SECTION MAY BE LOOSENED UP TO 0.3mm.
8. CARRY OUT FINAL MACHINING OF DIMENSIONS GIVEN IN BRACKETS IN ASSEMBLY.
9. MAKE THREAD A AS PER STANDARD 82020-13, ISSUE 4.
10. APPLY STAMP OF FINAL ACCEPTANCE ON THE TAG (PART 540-551) FOR BATCH OF PARTS AND SEAL.

(A) II. REPAIR SIZES DIMENSIONS ARE ADDED WHERE INDICATED. THUS (V)

\*\*\* ROD Bp A \* 9-4 GOST 1520-78  
 (B) CQA(HV)5.06.605E \* CB 306-01-20  
 CQA(HV)5.06.609E \* CB 306-02-20

S.No	R1	R2	REMARKS
(V) 1	2M 27x1.5 ± 0.124 Ø26-0.26 ± 0.062 (MEAN)	2M 30x1.5 ± 0.124 Ø29-0.26 ± 0.062 (MEAN)	1. MARK REPAIR SIZE CATEGORY R1, R2
(V) 2	Ø32.5 <sup>-0.84</sup>	Ø35.5 <sup>-0.84</sup>	2. ALL OTHER SIZES SURFACE FINISH MATERIAL AND TECHNICAL REQUIREMENTS ARE SAME

BASED ON LETTER No. B2847/0H/QAD/ED DT 13-1-95

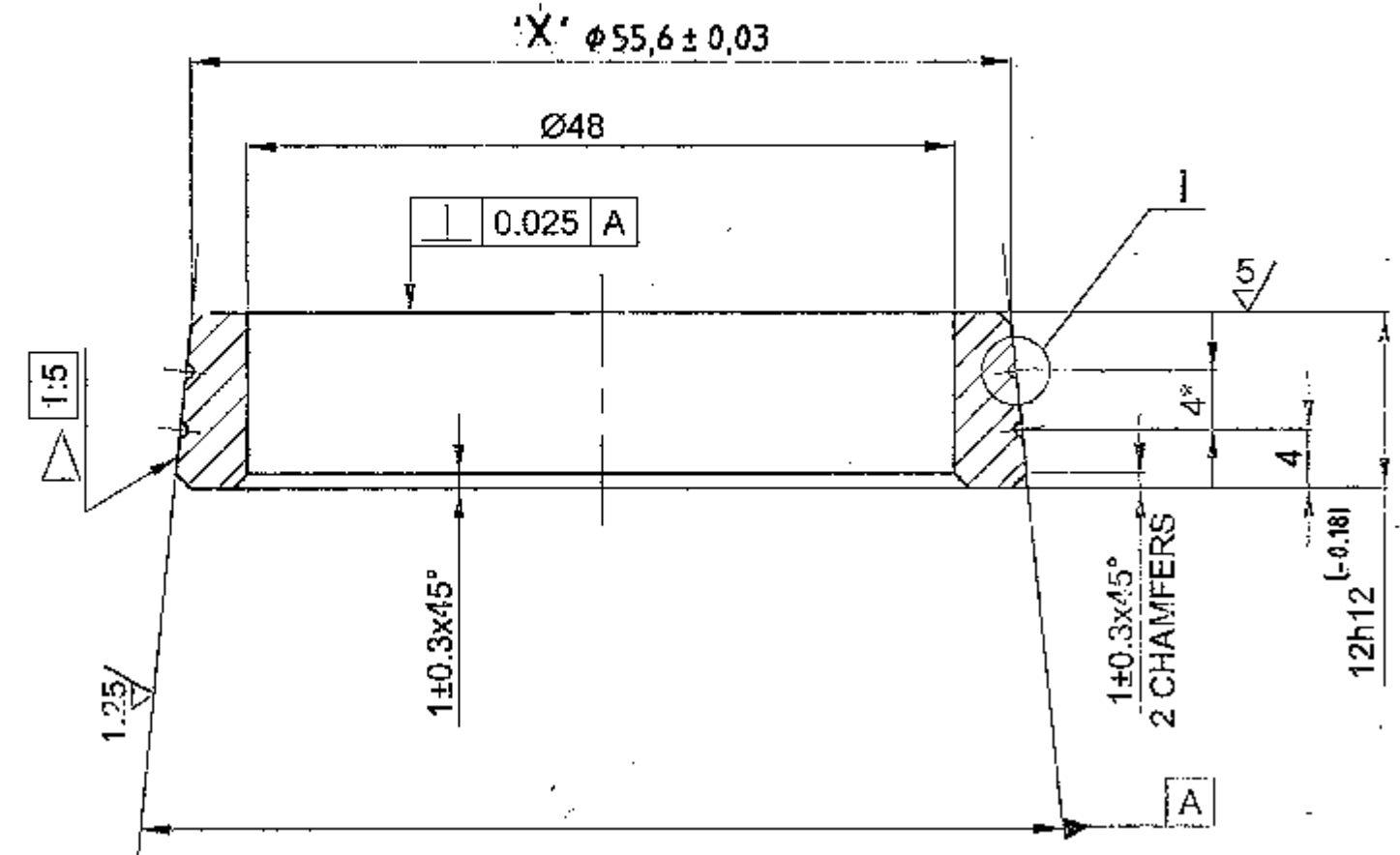
PRINT STAMP SHOULD BE APPROVED BY A MAN RECORDS AND ENGINEERING

B	15.715	Pt. 11 of 7th Alt. Com. Meeting Dt. 11.4.12	EST. MASS 0.030 Kg	TO BE STAMPED BY DESIGNER [ ]
A	205.86	REPAIR SIZES ADDED	ALL SHARP EDGES AND CORNERS TO BE ROUNDED OFF	[ ]
DATE		NATURE OF ASSIGNMENT	OTHERWISE STATED INDICATED TO HAVE A DESIGN A HIGH EQUIVALENT TENSILE AND YIELDING	[ ]
SCALE	2:1		MATERIAL	USED DT. 15.06.07-5 15.20.06.01-05 ***
DIMENSIONS BY			* * * SEE ABOVE	***
TOLERANCE ON HOLE PRESS OTHERWISE STATED			CONTROL UNIT OF INSPECTION HEAVY VEHICLE AVAIL	[ ]
DATE	15.20.07	PER THREADS CATEGORY	10	TITLE <b>STARTING VALVE BUSH</b>
				DRAWING NUMBER 306-19-7

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 13  
 DRG. REPLACES 306-22-1, ISSUE - A VIDE NOTIFICATION NO: 89-361  
 COMMON TO V-92SZ & UTD-20

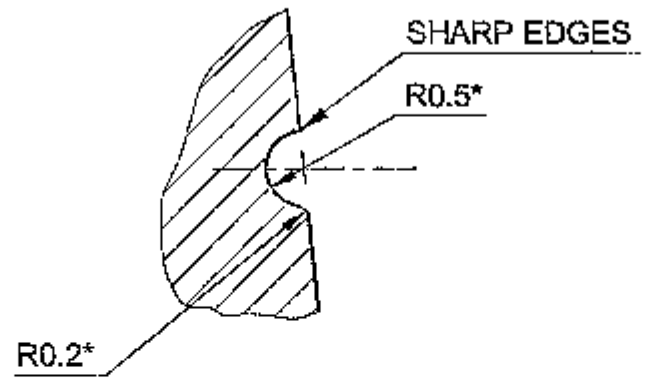
DRAWING NUMBER  
**306-22-1**

10 / (✓)



1. Inspection group IV as per TT-11.
2. Hardness 269.....321 HB.
3. Alternative material is steel 38XC GOST 4543-71.
4. Coating : Chemically oxidized,oiled.
5. Unspecified limit deviation of dimensions  $H14, \pm \frac{IT14}{2}$ .
6. Deviation from the taper surfaces 'A' to be checked by "bluing" with special gauge, the imprint should be uniform and cover the length of the cone minimum 80 % of the area.
7. \*Dimension to be ensured by tool.

1 (10:1)



CATEGORY		X
306-22-1	R <sub>1</sub>	DIA 55,7 ± 0,03
306-22-1	R <sub>2</sub>	DIA 55,8 ± 0,03

NOTE: R<sub>2</sub> SIZE IS "APPLICABLE ONLY" FOR V46-6 & UTD-20 ENGINES.

\*\*  
 (13B) CQA(HV)5.06.605E  
 CQA(HV)5.06.609E

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. 0.065Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE. EQUIVALENT CHAMFERS ARE PERMISSIBLE.

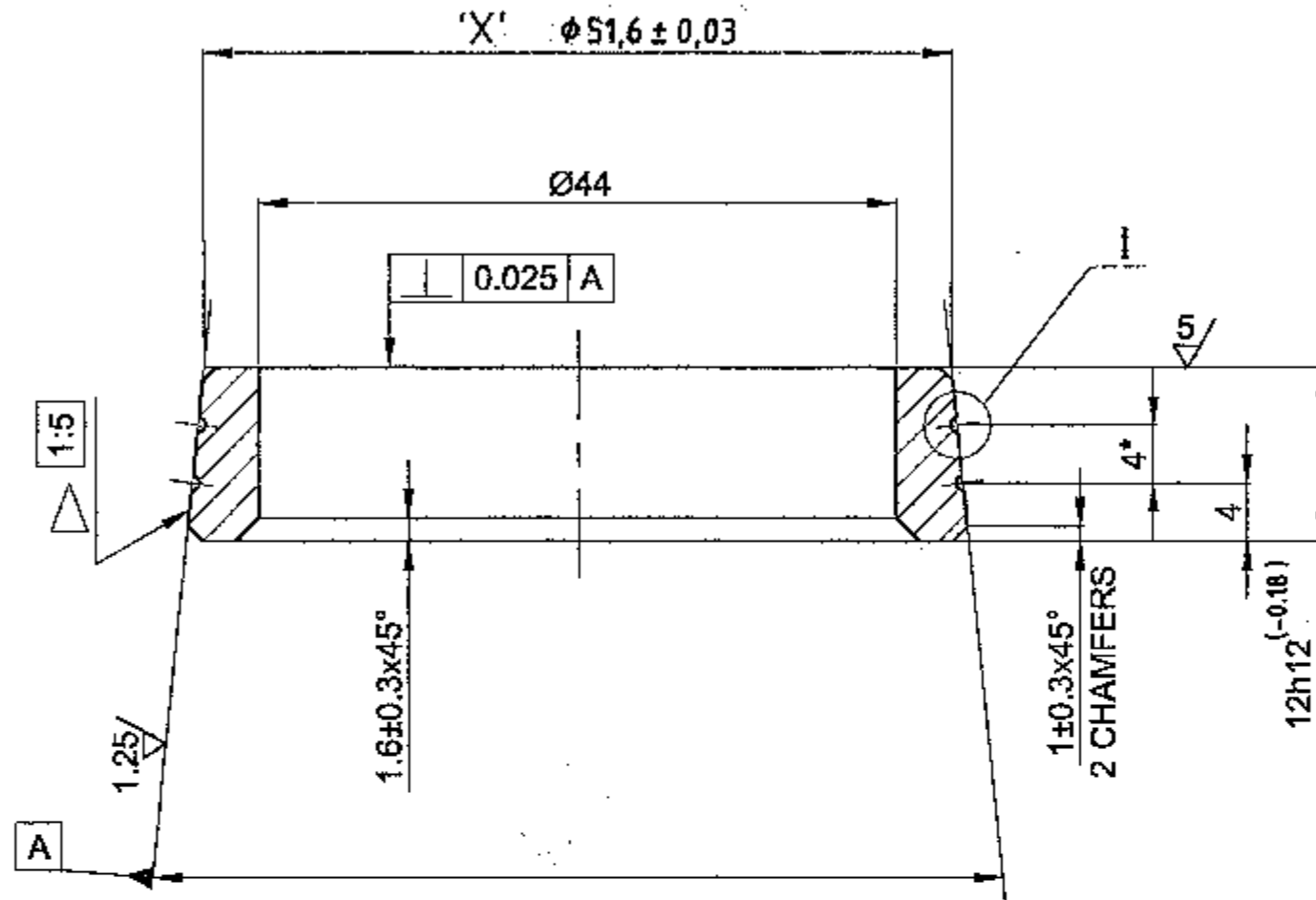
DRN	CHD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69	MATERIAL :- PIPE 60x8GOST 8732-78 B-40X GOST 8731-87	USED ON :- Sb 20-06-01-5 Sb 20-06-02-5, SB 306-01-20, Sb 306-02-20, Sb 306-01-36, ** Sb 306-02-36
			31.12.07	2 : 1			CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
							TITLE :-	
							<b>VALVE SEAT</b>	
							D S CAT NUMBER	DRAWING NUMBER
								<b>306-22-1</b>
ISSUE	DATE	NATURE OF AMENDMENTS						

F-153  
 12  
 74  
 SIZE A3

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 14  
 DRG. REPLACES 306-23-1 ISSUE - A, VIDE NOTIFICATION NO: 89-361  
 COMMON TO V-9252 & UTD-20

DRAWING NUMBER  
**306-23-1**

10 ✓ (✓)



1. Inspection group IV as per TT-11.
2. Hardness 269.....321 HB.
3. Alternative material is steel 38XC GOST 4543-71.
4. Coating: Chemically oxidized, oiled.
5. Unspecified limit deviation of dimensions H14, ±  $\frac{IT14}{2}$ .
6. Deviation from the taper surfaces 'A' to be checked by "bluing" with special gauge, the imprint should be uniform on cone length and cover minimum 80 % of the area.
7. \*Dimension to be ensured by tool.

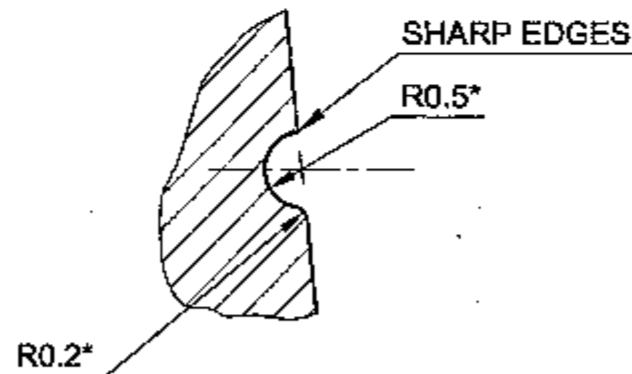
14A

CATEGORY	X
306-23-1 R <sub>1</sub>	DIA 51,7 ± 0,03
306-23-1 R <sub>2</sub>	DIA 51,8 ± 0,03

NOTE: R<sub>2</sub> SIZE IS "APPLICABLE ONLY" FOR V46-6 & UTD-20 ENGINES.

