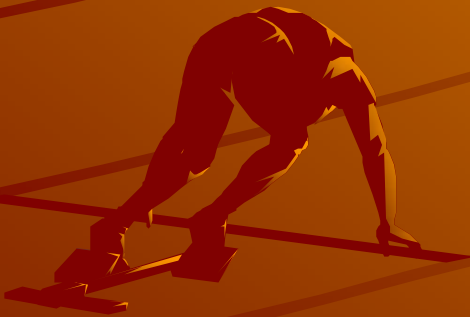


GUN & SHELL FACTORY COSSIPORE KOLKATA-700 002

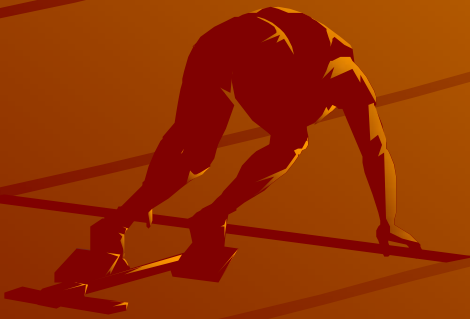


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◆ THE CD SHOULD BE RETURNED TO THE GENERAL MANAGER GUN AND SHELL FACTORY AFTER USE

Travelling Lock



Format	Zone	Position	Designation	Nomenclature	Qty.	Remarks
A4		16	AK-630 106-14	Gasket	2	
A3		17	AK-630 106-15	Angle	2	
A4		18	AK-630 106-16	Gasket	1	
A4		19	AK-630 106-17	Cover	1	
A4		20	AK-630 106-18	Screw	5	
A4		21	AK-630 106-19	Cover	1	
A3		22	AK-630 106-20	Buffer	1	
A3		23	AK-630 106-21	Spring	1	
A3		24	AK-630 106-22	Retainer	1	
A4		25	AK-630 106-23	Bush	1	
A4		26	AK-630 106-24	Ring	1	
A3		27	AK-630 106-25	Internal spring	2	
A4		28	AK-630 106-26	Handle	1	
				<u>Standard articles</u>		
		37		Bolt 3M10-8gx30.109.40X.029 GOST 7798-70	1	31...40,5 HRC _e
		38		Bolt 3M10-8gx55.109.40X.029 GOST 7798-70	1	31...40,5 HRC _e
		39		Bolt M10-8gx55.109.40X.029 GOST 7798-70	2	31...40,5 HRC _e
		43		Screw M4-6gx6.33 H.026 GOST 1476-93	2	
		44		Screw M4-6gx8.33 H.40 X.026 GOST 1476-93	2	
Orig. Inv. No.						
Amend.	Sheet	Doc. No.	Sign	Date	AK-630. Sb 106	
						Sheet 2

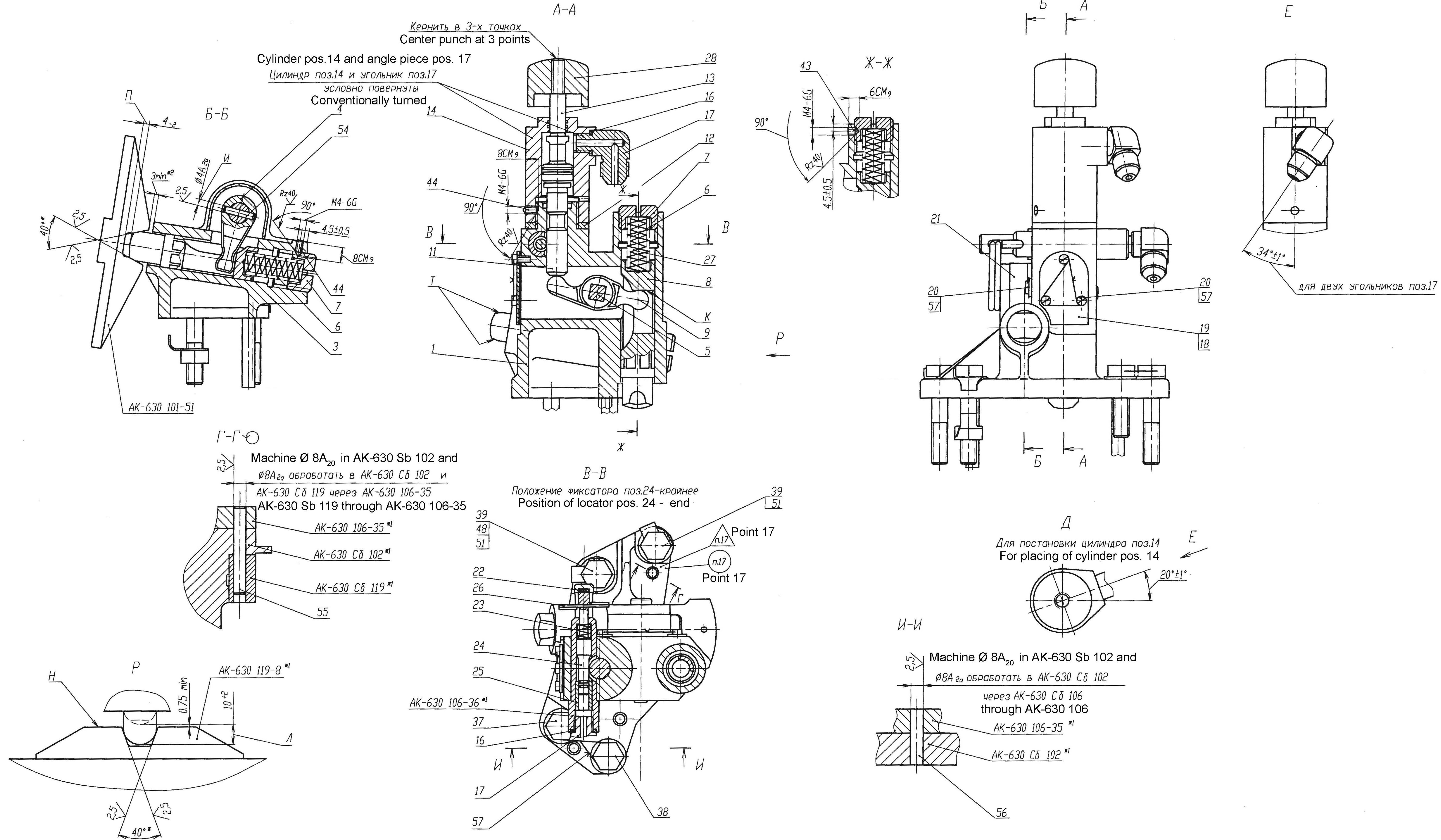
Format	Zone	Position	Designation	Nomenclature	Qty.	Remarks
		48		Nut 2M10-66.10.4X.029 GOST 5915 – 70	1	
		51		Washer 10.01.08KP.029 GOST 13463-77	3	
		54		Pin 2Pr22ax22.40X. K38.5...45.5HRC _E .Chem.Phos.Oil. OST 3-2234-93	1	
		55		Pin 8Pr22ax55.40X. K38.5...45.5HRC _E .Chem.Phos.Oil. OST 3-2234-93	1	
		56		Pin 8Pr22ax25.40X. K38.5...45.5HRC _E .Chem.Phos.Oil. OST 3-2234-93	1	
				<u>Materials</u>		
		57		Wire 0.6-T-12X18H10T GOST 18143-72	0.3 m	

Orig. Inv. No. Duplicate Inv. No. Alternate Inv no. Sign and Date

Amend.	Sheet	Doc. No.	Sign	Date
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AK-630. Sb 106