\*\*

14B CQA(HV)5.06.605E  
 CQA(HV)5.06.609E

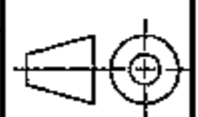


PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. **0.055 Kg** TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

ISSUE	DATE	NATURE OF AMENDMENTS
14B	15.7.15	Pt. 11, 7 <sup>th</sup> Alt. Comm. Meeting Dt. 11.4.12
14A	24-03-10	i) Lt. No. EFA/P/RDS/CQA(HV)/23. Dt: 20-3-10 ii) Authy: SPECN. FOR REPAIR SIZE DRGS PART-III

DRN	<i>B. J. ...</i>	MATERIAL :- PIPE	USED ON :- Sb 20-06-01-5
CHD	<i>R. P. ...</i>	56x8 GOST 8734-75	** Sb 20-06-02-5
APPD	<i>...</i>	B-40X GOST 8733-87	Sb 306-01-20, Sb 306-02-20
DATE	31-12-07		Sb 306-01-36, Sb 306-02-36
SCALE:-	2:1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) <b>AVADI</b>	
DIMENSIONS IN mm		TITLE :-  <b>VALVE SEAT</b>	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69			
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER <b>306-23-1</b>

F-153  
 13  
 74

SIZE A3

DRAWING NUMBER  
306-25

76

unless otherwise stated.

**EXPLANATORY NOTE:**

Material quoted: Bar ПС 59-1 GOST 2060-73

Alternate material quoted: Brass П63 GOST 15527-70

ПС 59-1 and П63 : grade of Brass.

Chemical composition

chemical composition

(For Gde. ПС 59-1 GOST 15527-70)

(For Gde. П63 GOST 15527-70)

Basic elements

Basic elements

Copper = 57.0 - 60.0

Copper = 62.0 - 65.0

Lead = 0.8 - 1.5

Zinc = Remainder.

Zinc = Remainder.

Admixtures

Admixtures

Iron = 0.5 ; Tin = 0.30 ;

Lead = 0.07 ; Phosphorus = 0.01 ;

Antimony = 0.01 ;

Iron = 0.20 ;

Bismuth = 0.003 ;

Antimony = 0.005 ; Bismuth = 0.002 .

Phosphorus = 0.02

Mechanical properties - GOST 2060-73.

Mechanical properties - GOST 2060-73.

ultimate tensile strength  $kgf/mm^2 = 40$  (min)

ultimate tensile strength  $kgf/mm^2 = 38$  (min)

% Relative elongation = 15 (min)

% Relative elongation = 15 (min)

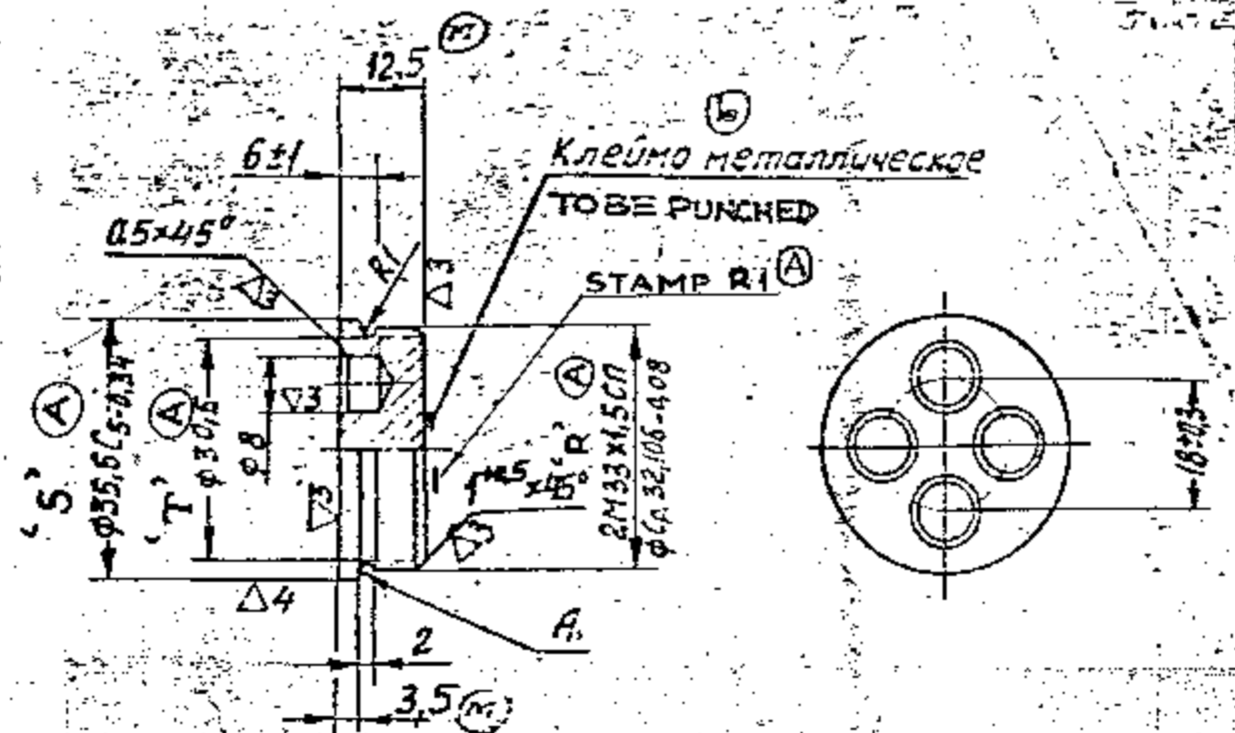
Hardness BHN = 100 (min)

Hardness BHN = 100 (min)

**REPAIR SIZE DIMENSIONS**

CATEGORY	DESIGNATION SIZE	SIZE ACCORDING TO WORKING DRG	REPAIR SIZE DIMENSION
306-25 R1	(DIAMETER)	2M 33 X 1.5 C П	2M 36 X 1.5 C П
	DIAMETRAL PITCH		35.106 - 0.08
	S	DIA 35.5 C5 - 0.34	DIA 38.5 C5 - 0.34
	T	DIA 30.5	DIA 33.5

- Maximum permissible run-out of surface 'A' with respect to thread axis at 38mm diameter should not exceed 0.08mm.
- All other details as per working drg.
- Stamp R<sub>1</sub> where marked thus -



- Dimensions without tolerances should be as per accuracy class 7, GOST 1010.
- Technical requirements for thread should be in accordance with standard 82021-00
- Run-out of surface A relative to thread on  $\varnothing 35$  should not exceed 0.08 mm.
- Sharp edges should be blunted.
- Alternate material: Brass П63, Gost 15527 - 70

\*\* CQA(HV)5.06.605E  
CQA(HV)5.06.609E  
CQA(HV)5.06.605E  
CQA(HV)5.06.609E  
CQA(HV)5.07.502E  
CQA(HV)5.07.504E

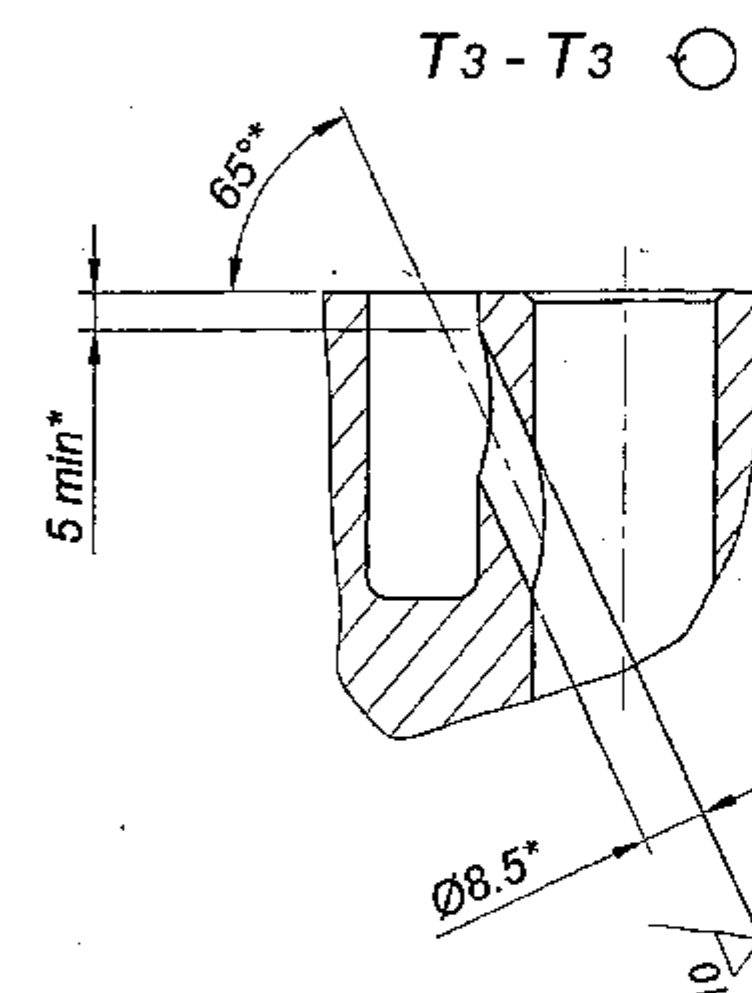
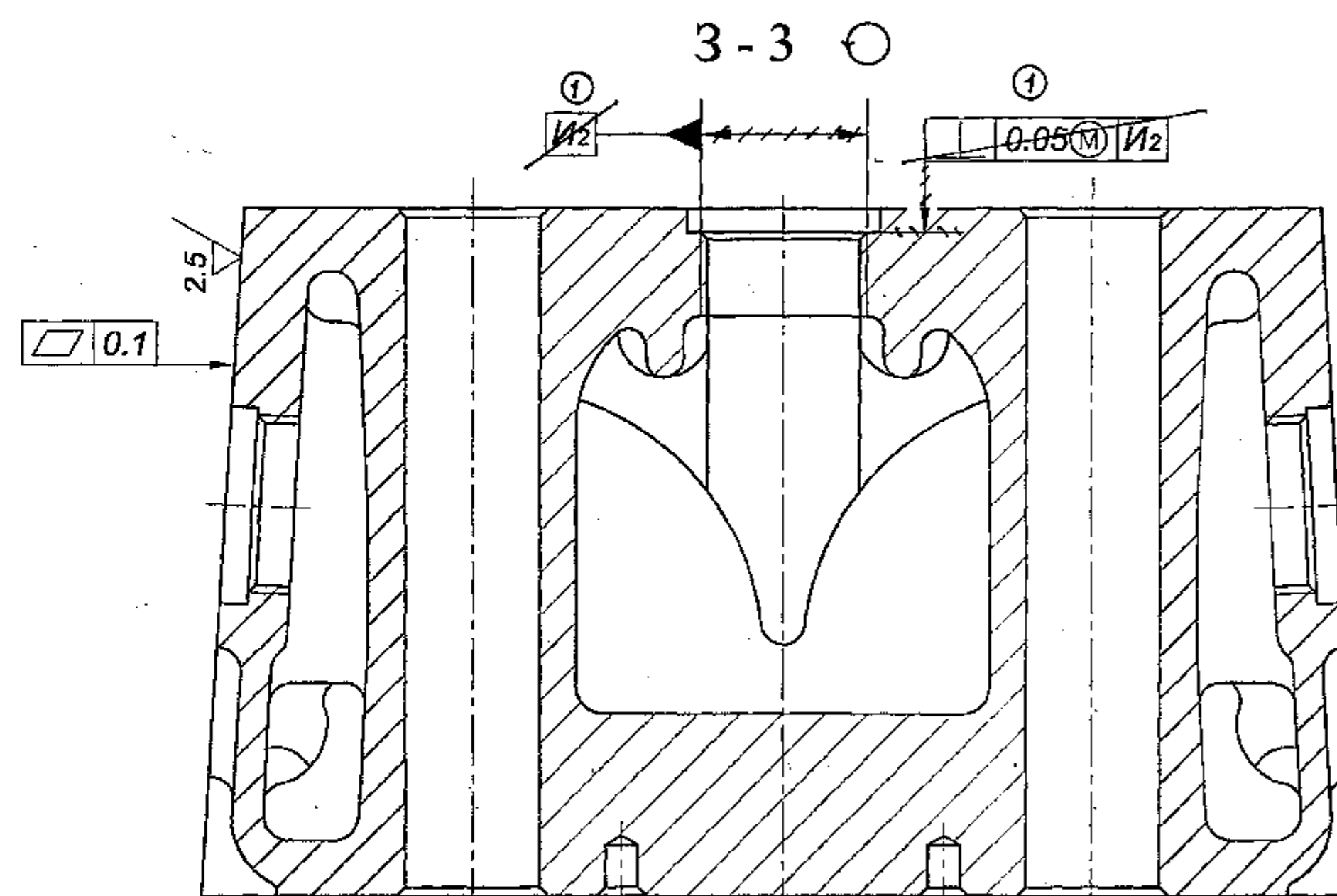
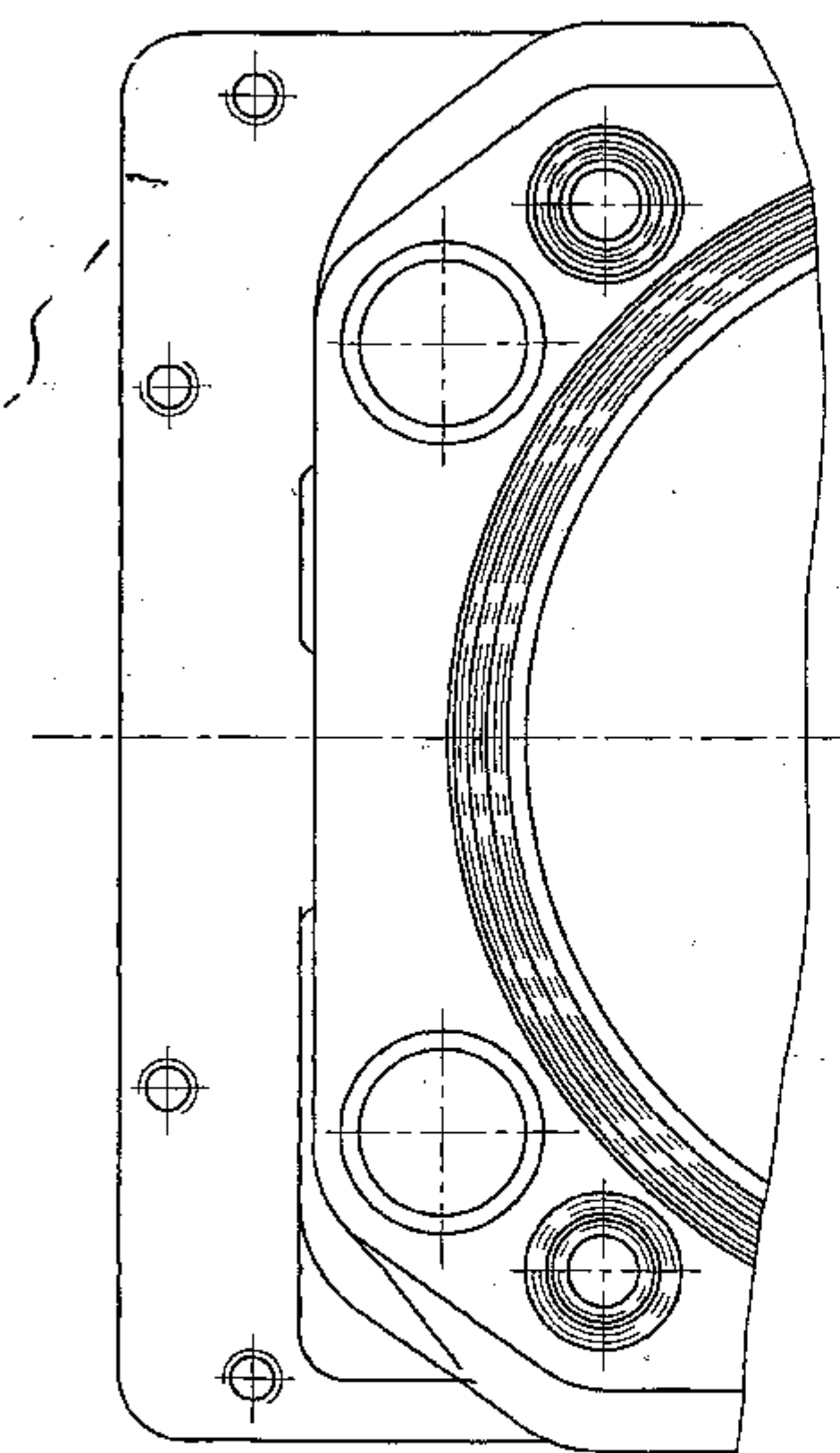
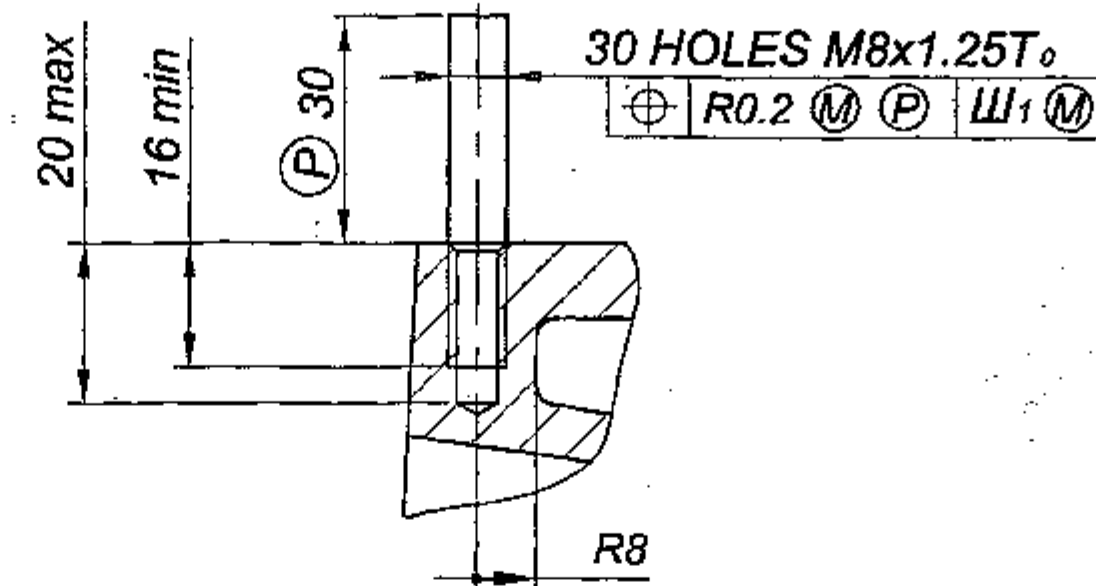
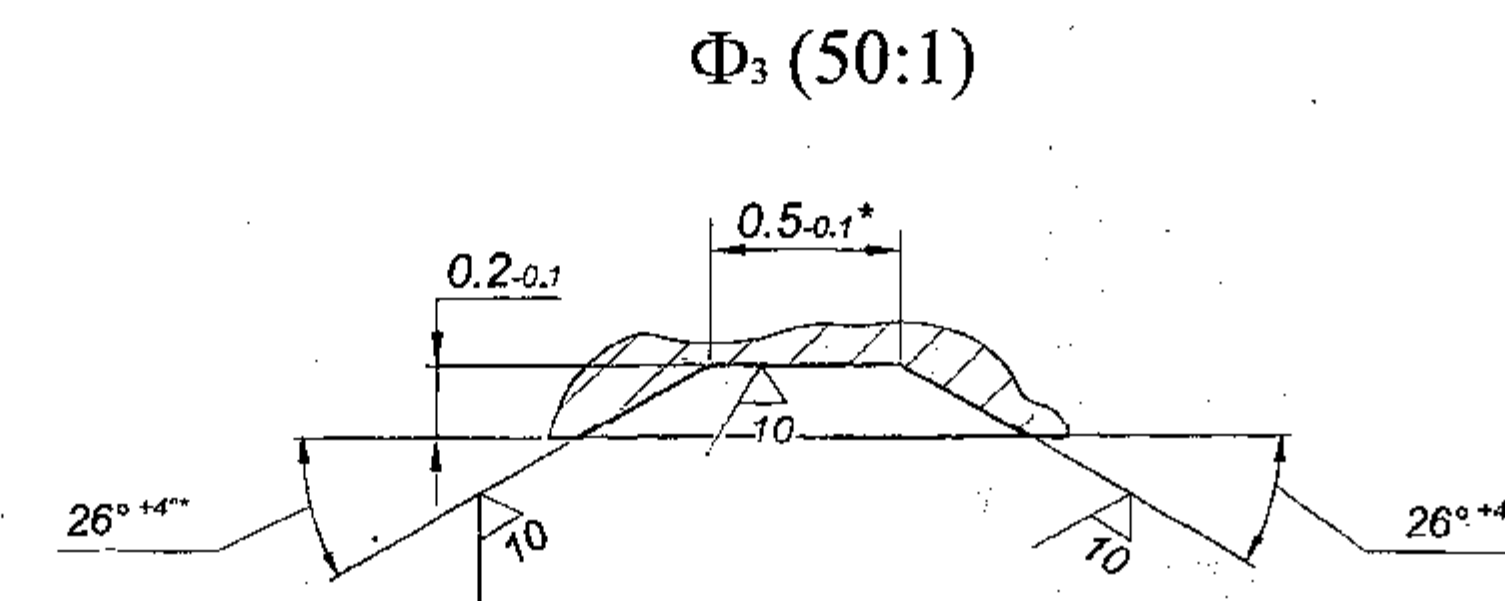
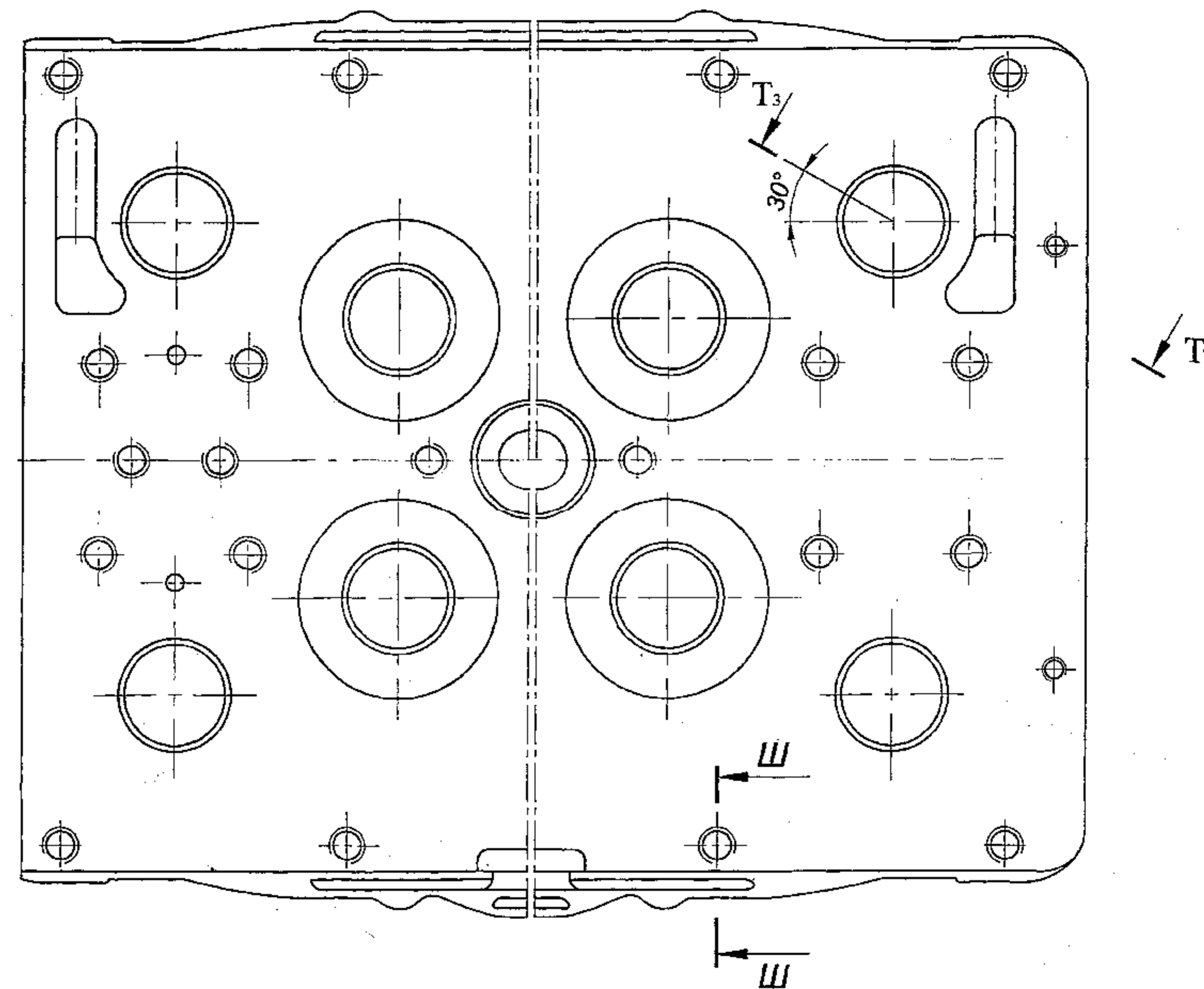
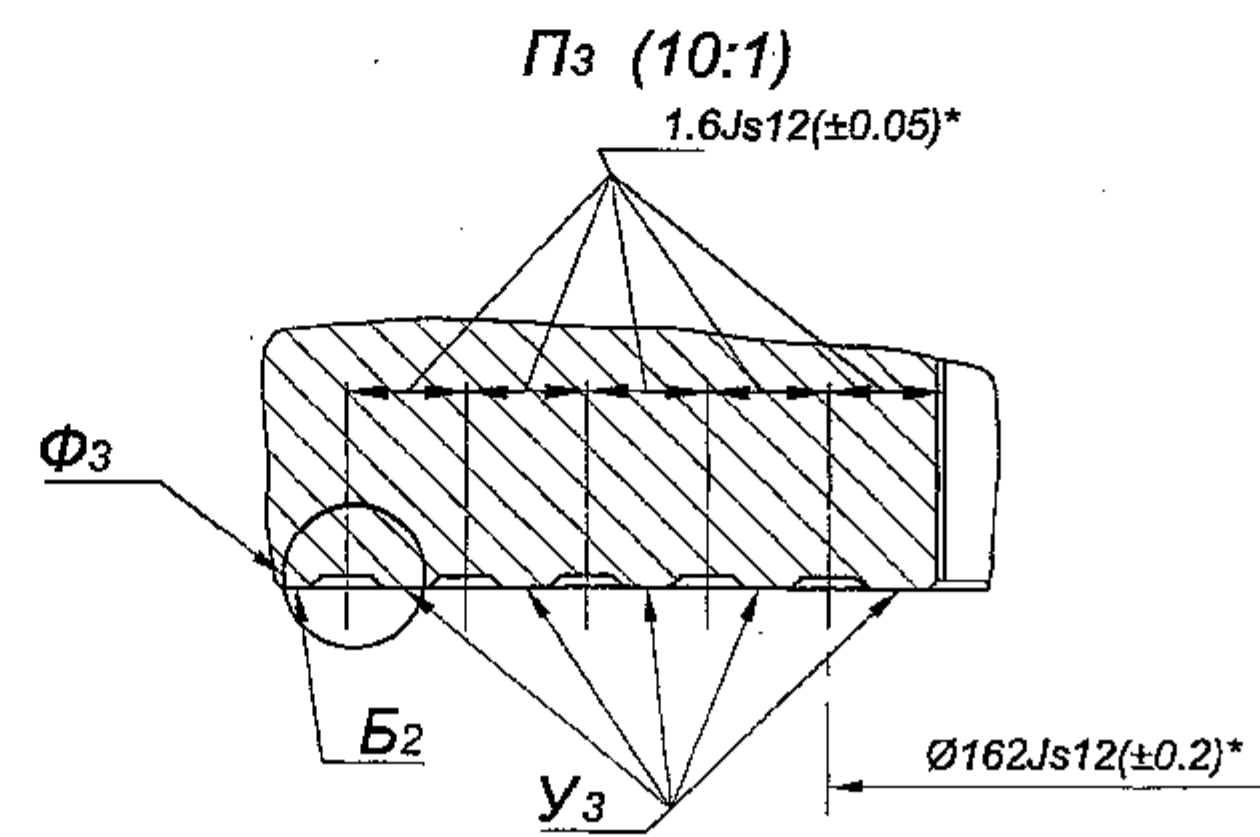
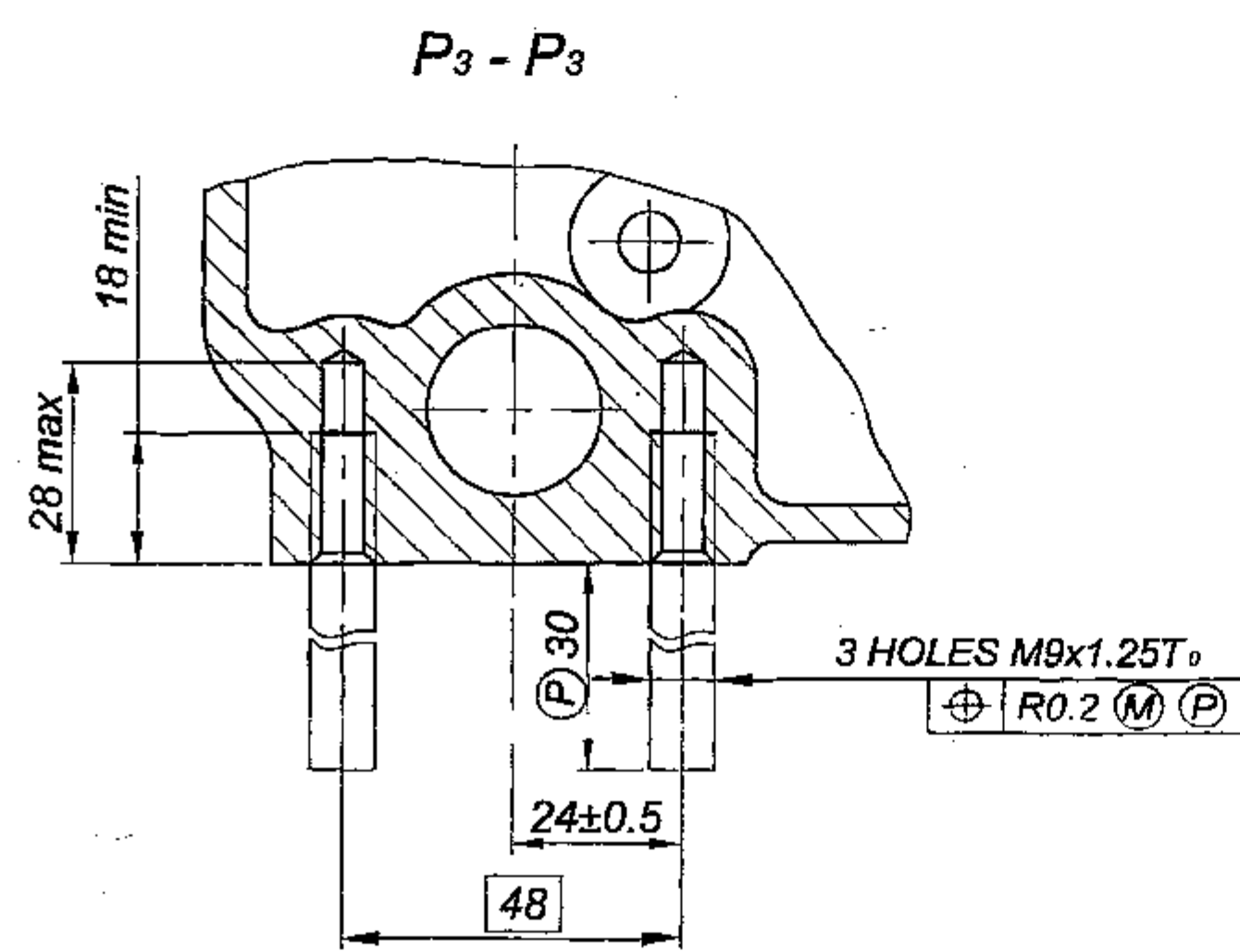
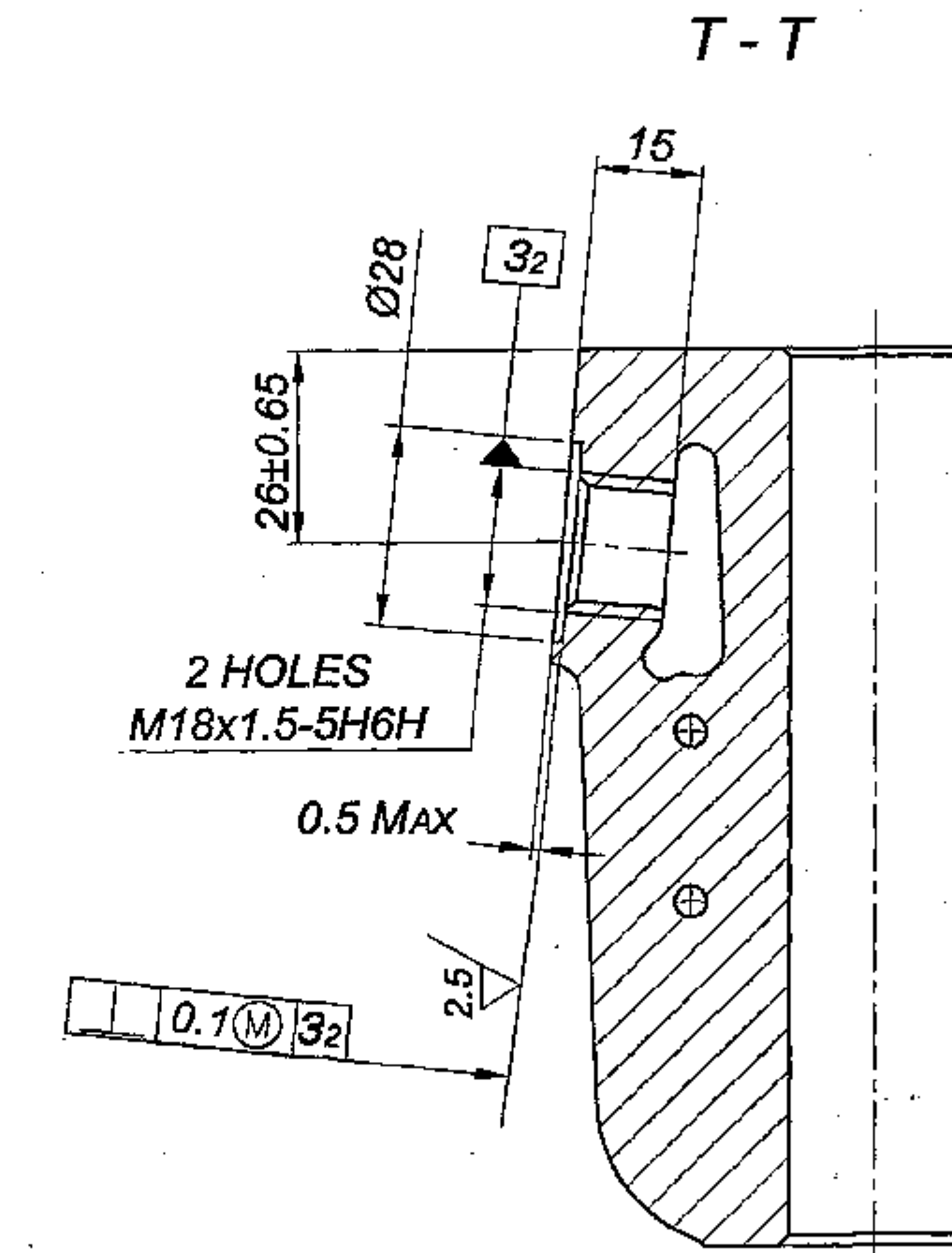
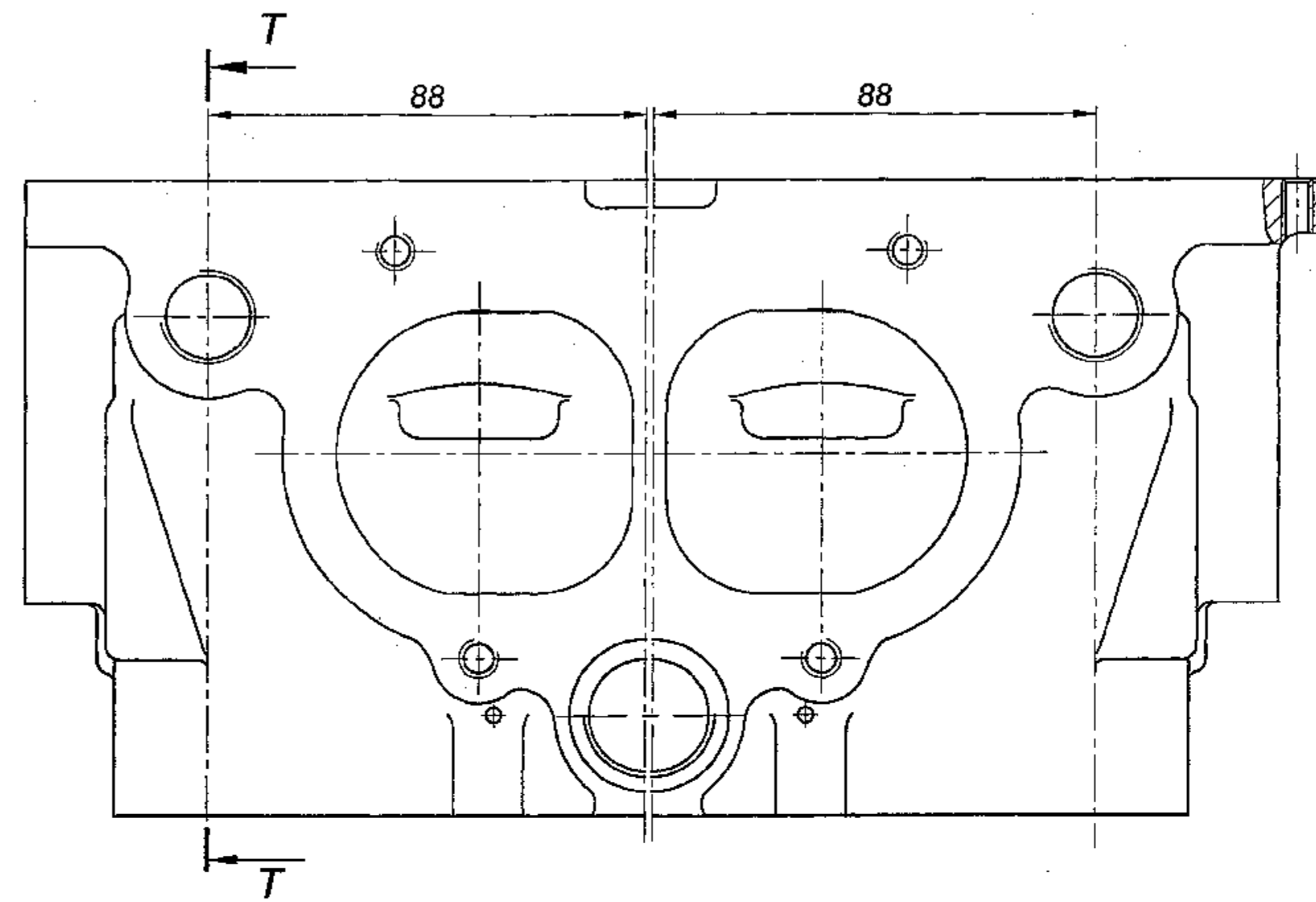
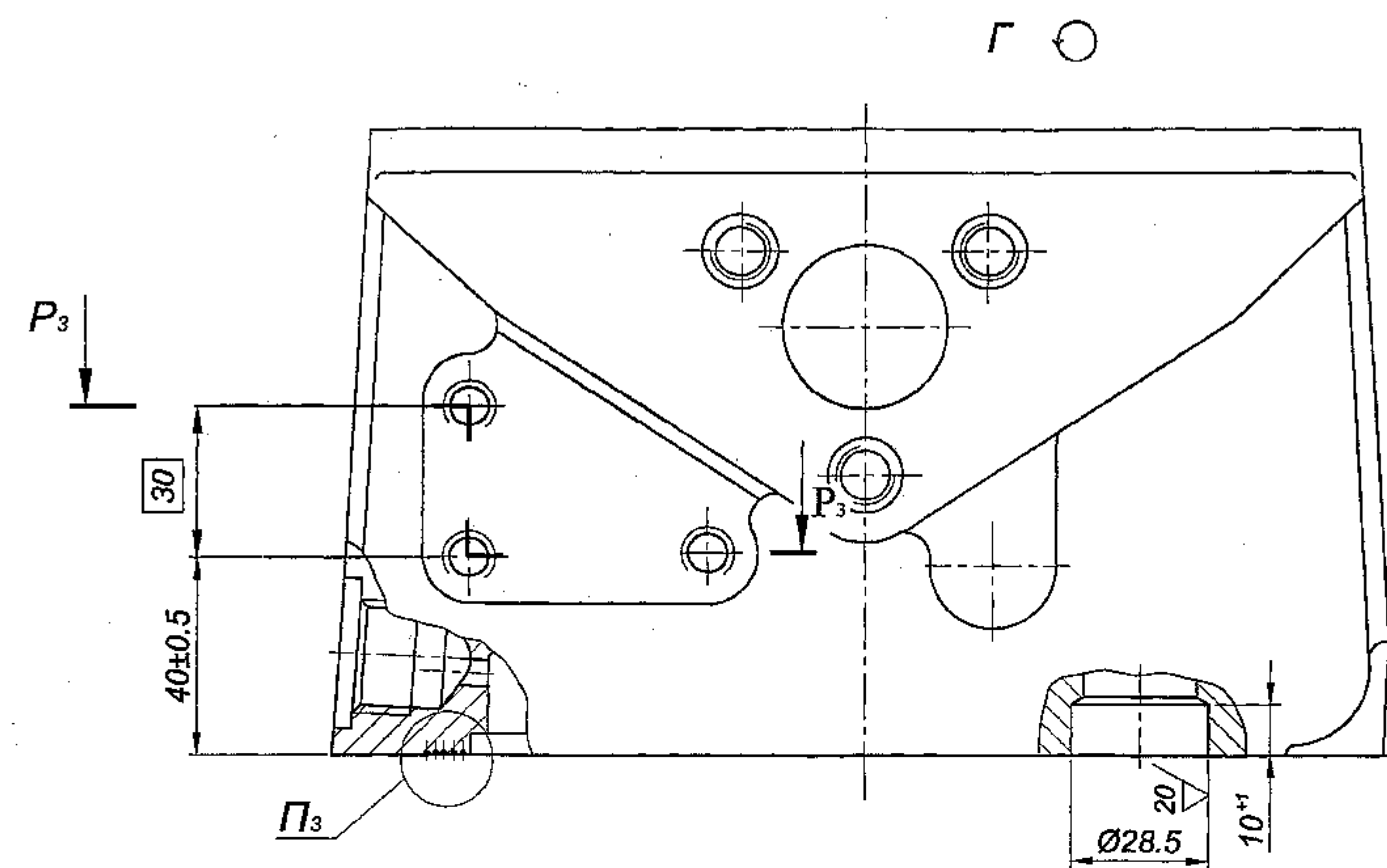
Cb 3308-04-24  
Cb 3308-00-23  
Cb 3301-15-30  
Cb 3301-15-44  
Cb 306-01-36  
Cb 306-02-36  
\* Cb 20-06-01-5  
Cb 20-06-02-5