Sheet
3



1. * Reference dimensions .
- 2.*1 Article for reference .
3. *2 Inspect dimension in AK-630M SB.00.
4. Coat cad. 6. Chrome after carrying out specifications of adjustment of ring assembly pos. 12 .
5. Carry out setting of cylinder pos. 14 (refer view J) and angle piece pos. 17 (refer view E) by fitting adjusting ring pos. 12 and gasket pos. 16. Thickness of component AK-630 106-10 should be not less than 2.8 mm .
6. Secure by adhesive 88 NP TU 38 105540 - 85 placement of buffer pos. 22 in sleeve comp. AK-630 106-36. Using of adhesive 88 SA TU 38 105 1760-89 is permissible .
7. Center punch screws pos. 43 and 44 at two points by center punching metal component in screw slots .
8. Lubricate all friction surfaces of components with lubricant MS-70 GOST 9762-76.
9. All movable components should move freely, without jamming and under influence of spring should energetically return to its initial position .
10. Carry out bending of stop washers pos. 51 and tying of screws pos. 20 and bolts pos. 27 and 38 with wire pos. 57 in AK-630M SB.00.
11. Carry out adjustment of catch AK-630 119-8 on pin pos. 8 till ensuring A filling of adjoining surface not less than 75% . It is permissible to file plane "K" of pin in case of non ensuring of dimension Л.
12. Carry out drilling of hole "И" after obtaining dimension "Л" and "П" during positioning of pin pos. 3, placed in stopper socket AK-630 101-51 and pin pos. 8, placed in catch slot AK-630 119-8 and on dimension "Л" minus 1 mm surfaces of pins pos. 3 and 8 and lever pos. 4 and 9 should be pressed to each other .
13. File side surface of stopper socket on pin till obtaining dimension "П" . Fitting of adjoining surface should not be less than 75% .
14. Displacement of components AK-630 106-1 (pos. 3) in respect to components AK-630 101-51 (stopper socket) , is permissible , during which plane T of whole area should be placed in component AK-630 101-51.
15. Tighten plug pos. 7 up to stop , align on rotation plane and stop with screw pos. 43 and 44. At lower end position of piston pos. 13 after final filing of components AK-630 119-8 and AK-630 101-51.
16. Secure component pos. 28 by red, brown putty EP-0010 GOST 28379-89.
17. Mark Ш, Ч, Ha and stamp K on AK-630, AK-630M TU 1, Ha- technological unit of assembly number .

					AK - 630 SB 106 SB			
Amend	Sheet	Doc. No.	Sign	Date	Travelling lock Assembly drawing	Type	Weight	Scale
Developed by						A	4.70	1:1
Checked by					Sheet	Sheets 1		
Technician								
Head of bureau								
Head of QCD								
Approved by								

First remarks

Reference No.

Sign & Date

Duplicate Inv. No.

Alternate Inv. No.

Sign & Date

Inv. No.

First use

Reference No.

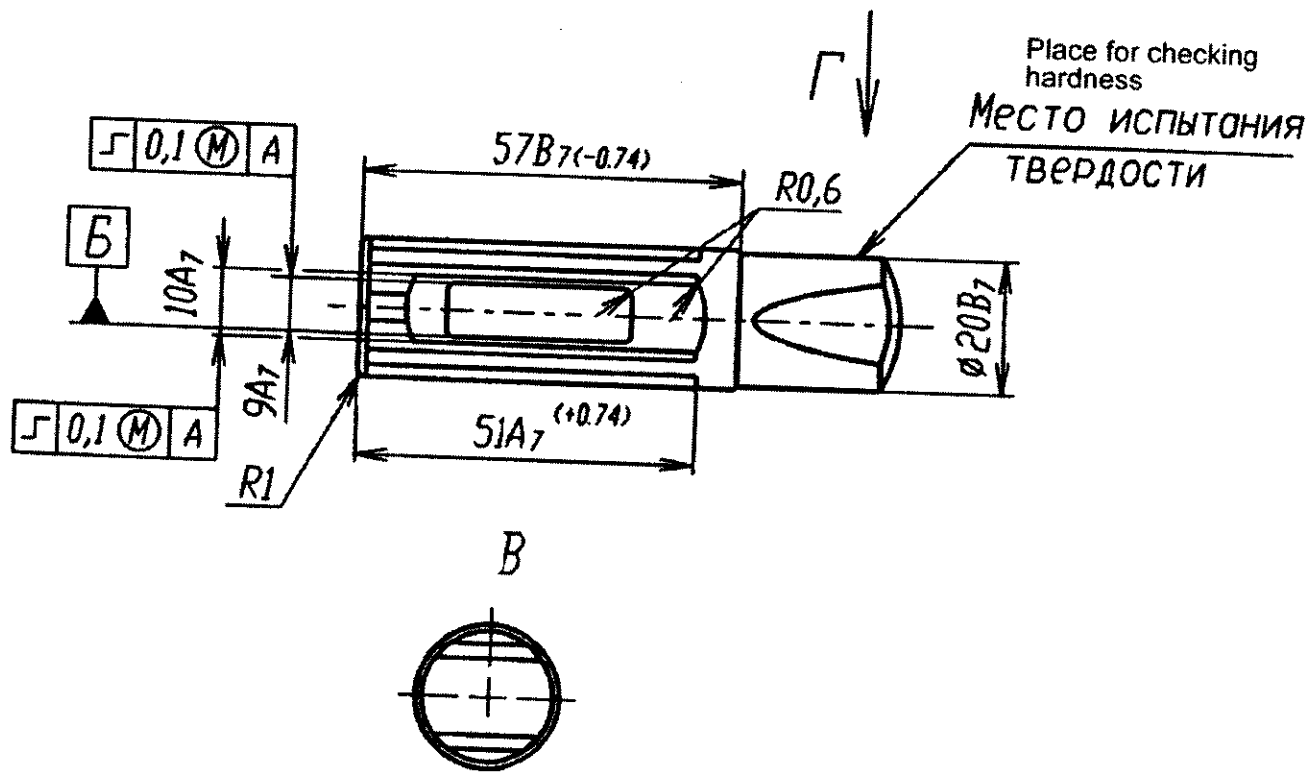
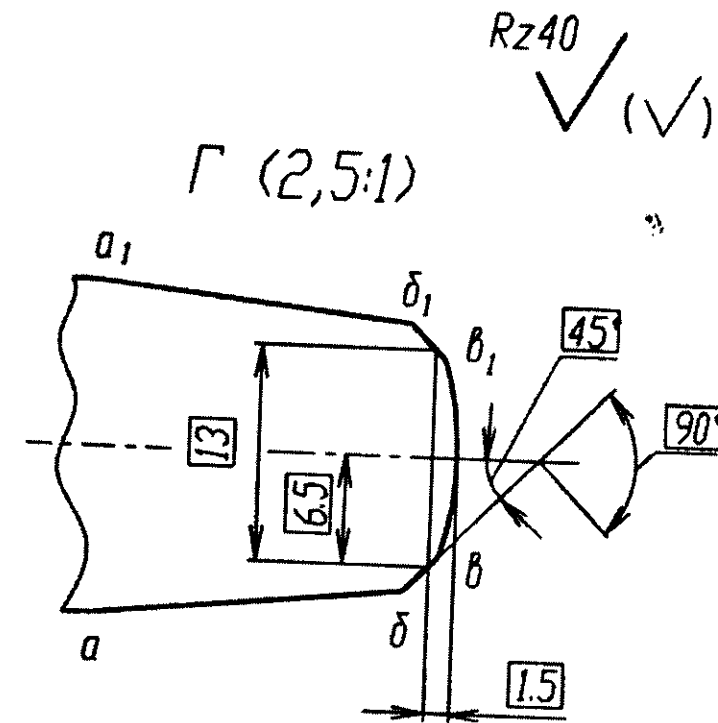
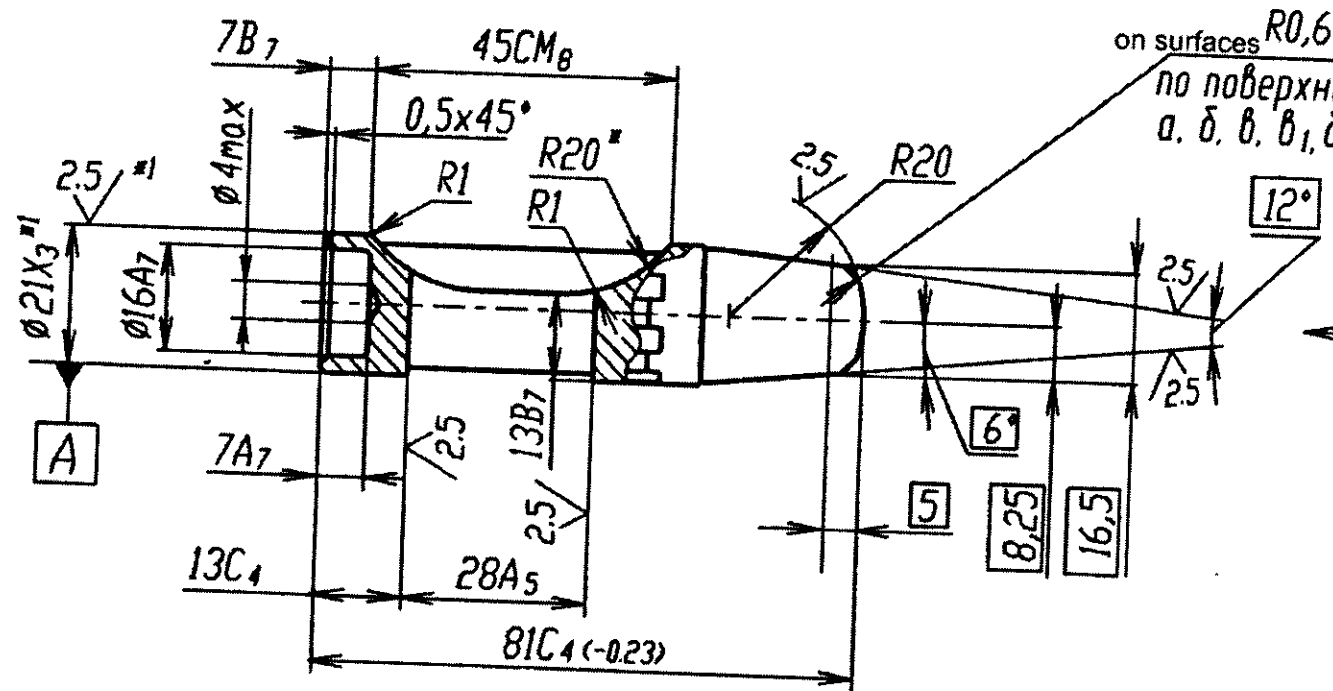
Sign and Date