DRN	15.7.15	Pl. 11, 7 <sup>th</sup> Alt. Comm. Meeting Dt. 11.4.12	DRN	15.7.15	Pl. 11, 7 <sup>th</sup> Alt. Comm. Meeting Dt. 11.4.12	MATERIAL - BAR ПС 59-1	USED ON - CB 306-04-20
CHD	5.3.14	Authy. Point No. 11 of 7 <sup>th</sup> Alt. Comm. meeting at EFA	CHD	5.3.14	Authy. Point No. 11 of 7 <sup>th</sup> Alt. Comm. meeting at EFA	GOST 2060-73	CB 20-12-01-13 CB 306-02-20 **
TCO	25.8.08	USED ON NUMBER ADDED	TCO	25.8.08	USED ON NUMBER ADDED	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
APPO	7.8.98	AUTHY. SPECN. FOR REPAIR SIZE DRGS PART III BK 77-498	APPO	7.8.98	AUTHY. SPECN. FOR REPAIR SIZE DRGS PART III BK 77-498	SCALE - 1:1	
DATE	15-6-89		DATE	15-6-89		TITLE	PLUC
ISSUE			ISSUE			D S CAT NUMBER	
						DRAWING NUMBER	306-25

PILOT SAMPLE SHOULD BE APPROVED BY A RESPONSIBLE BULK PRODUCTION.