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Alternate Inv. No

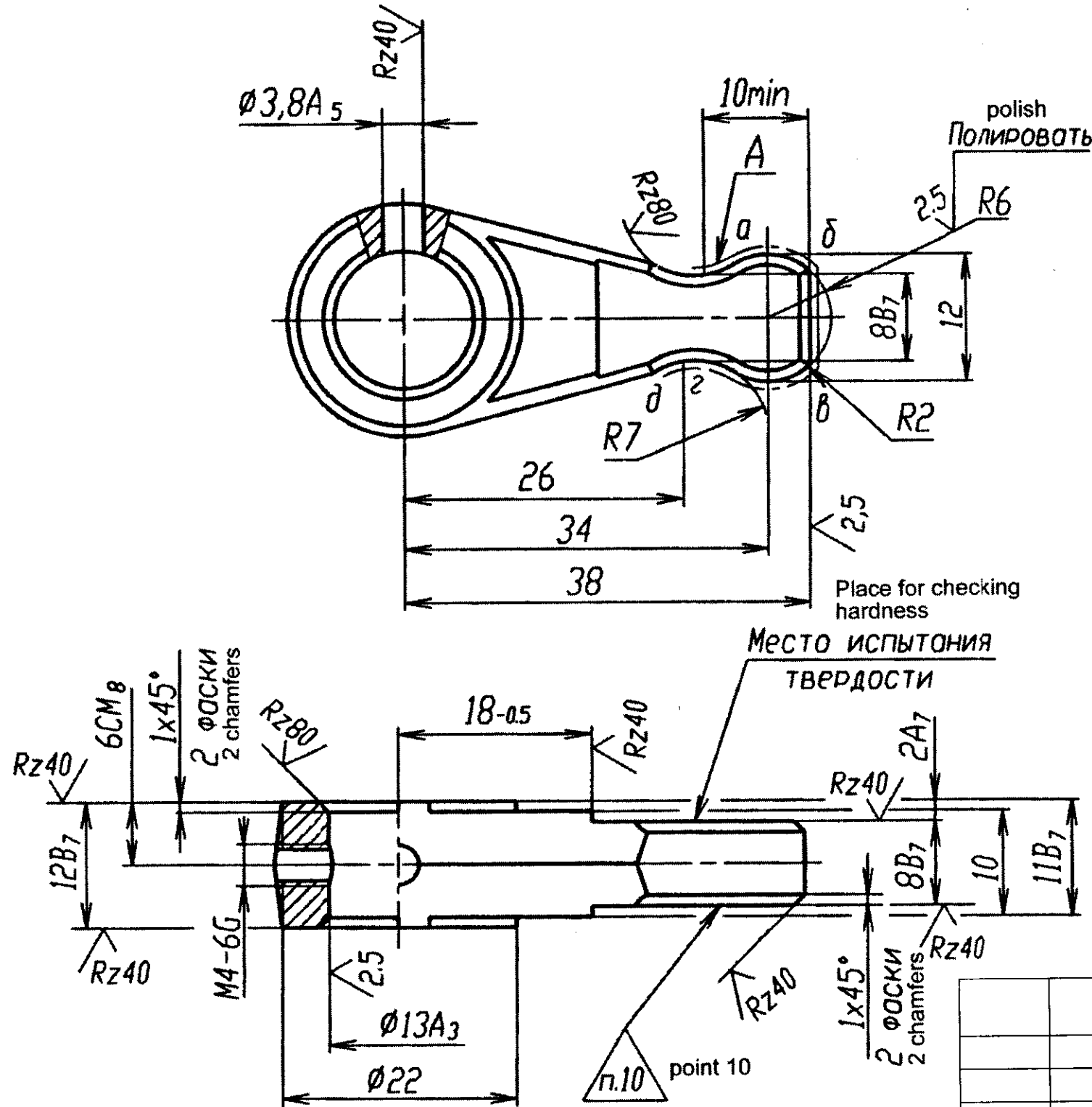
Sign and Date

Orig. inv. no.



- 1.38.5..44.5 HRC_E.
- * Dimension ensured by tool.
- Inner angles $R \sim 0.6$ mm.
- Blunt sharp edges ~ 0.6 mm.
- *1 Dimensions and surface finish after coating.
- Allowance of form of surfaces a, b, v and a_1, δ_1, δ_1 with respect to surfaces A, B $T/2$ is 0.1 mm.
- Coating: external surfaces- Kh30 B; Others- Chem.Phos.oil.
- Mark Ш, Ч and stamp К, И on tag.

					AK-630 106-1			
Amend.	Sheet	Doc.No.	Sign	Date	Pin	Type	Weight	Scale
Developed by						A	0.150	1:1
Checked by						Sheets 1		
Head of Q.C.D						Steel 40 Kh GOST 4543-71		
Approved by								



✓ (✓)

1. Substitute material- steel 50A OST3-98-80.
2. Blank-Forging accuracy class T 5 GOST 7805-89.
Surface defects on un machined surfaces should not be deeper than 0.5 mm.
3. 38.5..44.5 HRC_E.
4. Inner angles R~0.4 mm.
5. Blunt sharp edges ~0.6 mm.
6. Allowance for contour "абв" from hole and point "д" – 0.12 mm.
7. Blunt sharp edges ~1 mm at places of chrome plating.
8. Coating of surface A- Kh42;
For others- Cd 12.phos.
9. Lacquer BF-4 with Nigrozene 2 coats, made as per OST 3-4123-78, IV, OM2.
10. Mark Ш, Ч on tag.
10. Stamp К, И as per AK-630, AK-630M TU I.

					AK-630 106-2			
Amend.	Sheet	Doc.No.	Sign	Date	Lever	Type	Weight	Scale
Developed by						A	0.050	2:1
Checked by						Sheets 1		
Head of Q.C.D								
Approved by					Steel 50 GOST 1050-88			

First use

Reference No.