EST. WT.	TO BE STAMPED OR MARKED (WHERE INDICATED THIS * LETTERS)
0.070 Kg.	
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE: OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	

COMMON TO V-92S2 & UTD-20 ENGINE



1. Nicks, dents, marks and cracks from machining are not allowed on the surface  $Y_3$ .
2. Surfaces  $E_2$  and  $Y_3$  should be placed in one flatness.
3. Remaining dimensions, surface finish, technical requirements are as per drawing 306-16-23.
4. Remaining graph should be as per drawing 306-16-23 with mirror reflection.

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. 36.61 TO BE STAMPED OR MARKED WHERE INDICATED THIS # ( LETTERS)

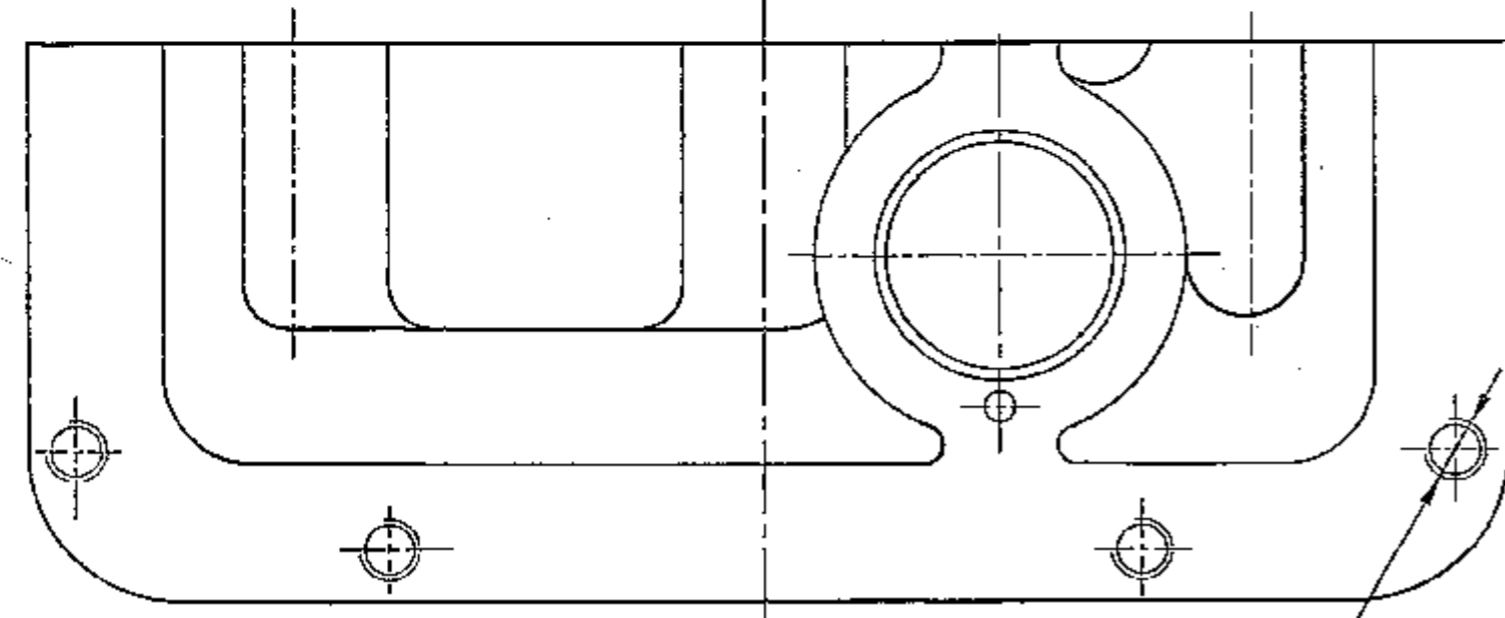
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE & INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	CHD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS:	DRN	CHD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS:		
			16/12/07	1:1		±0.1									
MATERIAL: AK7(A19) GOST 1583-93				USED ON: CB 306-02-36				CONTROL STATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI				TITLE: CYLINDER HEAD LH			
D S CAT NUMBER				DRAWING NUMBER				D S CAT NUMBER				DRAWING NUMBER			
				306-34-27								306-34-27			

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - NIL

8	7	6	5	4	3	2	1
DRAWING NUMBER <b>306-36-4</b>		SHEET No. 1 OF 1					

1. Remaining sketch, dimensions, surface finish, Technical requirements as per drawing 306-36-2



4 HOLES  
M8x1.25T.

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. (Kg) 0.73	TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)
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ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R. OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

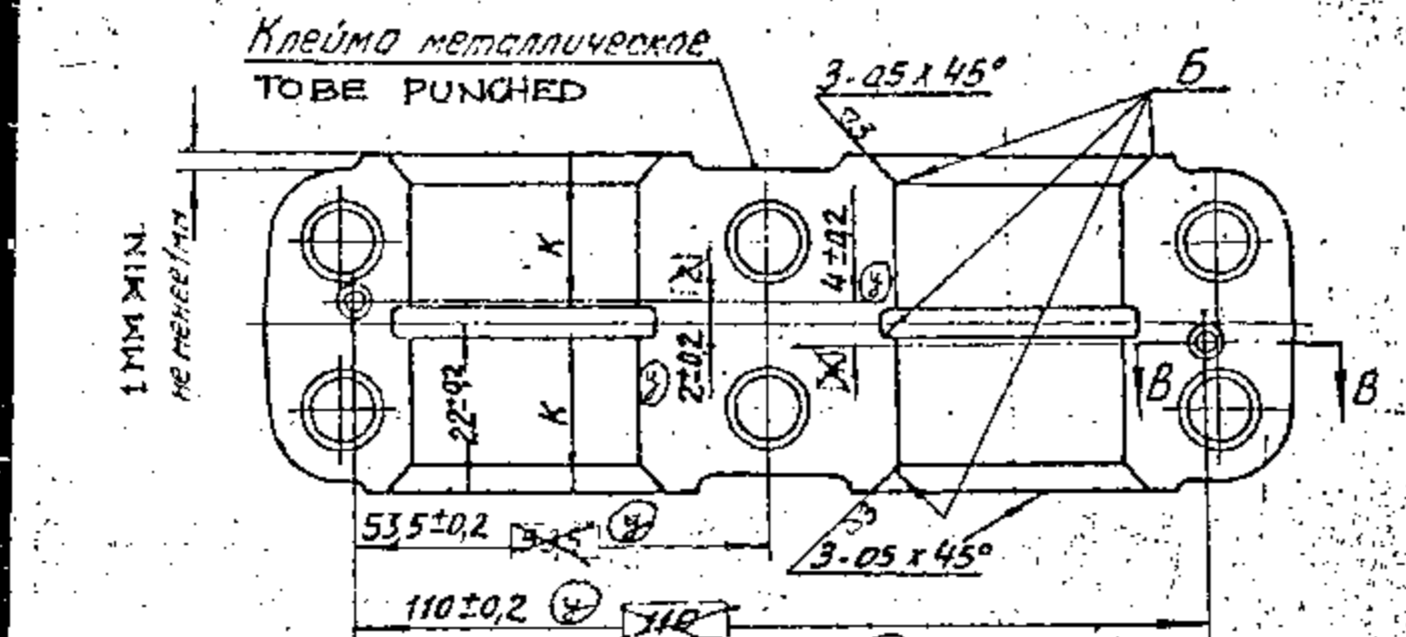
				DRN	<i>As per</i>	MATERIAL :-	USED ON :-		
				CHD	<i>AK7</i>	AK74(A179) GOST 1583-93	СБ306-02-36		
				APPD	<i>[Signature]</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI			
				DATE	02/2/07				
					SCALE:- 1:1				
					DIMENSIONS IN mm		TITLE :- <b>INCLINED <sup>(A)</sup> SHAFT BOX LH</b>		
					TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69				
					ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER <b>306-36-4</b>	
				A	09.07.08	DO CORRECTION.			
				ISSUE	DATE	NATURE OF AMENDMENTS			

F-3  
86  
166  
SIZE A3

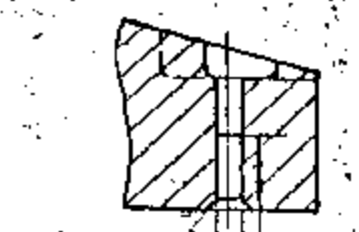




1-8E-90E



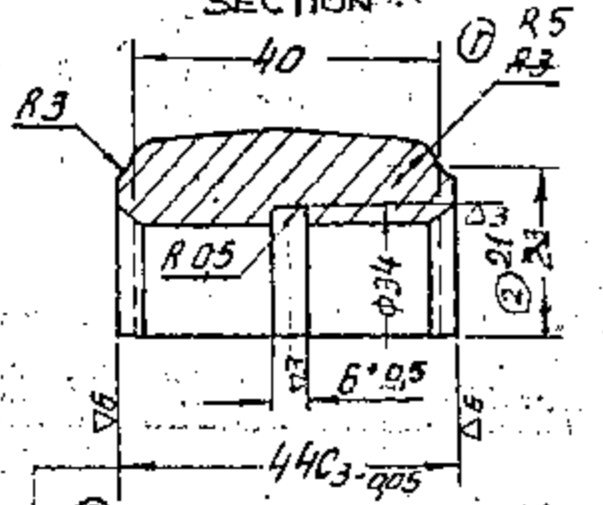
Разрез ВВ SECTION



2 отв.  $\phi 4 \pm 0.013$   
вместить на  
глубине 10 мм

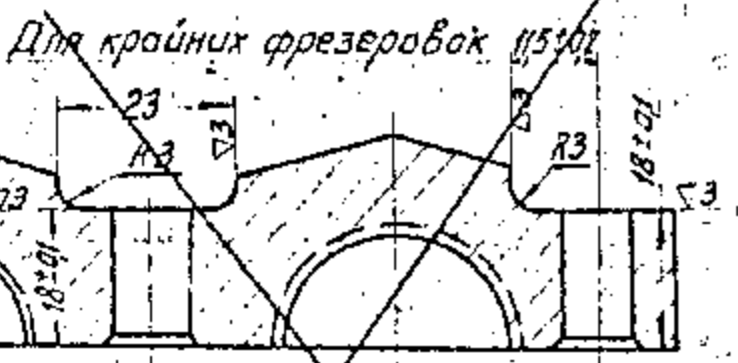
2 HOLES  $\phi 4 \pm 0.013$   
TO BE MAINTAINED  
AT 10MM DEPTH

Разрез АА SECTION

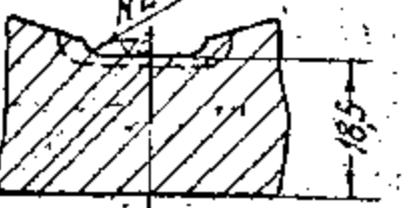


Окончательно обработать  
в узле головки блока  
TO BE FINISH MACHINED AFTER  
ASSEMBLY OF