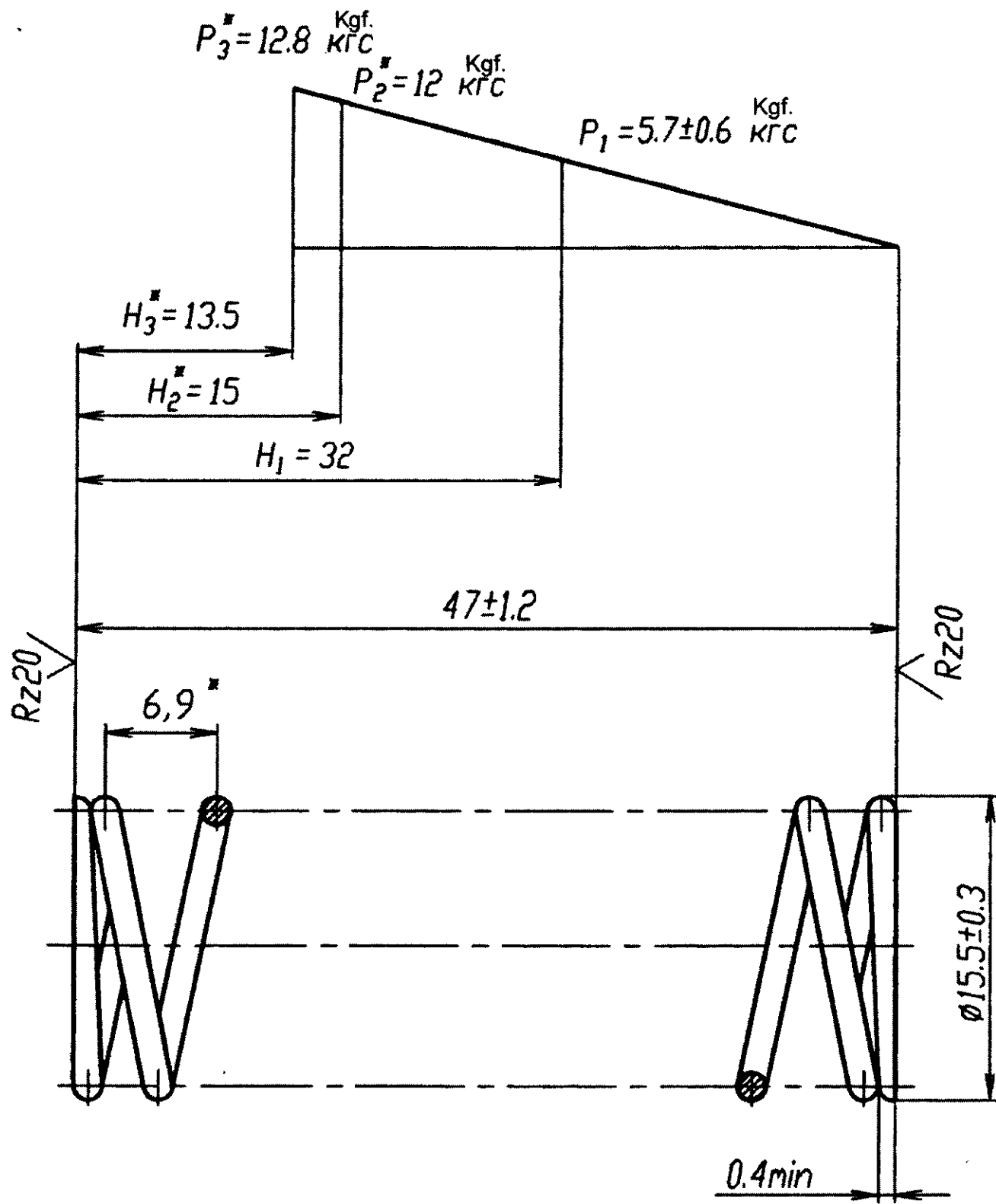
Sign and Date

Duplicate Inv. No

Alternate Inv. No

Sign and Date

Orig. inv. no.



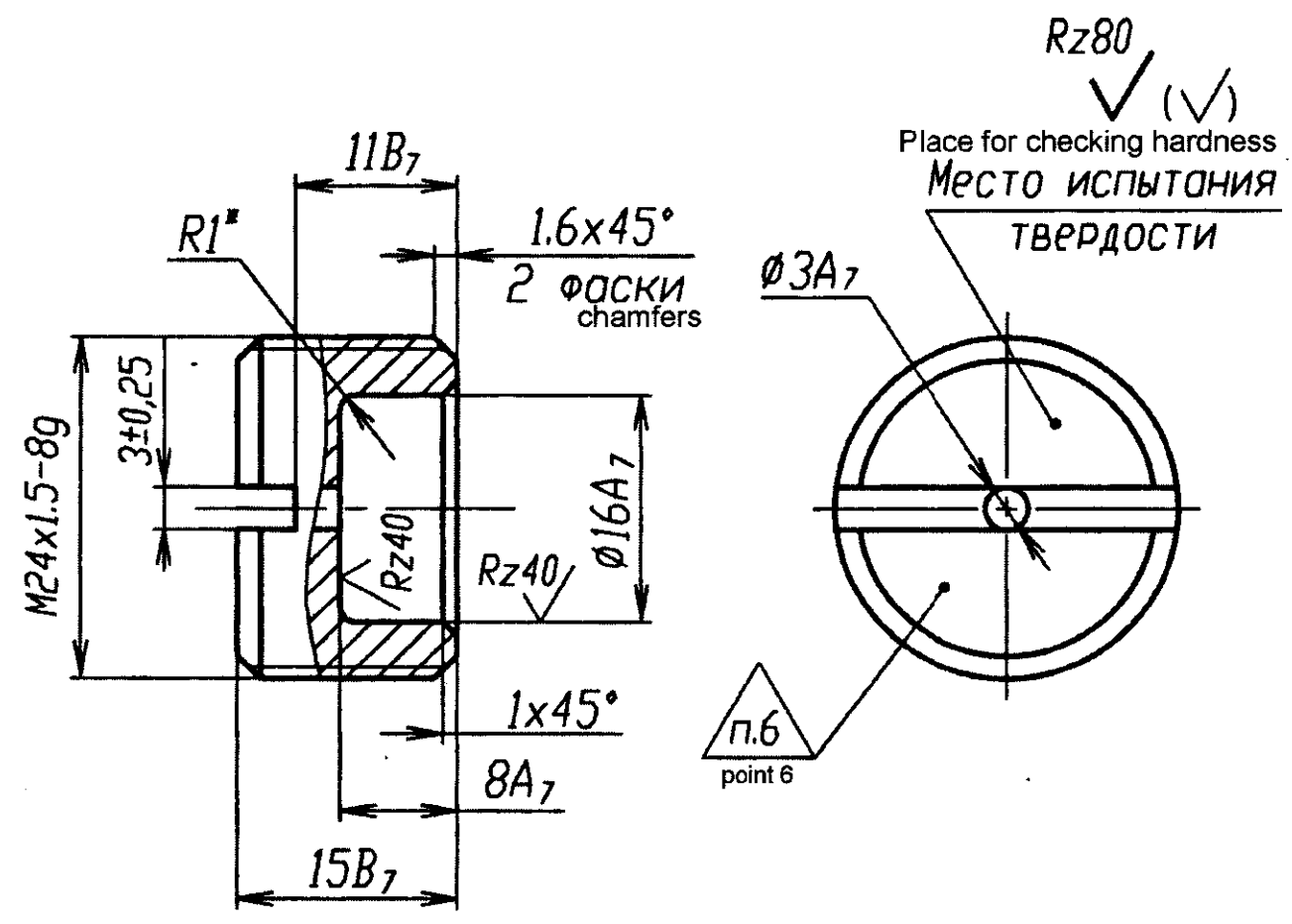
✓(✓)

1. Group I.
2. $G^* = 8000 \text{ kgf/mm}^2$. $\tau_3^* = 129 \text{ kgf/mm}^2$.
3. Unrolled length $L^* = 400 \text{ mm}$.
4. Coiling direction- right.
5. $n = 6.5$.
6. $n_1 = 8.5 \pm 0.25$.
7. Heat treatment- tempering $240-260^\circ\text{C}$.
8. $D_g = 16A_5 \text{ mm}$.
9. D_s .
10. Pre deformation time (at H_z) -24 hours.
11. Coating Chem.phos. accel.Cr. Lacquer BF-4 with nigrozene, 2 coats, made as per OST 3-4123-78, IV, OM2.
- 12.* Dimensions as parameters for reference.
13. Other technical requirements as per GOST 16118-70.
14. 11. Mark Ш, Ч and stamp K, И on tag.

					AK-630 106-4			
Amend.	Sheet	Doc.No.	Sign	Date	Spring	Type	Weight	Scale
Developed by						A	0.005	5:1
Checked by						Sheet	Sheets	1
Head of Q.C.D					Wire V-1-1.6 GOST 9389-75			
Approved by								

AK-630 106-5

Approved OGMet	Approved KT. -I	Approved by shop	First use
Orig. Inv. No.	Sign and Date	Reference No.	
Design bureau chief	Dupl. Inv. No.		
Head of Q.C.D	Apprc. TOsb		
Checked by	Alternate Inv. No.		
Developed by	Sign and Date		
Amend.			
Sheet			
Doc. No.			
Sign			
Date			



1. 31..40.5 HRC_E.
- 2.* Dimension ensured by tool.
3. Blunt sharp edges ~0.4 mm.
4. Coating Cd 6.Phos. Oil.
5. Mark Ш, Ч and stamp K on tag.
6. Stamp И as per AK-630, AK-630M TU I.

Amend.	Sheet	Doc. No.	Sign	Date
Developed by				
Checked by				
Head of Q.C.D				
Design bureau chief				
Head of Q.C.D				
Approved by				

AK-630 106-5			
Plug	Type	Weight	Scale
	A	0.030	2:1
	Sheet	Sheets 1	
Steel 40Kh GOST 4543-71			

Copied by

Format A4

First use

Reference No.

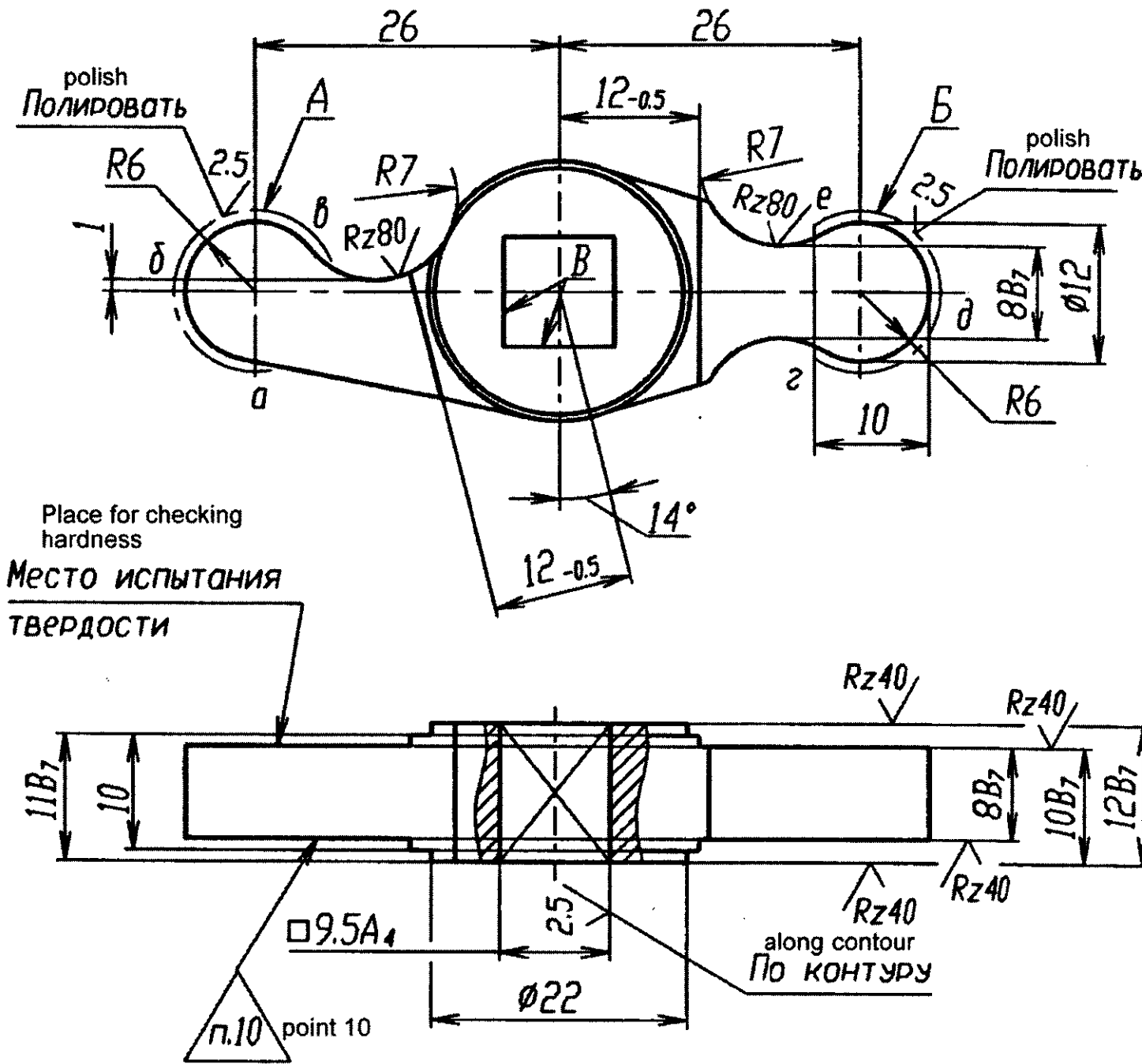
Sign and Date

Duplicate Inv. No

Alternate Inv. No

Sign and Date

Orig. inv. no.



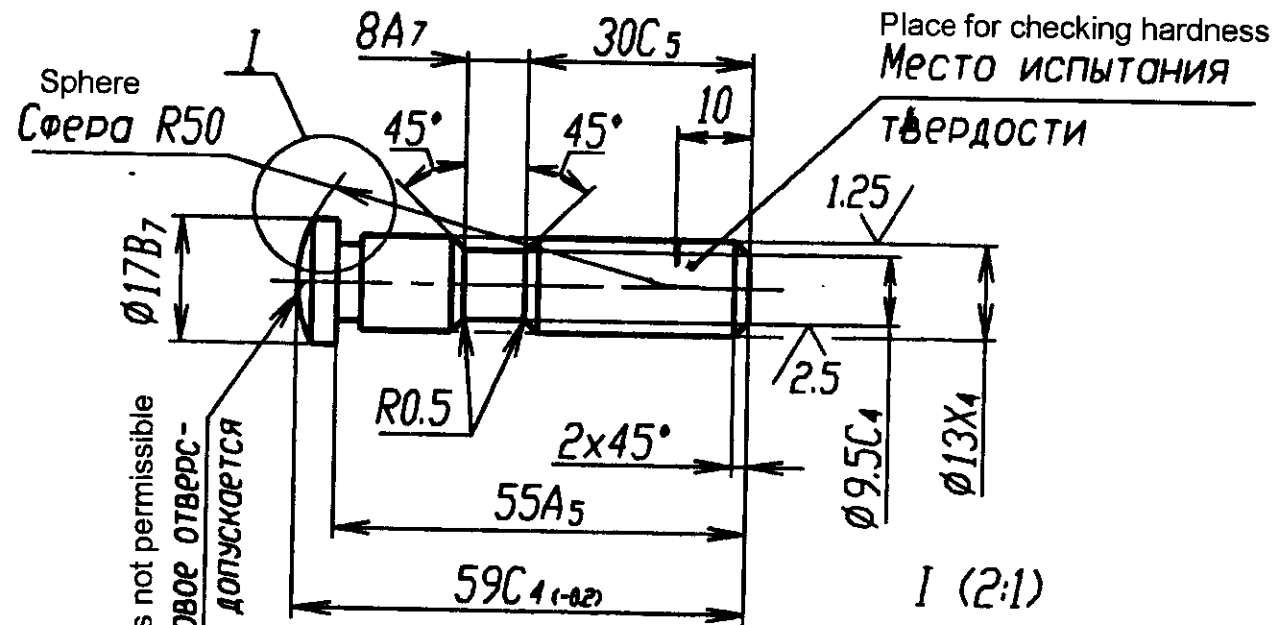
✓ (✓)

1. Substitute material- steel 50A OST3-98-80.
2. Blank-Forging accuracy class T 5 GOST 7805-89.
Surface defects on un machined surfaces should not be deeper than 0.5 mm.
3. 38.5..44.5 HRC_E.
4. Inner angles R~0.4 mm.
5. Blunt sharp edges ~0.6 mm.
6. Allowance for contour "а б в", "г д е" – 0.12 mm. from plane B of square.
7. Blunt sharp edges ~1 mm at places of chrome plating.
8. Coating of surface A and Б- Kh42;
For others- Cd 12.phos.
- Lacquer BF-4 with Nigrozene 2 coats, made as per OST 3-4123-78, IV, OM2.
9. Mark Ш, Ч on tag.
10. Stamp К, И as per AK-630, AK-630M TU I.