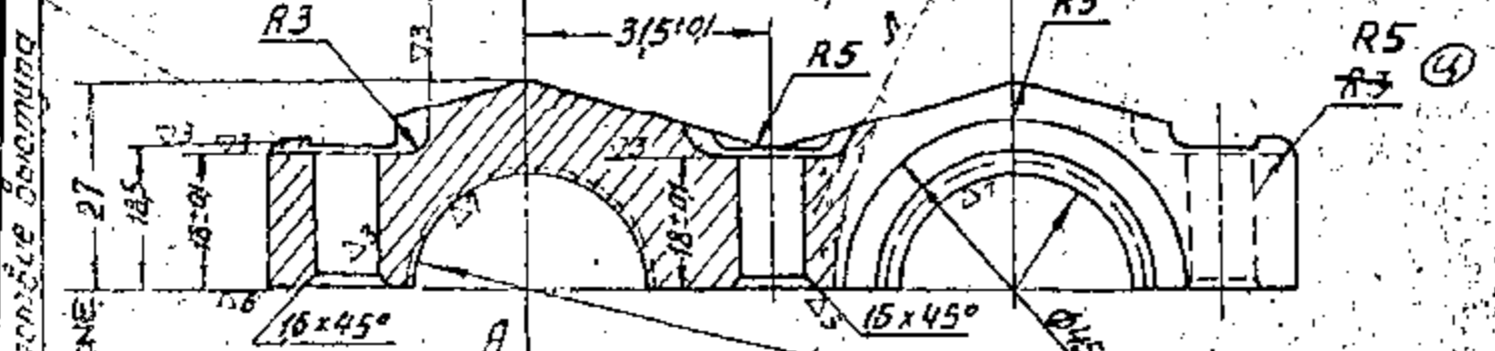
РАЗРЕЗ АА ASSEMBLY OF  
CYLINDER HEAD



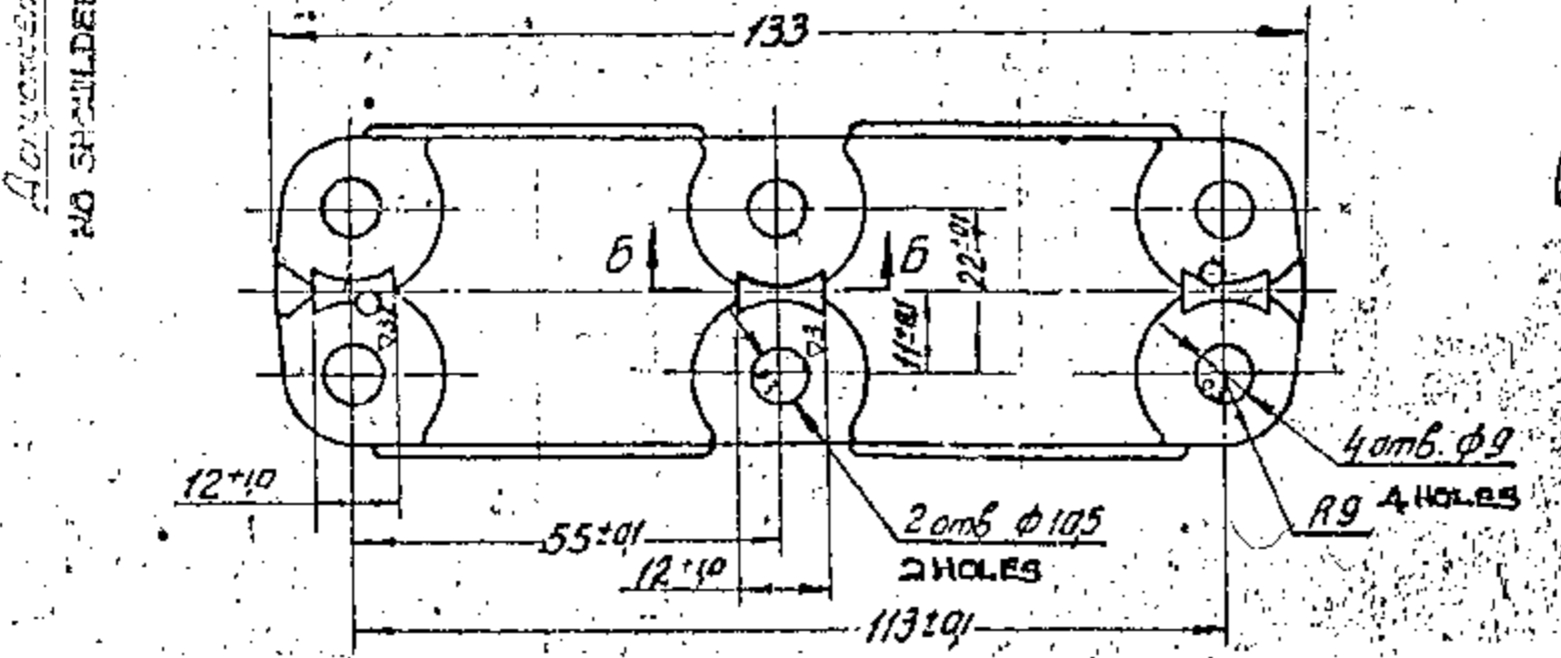
Разрез ББ SECTION



ALL SPOT FACINGS  
на всех подтаргавках



TO BE FINISH MACHINED AFTER ASSEMBLY OF CYLINDER HEAD



1. Inspection group IV as per TT - 11
2. BHN  $\geq 90$ ;
3. Components should be accepted after final heat treatment according to TT - 10 TTM - 79 - 81 (A)
4. Tolerances on stamping dimensions should be in accordance with standard 82050 - 17.
5. Drafts which are not specified in the drawing should be equal to 6°.
6. Machining dimensions without tolerances should be as per accuracy, class 7 OST 1010.
7. Surfaces 6 should be machined after assembly. Difference in measuring of dimension 'K' should not be more than 0.8 mm
8. Sharp edges should be blunted.
9. Traces of fins upto 1.7 mm high along the die parting line are permissible

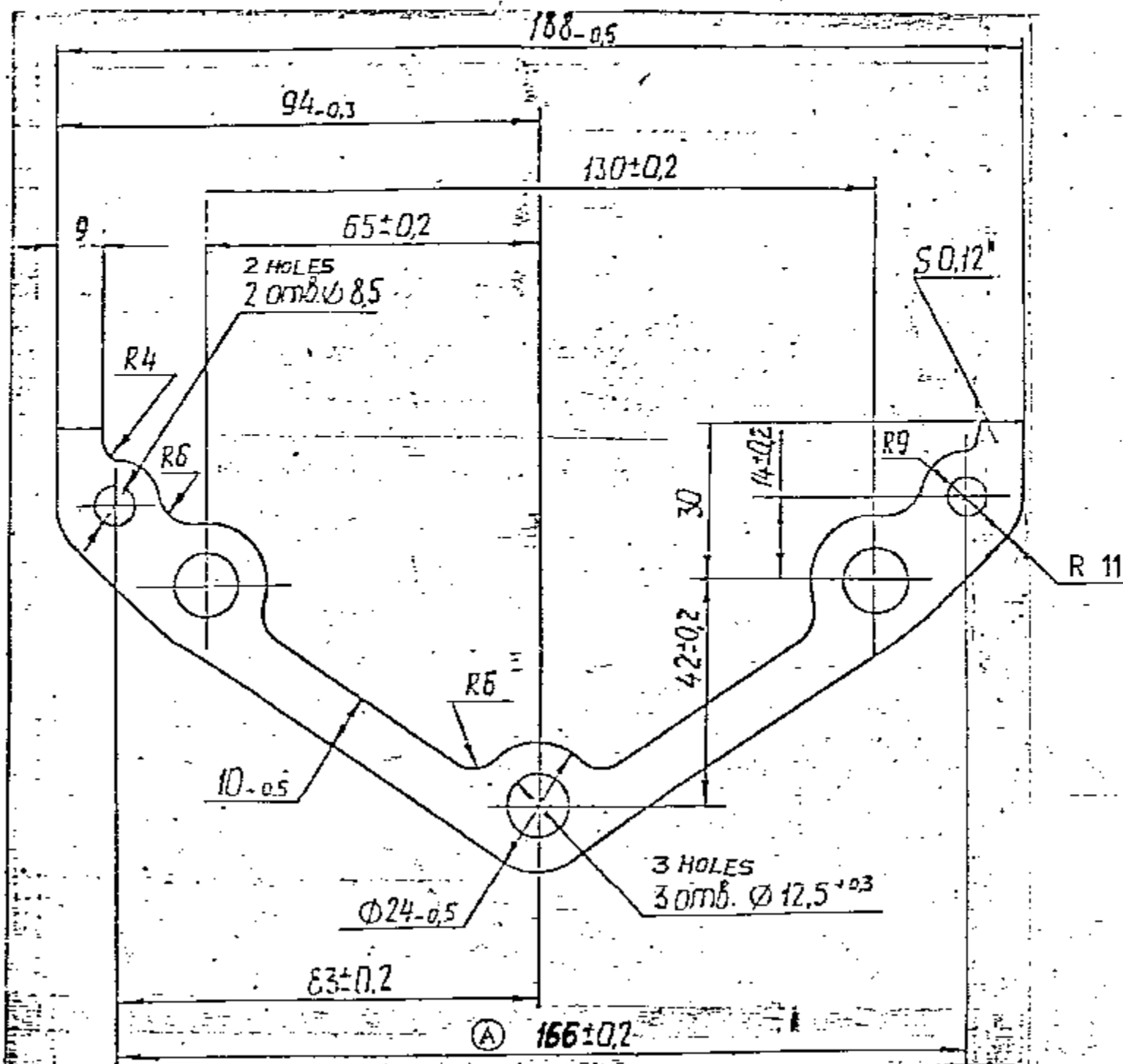
A-4

PILOT SAMPLE SHOULD BE APPROVED BY A.I.S.P. BEFORE BULK PRODUCTION

EST. MASS	0.200Kg	TO BE STAMPED OR MARKED WHERE INDICATED THIS # LETTERS
ISSUE DATE	2-12-84	ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED OTHERWISE CORNERS TO HAVE R OUTSIDE IF INSIDE EQUIVALENT CHAMFERS ARE PREMISSIBLE
DRN	04	NATURE OF APPROVEMENTS
CHKD	04	SCALE 1:1
TCU	04	DIMENSIONS IN mm
APPD	04	TOLERANCE ON DIMS UNLESS OTHERWISE STATED
DATE	28-1-88	ALL THREADS TO CONFORM TO
		MATERIAL ALUMINIUM ALLOY (A1) USED ON - GOST 4764-74 (STAMPING) GOST 306-03-3
		CONTROL RATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AV 411
		CAP OF CAMSHAFT THRUST BEARING
		DRAWING NUMBER 306-38-1

5 1 18E81-12 1013 34





1. ALTERNATE MATERIAL : CABLE INSULATING PAPER K-170 GOST 23463-83.
2. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS  $\pm 0.5\text{mm}$ .
3. ON THE EDGES OF CONTOUR OF DENTS AND RUPTURE ARE NOT ALLOWED.
4. \* DIMENSION FOR REFERENCES.

EXPLANATORY NOTE

5. MATERIAL QUOTED : CABLE INSULATING PAPER K120 GOST 23436-83.
- Alt Matl quoted : CABLE INSULATING PAPER K170 GOST 23436-83.
- PAPER = FOR INSULATING 35KV POWER CABLES.
- K-120 = GRADE OF PAPER - ORDINARY - THICKNESS =  $120 \pm 7$  MICRONS.
- K-170 = GRADE OF PAPER - ORDINARY - THICKNESS =  $170 \pm 10$  MICRONS.

QUALITY PARAMETERS :

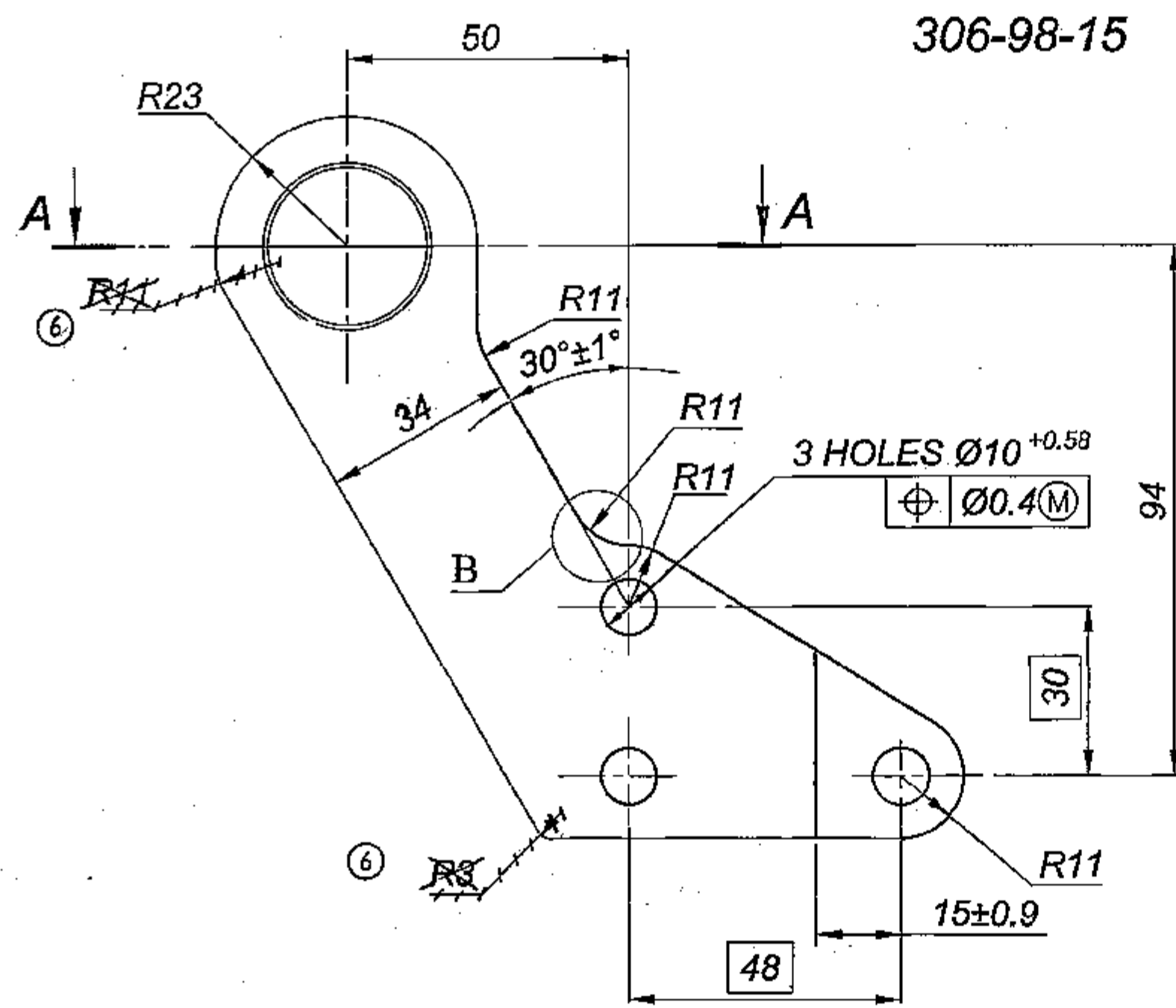
	K - 120	K - 170
1. FIBRE COMPOSITION % OF UNBLEACHED SULPHATE CELLULOSE AS PER STANDARD AND TECHNICAL DOCUMENTATION	100	100
2. DENSITY $\text{g/cm}^3$	$0.78 \pm 0.05$	$0.76 \pm 0.05$
3. BREAKING PROOF Kgf (min)		
IN THE MACHINE DIRECTION	13.0	17.5
IN THE TRANSVERSE DIRECTION	6.0	8.5
4. ELONGATION % (min)		
IN THE MACHINE DIRECTION	2.2	2.2
IN THE TRANSVERSE DIRECTION	6.6	6.6
5. AIR PERMEABILITY $\mu\text{l/min}$ (max)	40	40
6. ASH CONTENT % (max)	1.0	1.0
7. PH VALUE OF AQUEOUS EXTRACT	7.0 - 9.5	7.0 - 9.5
8. CONDUCTIVITY OF AQUEOUS EXTRACT $\mu\text{s/cm}$ (max)		
WITH MODULE 1 : 50	63	63
WITH MODULE 1 : 20	126	126
9. MOISTURE CONTENT %	4-8	4-8

PLOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. (A) TO BE STAMPED OR MARKED WHERE INDICATED THIS  $\neq$  LETTERS).