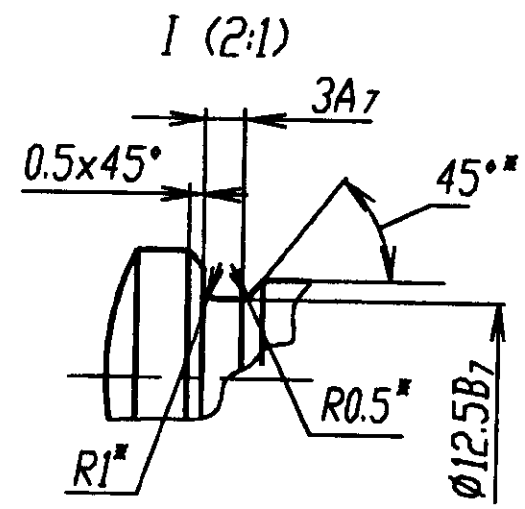
					AK-630 106-7			
Amend.	Sheet	Doc.No.	Sign	Date	Lever	Type	Weight	Scale
Developed by						A	0.056	2:1
Checked by						Sheets 1		
Head of Q.C.D								
Approved by					Steel 50 GOST 1050-88			

AK-630 106-9

Rz40 ✓ (✓)



Centre holes not permissible
Центровое отверстие не допускается



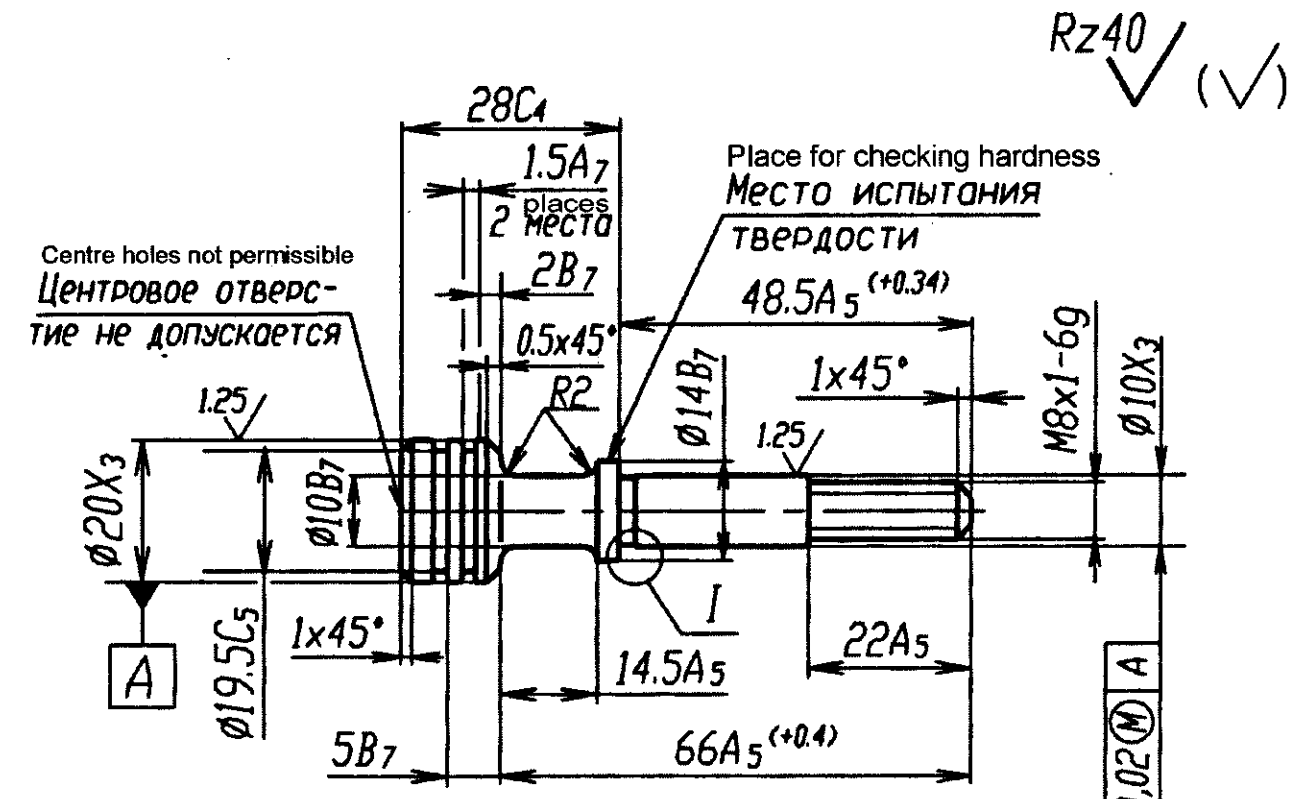
1. 38.5..44.5 HRC_E.
- 2.* Dimension ensured by tool.
3. Blunt sharp edges ~0.6 mm.
4. Coating Cd 6.Phos. Oil.
5. Mark Ш, Ч and stamp К, И on tag.

Approved OGMet	Approved KT	Approved by shop	First use
Orig. Inv. No.	Alt. Inv. No.	Reference No.	
Sign and Date	Sign and Date		
Appr. of TOsb	Dupl. Inv. No.		

Amend.	Sheet	Doc. No.	Sign	Date

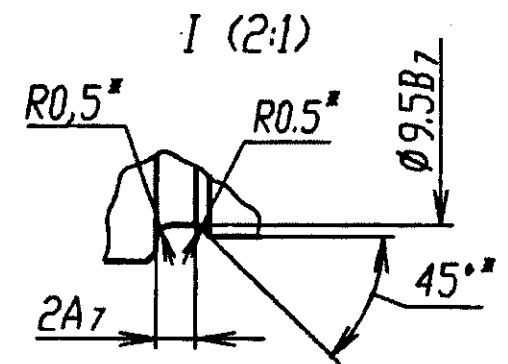
AK-630 106-9			
Rod	Type	Weight	Scale
	A	0.055	1:1
	Sheet	Sheets 1	
Steel 40Kh GOST 4543-71			