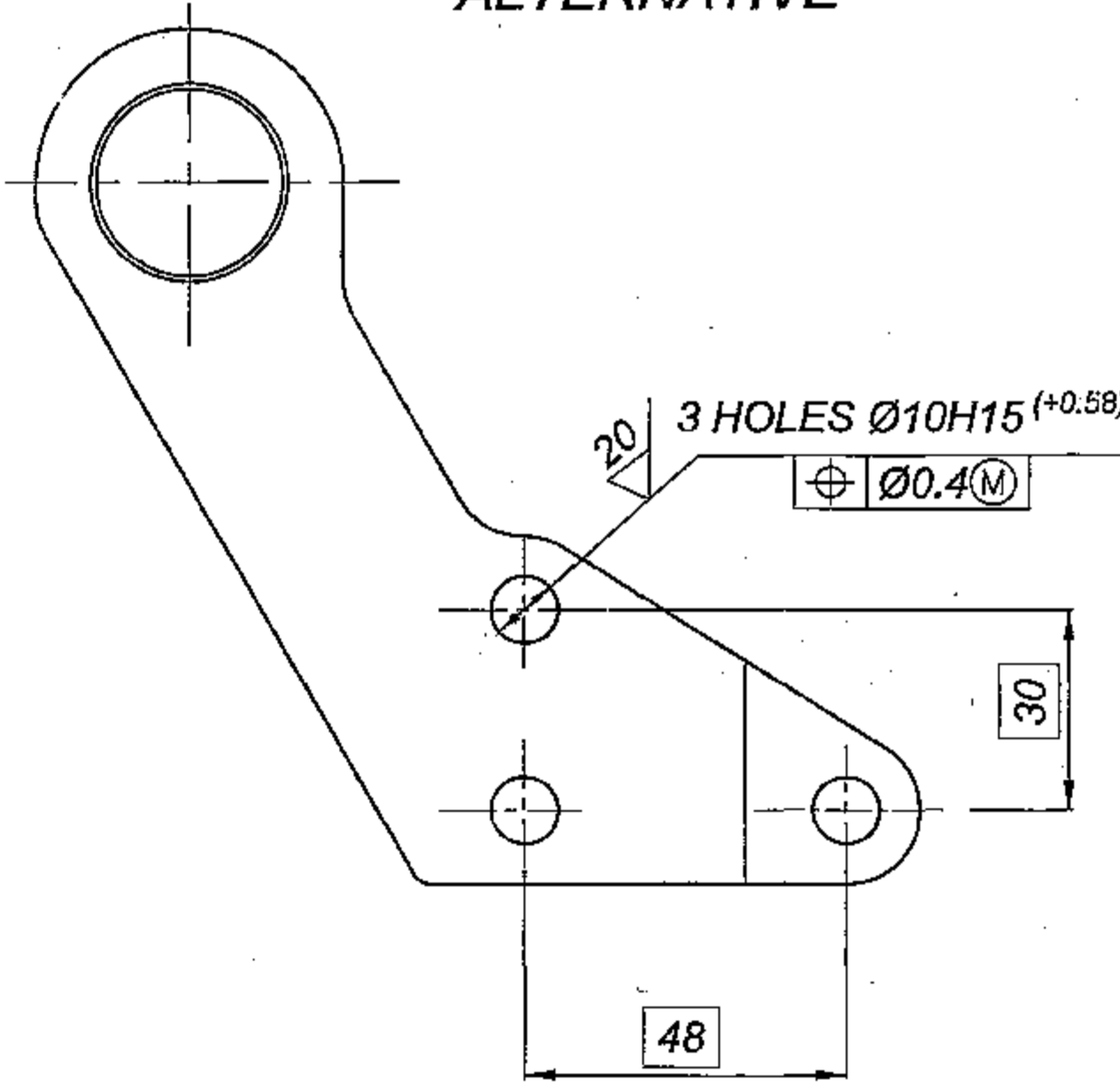
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	Art. 306-87	MATERIAL :-	USED ON :-
CHKD	9/1/89	CABLE INSULATING PAPER	CB 306-01-20
TED	11/9/89	K-120 GOST 23436-83	CB 306-02-20
APRD		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	11-5-89	A V A D I	
SCALE	1:1	TITLE	
DIMENSIONS IN	mm	GASKET	
TOLERANCE ON DIMS	UNLESS OTHERWISE STATED IS 2102-69	D S GAT NUMBER	
A	28-2-96	AUTHY. I.T. No. EFA/PDO/2556-47	DRAWING NUMBER
ISSUE	DATE	NATURE OF AMENDMENTS	306-87

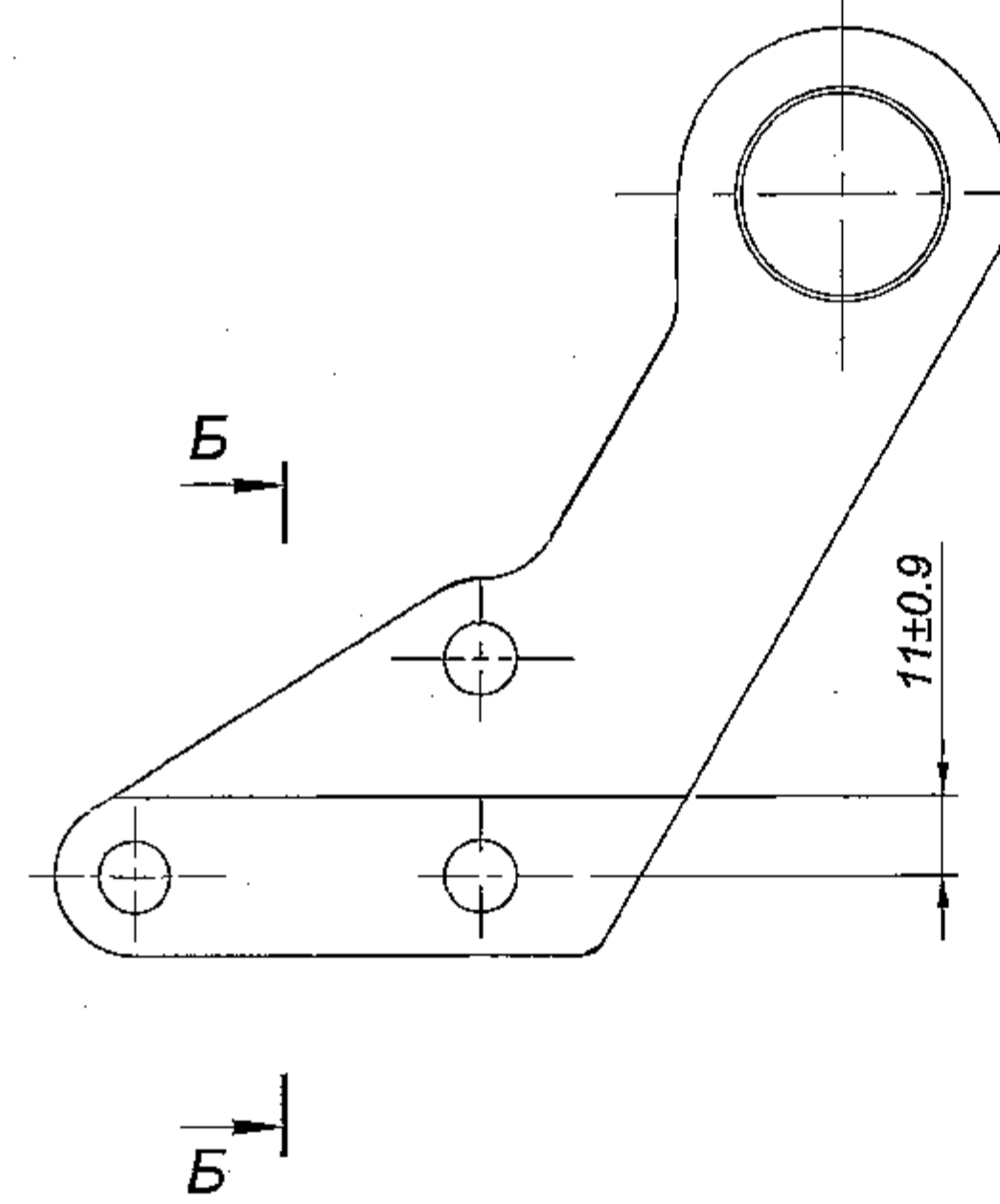


306-98-15

ALTERNATIVE



306-98-15-01- MIRROR IMAGE  
REMAINING . SEE 306-98-15



1. Alternate material : Sheet <sup>88 GOST 19903-74</sup> 20 GOST 4041-71  
Steel 25;35;40; 45 GOST 1050-88.

2. Unspecified limit deviations of dimensions for forging should be ±0.5 mm.

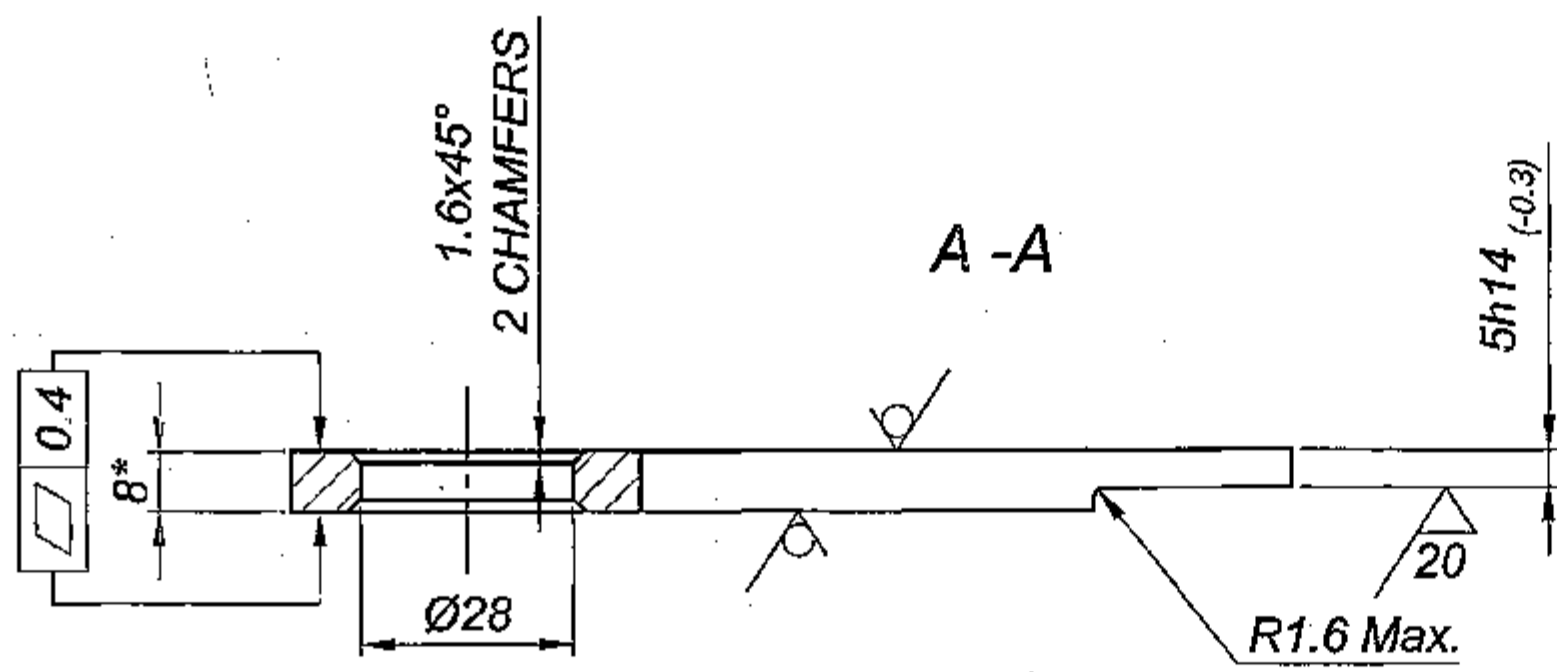
3. Forging draft should not exceed 0.8 mm per side.

4. Plating : Zinc-15 microns, chromium-1micron as per ИП -749-88.

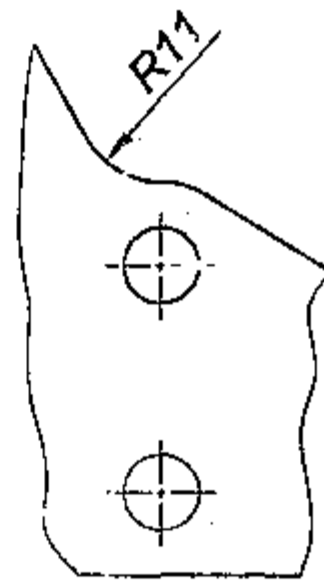
5. Put final acceptance stamp for part batch on the tag.

6. \*Dimension is given for reference.

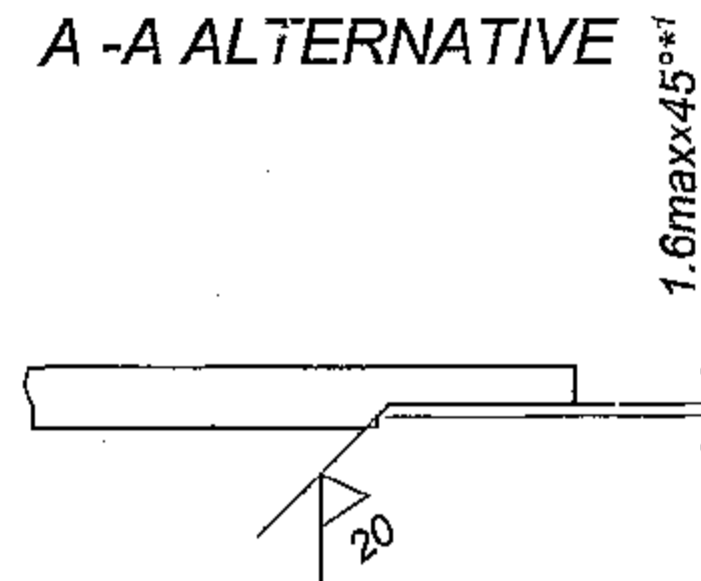
7. \*Dimension to be ensured by tool.