AK-630 106-11



Centre holes not permissible
Центровое отверстие не допускается

Place for checking hardness
Место испытания ТВЕРДОСТИ

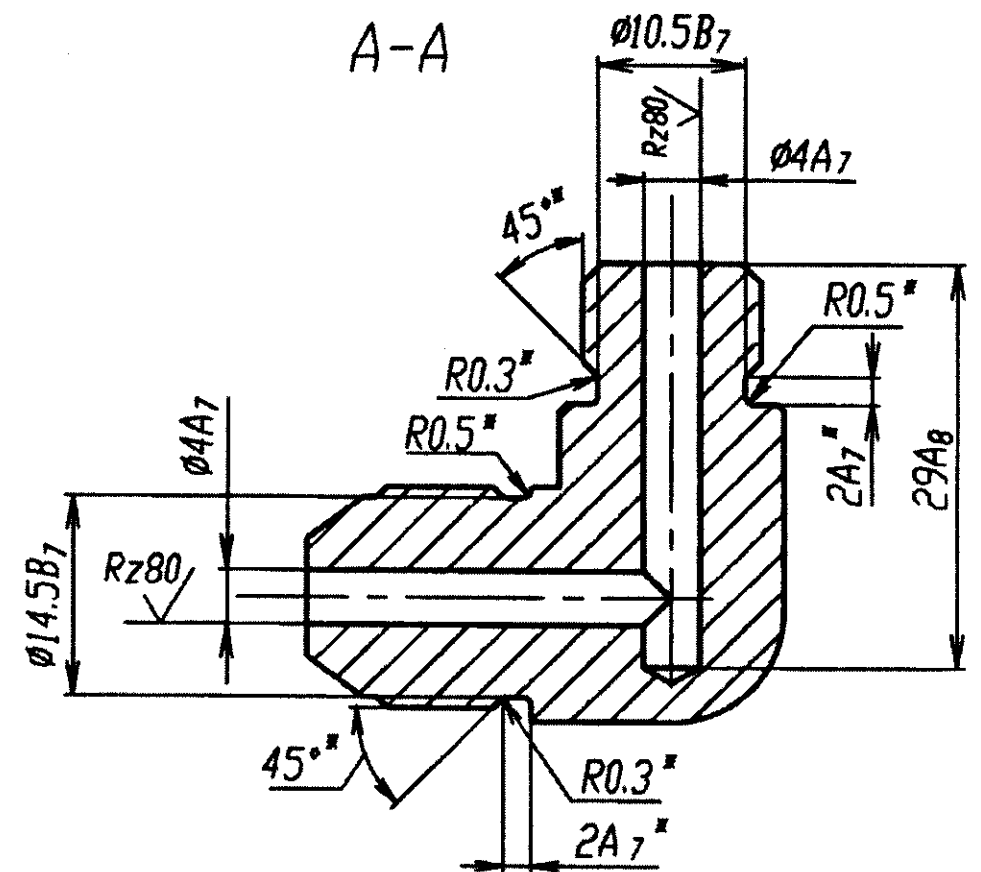
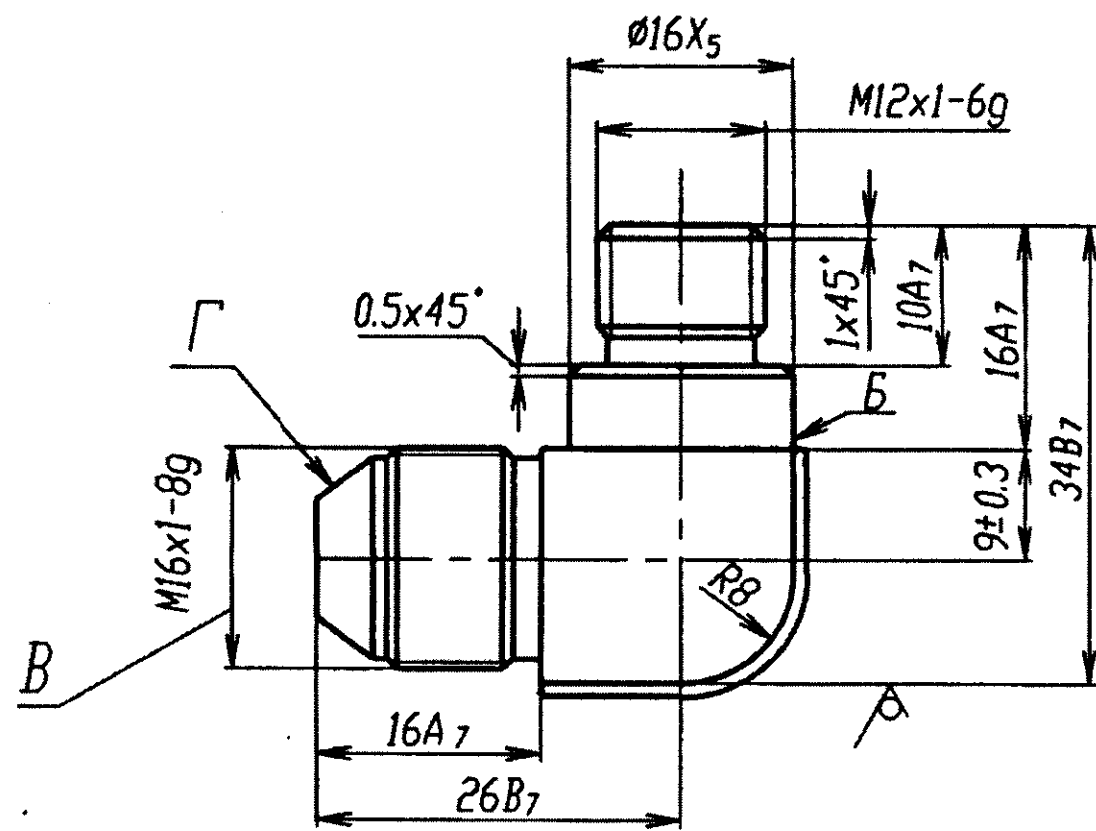


1. HRC_E 38.5...44.5. Check hardness on 3-5% of the batch , but not less than 3 nos.
2. Dimensions ensured by tool.
3. Inner angles R~0.4 mm.
4. Blunt sharp edges ~0.6 mm.
5. Coating Cd 6.phos.Oil.
6. Mark Ш, Ч and stamp K, И on tag.

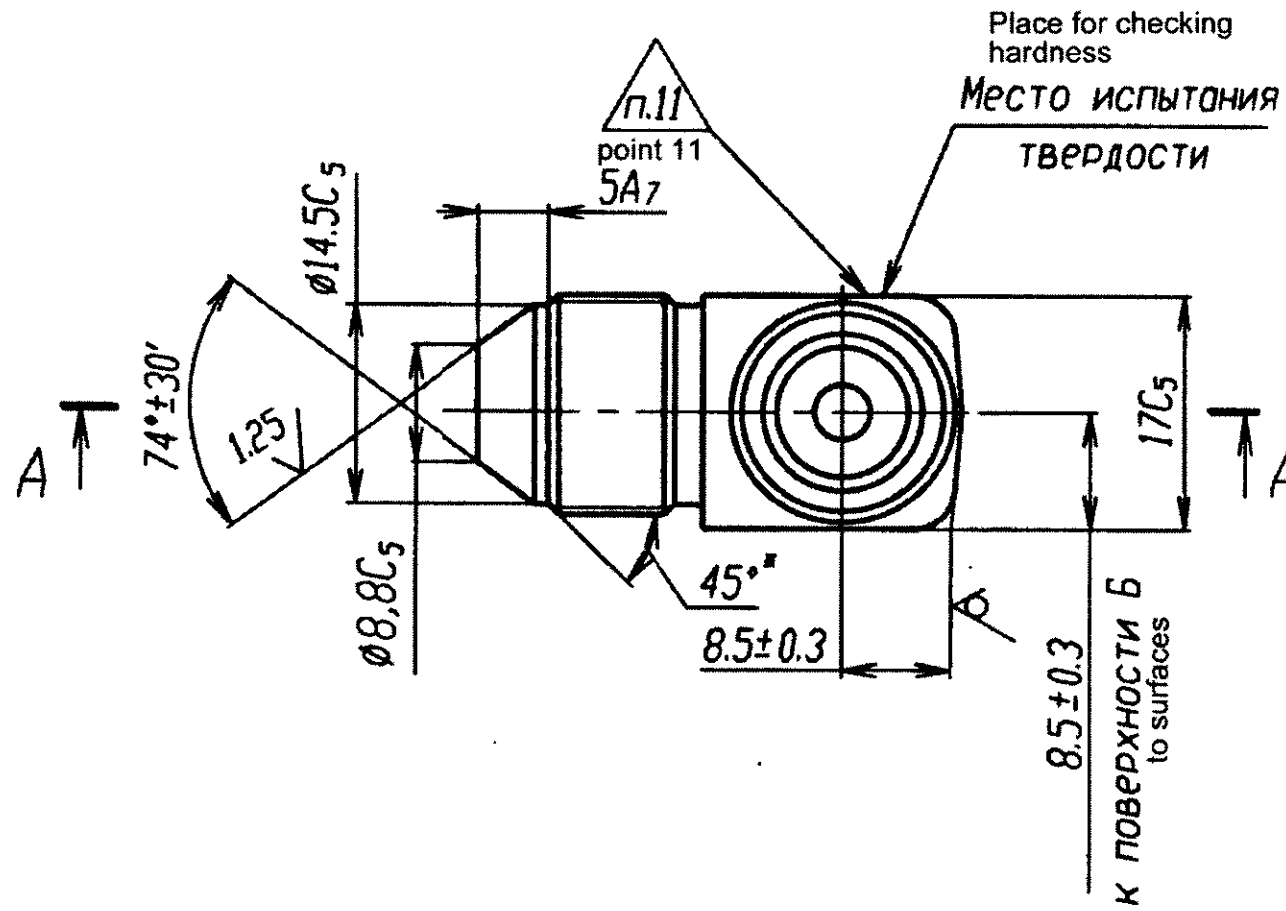
Approved OGMet	Approved KT	Approved by shop	First use
Orig. Inv. No.	Sign and Date	Reference No.	
Design bureau chief	Sign and Date		
Head of Q.C.D	Sign and Date		
Checked by	Sign and Date		
Developed by	Sign and Date		
Amend.	Sheet	Doc. No.	Sign Date

Amend.	Sheet	Doc. No.	Sign	Date

AK-630 106-11			
Piston	Type	Weight	Scale
	A	0.075	1:1
	Sheet	Sheets 1	
Steel 40Kh GOST 4543-71			



Rz40 (✓)



1. Blank-Forging accuracy class T 5 GOST 7805-89.
2. Forging gradient 7° unless otherwise specified.
3. Surface defects on un machined surfaces should not be deeper than 0.3 mm.
- 4.* Dimensions ensured by tool.
5. Blunt sharp edges ~ 0.6 mm.
6. 38.5..44.5 HRC_E.
7. Coating : Cd 6. phos. oil.
8. Run out of taper Γ surface with respect to mean diameter of thread B not more than 0.05 mm.
9. It is permissible to avoid cadmium plating of inner surfaces $\phi 4 A_7$.
10. Mark Ш, Ч and stamp K on tag.
11. Stamp И as per AK-630, AK-630M TU I.