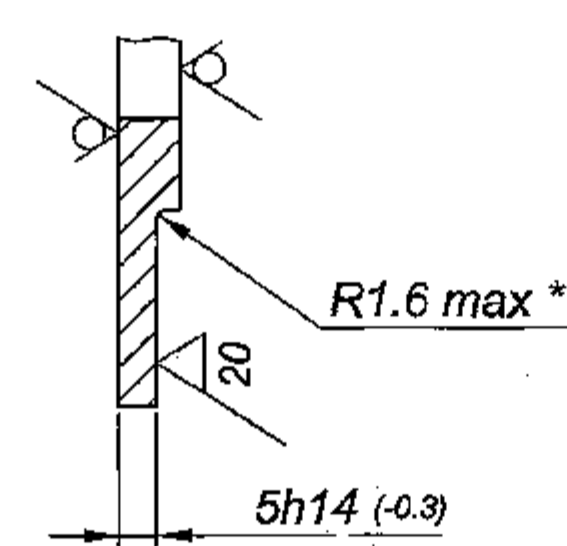
B ALTERNATIVE



A-A ALTERNATIVE



B-B



PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. (Kg) TO BE STAMPED OR MARKED WHERE INDICATED THIS # ( LETTERS)

0.36

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

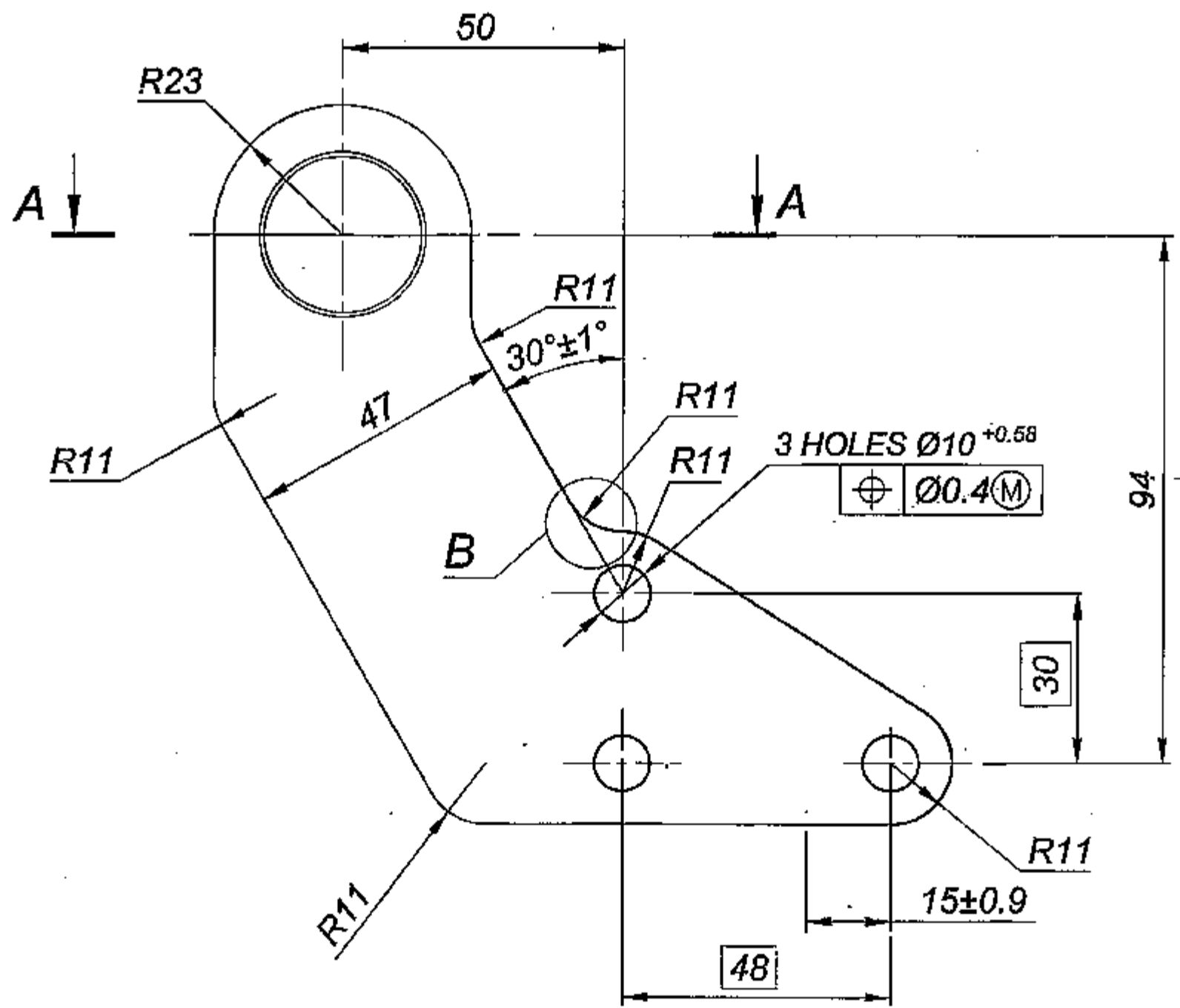
DRN	AP	MATERIAL	88 GOST 19903-74	USED ON	16 306-01-36
CHD	AP	SHEET	20 GOST 1577-81		16 306-02-36
APPD		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)			
DATE	01/29/07	AVADI			
SCALE	1:1	TITLE: ANGLE PIECE (5A)			
DIMENSIONS IN mm		D S CAT NUMBER			
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		DRAWING NUMBER			
6 20.11.08 NOTN. NO: 2002-324 (E-158)		306-98-15/01			
5A 09.07.08 DD CORRECTION.					
ISSUE DATE NATURE OF AMENDMENTS					

DRAWING NUMBER  
**306-98-17**

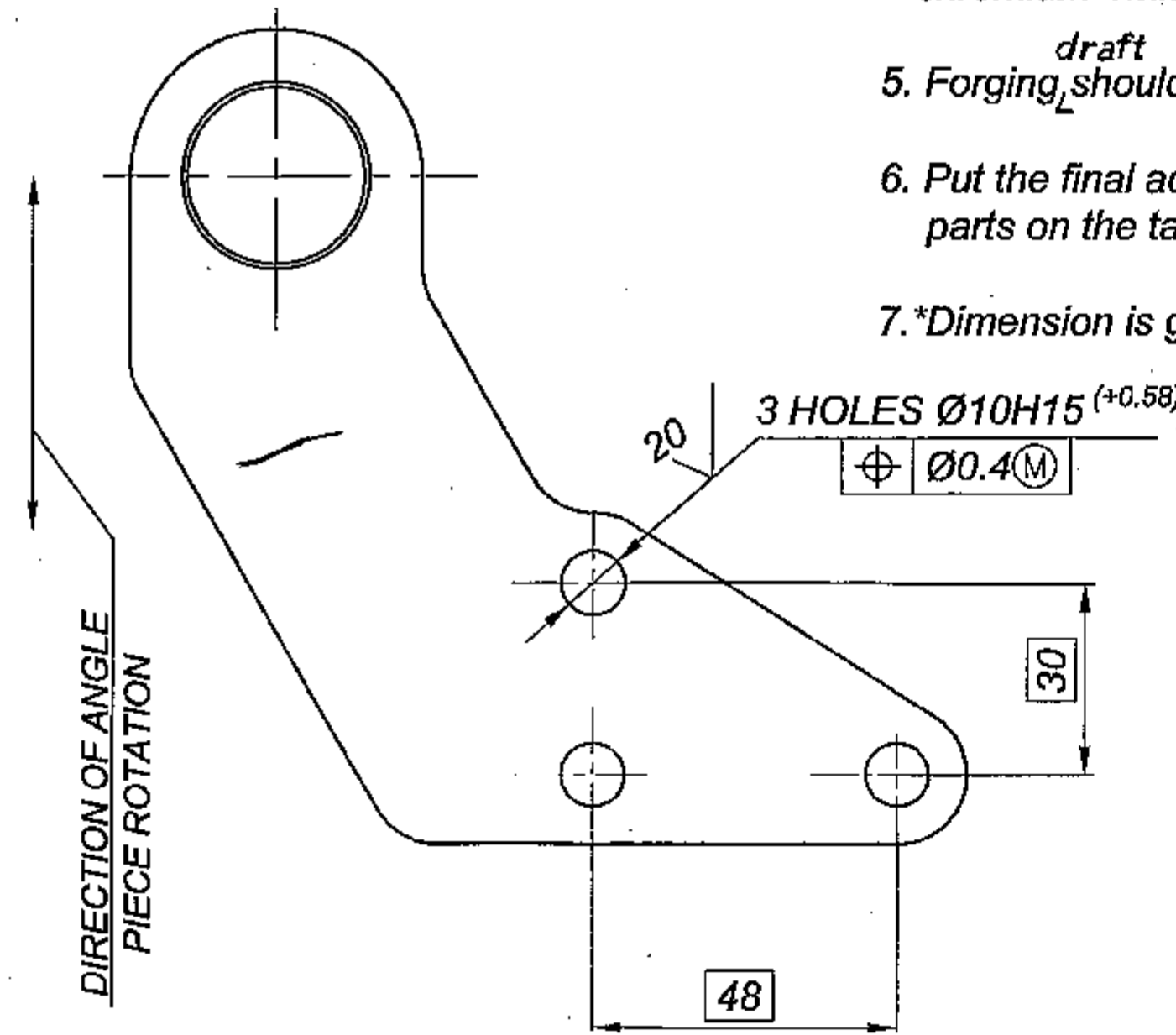
SHEET No. 1 OF 1

80 ✓(✓)

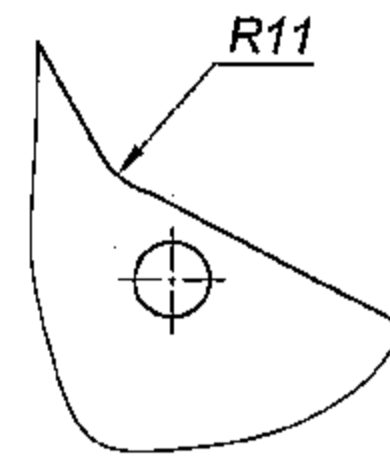
1. Alternate material : steel 20;25; 30 GOST 1050-88.
2. Unspecified limit deviation of dimensions is  $\pm 0.5$  mm.
3. Plating: Zinc-15microns, chromium-1micron, Titanium 1micron as per instruction ИЛ -749-88.
4. In tropical construction coating is cadmium-9microns, chromium-1micron, Titanium 1micron as per ИЛ -569-84.
5. Forging should not exceed 0.8 mm on one side.
6. Put the final acceptance stamp for batch of parts on the tag.
7. \*Dimension is given for reference.



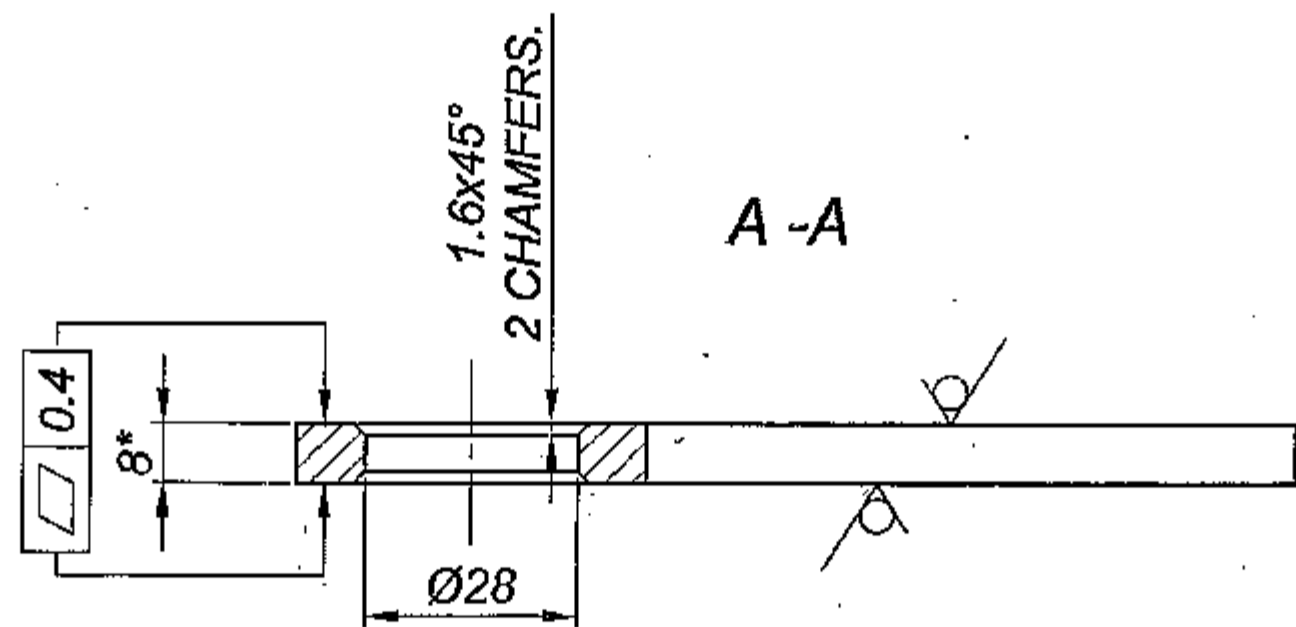
**ALTERNATIVE**



**B ALTERNATIVE**



**A-A**



Ⓟ EQUIVALENT MATERIAL  
STEEL 070 M20 (EN 3A) TO BS: 970

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. (Kg) 0.48 TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	APPD	MATERIAL:- SHEET	USED ON:-
CHD	DATE	E-nB-0 8 GOST 19903-74	C6 306-01-36
APPD	SCALE:- 1:1	15-TB1-M1 GOST 1577-93	C6 306-02-36
DATE	DIMENSIONS IN mm	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
SCALE:- 1:1	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69	AVADI	
DIMENSIONS IN mm	ALL THREADS TO CONFORM TO	TITLE:-	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69	D S CAT NUMBER	ELBOW (A)	
ALL THREADS TO CONFORM TO	DRAWING NUMBER	306-98-17	
ISSUE	DATE	NATURE OF AMENDMENTS	
A	09.07.08	DO CORRECTION.	
B	10-7-10	4/5 ALT. COMM. Mtg. MINUTES POINT No 5 DT 26-10-09	

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - NIL

F-3  
125  
166  
SIZE A2