					AK-630 106-15			
Amend.	Sheet	Doc.No.	Sign	Date	Angle piece	Type	Weight	Scale
Developed by						A	0.070	2:1
Checked by						Sheets 1		
Head of Q.C.D					Steel 40 Kh GOST 4543-71			
Approved by								

AK-630 106-17

First use

Approved by shop
Reference No.

Approved KTONI

Sign and Date

Approved Jsb

Alternate Inv. No

Sign and Date

Approved OGMet

Orig. Inv. No.

Rz80 ✓ (✓)

holes
30TB Ø4.2A₇

1. * Reference dimension.
 2. Dimensions ensured by tool.
 3. Blunt sharp edges ~0.4 mm.
 4. Coating Cd 12.phos. Lacquer BF-4 with Nigrosine , two coats, made as per OST 3-4123-78 IV, OM2.
 5. Mark Ш, Ч and stamp K on tag.

AK-630 106-17				
Amend.	Sheet	Doc. No.	Sign	Date
Developed by				
Checked by				
Head of Q.C.D				
Design bureau chief				
Head of Q.C.D				
Approved by				

AK-630 106-17			
Gasket	Type	Weight	Scale
	A	0.015	1:1
	Sheet	Sheets 1	

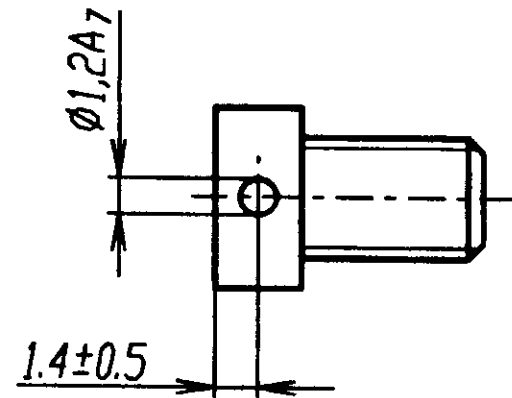
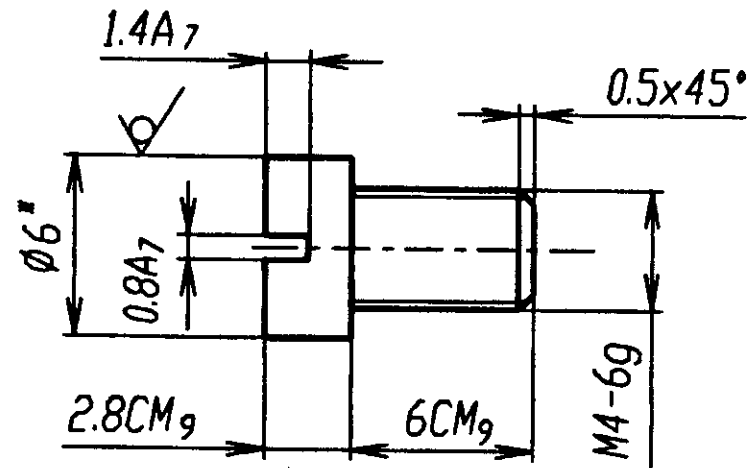
Sheet BT - PN - 01.5 GOST 19904 - 90
K 490V 4 - III - 35 GOST 16523 - 97

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Format A4

AK-630 106-18

Rz80
✓ (✓)



1. 65.5...70 HRA ; check on test specimen.
2. * Reference dimension.
3. Inner angles R~0.2 mm.
4. Blunt sharp edges ~0.6 mm.
5. Coating Cd 6. phos.Oil.
6. Mark Ш, Ч and stamp K, И on tag.

Approved OGMet	Approved by shop	Approved KTONI	Approved Osb	Approved Inv. No	Dupl. Inv. No.	Sign and Date	Sign and Date	Sign and Date	Sign and Date
Orig. Inv. No.	Reference No.		Alternate Inv. No						

Amend.	Sheet	Doc. No.	Sign	Date

AK-630 106-18			
Screw	Type	Weight	Scale
	A	0.001	4:1
	Sheet	Sheets 1	
Wheel	6 - 5GOST 7417 - 75 40KhV - NGOST1051 - 73		

First use

Reference No.

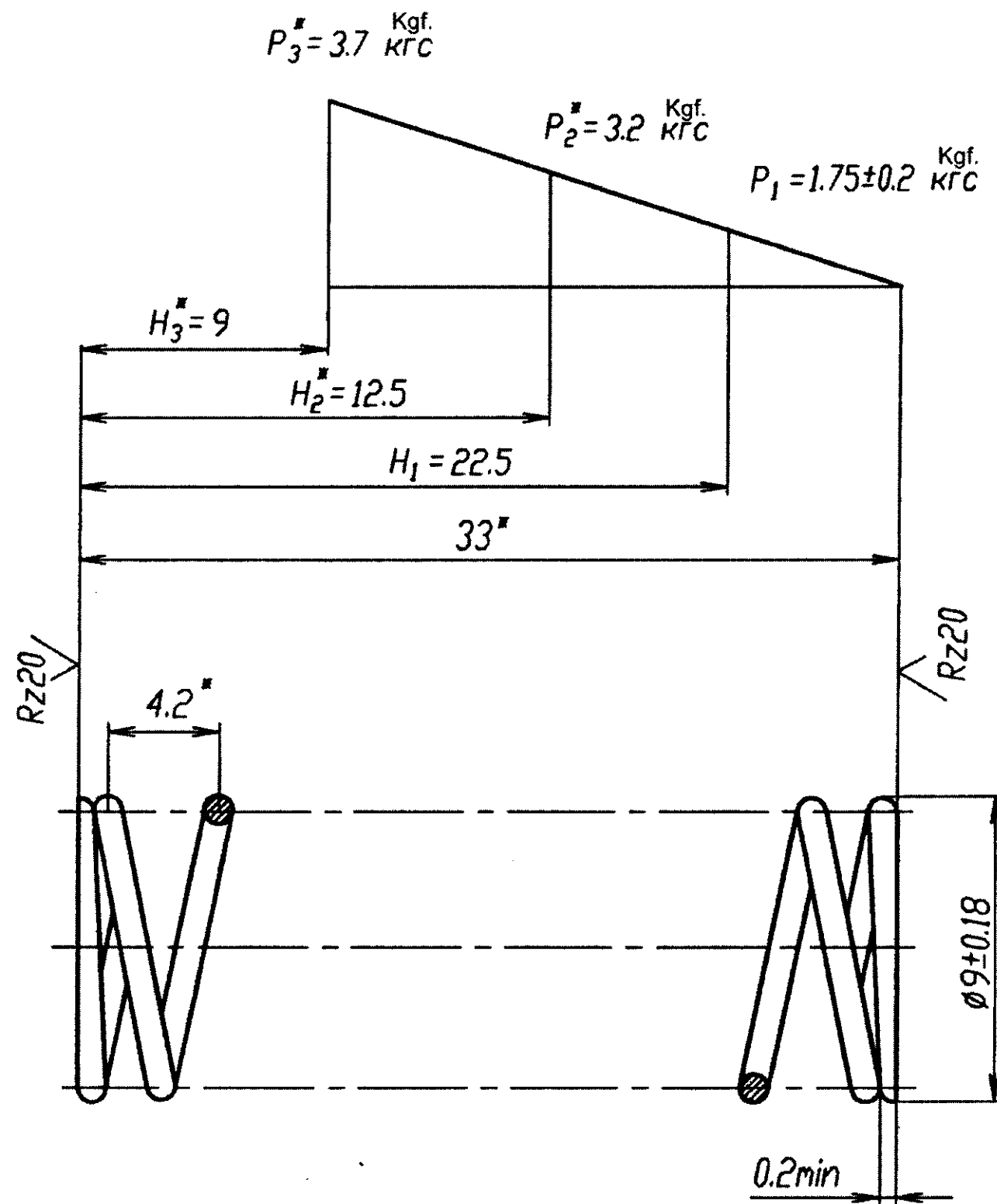
Sign and Date

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Alternate Inv. No

Sign and Date

Orig. inv. no.



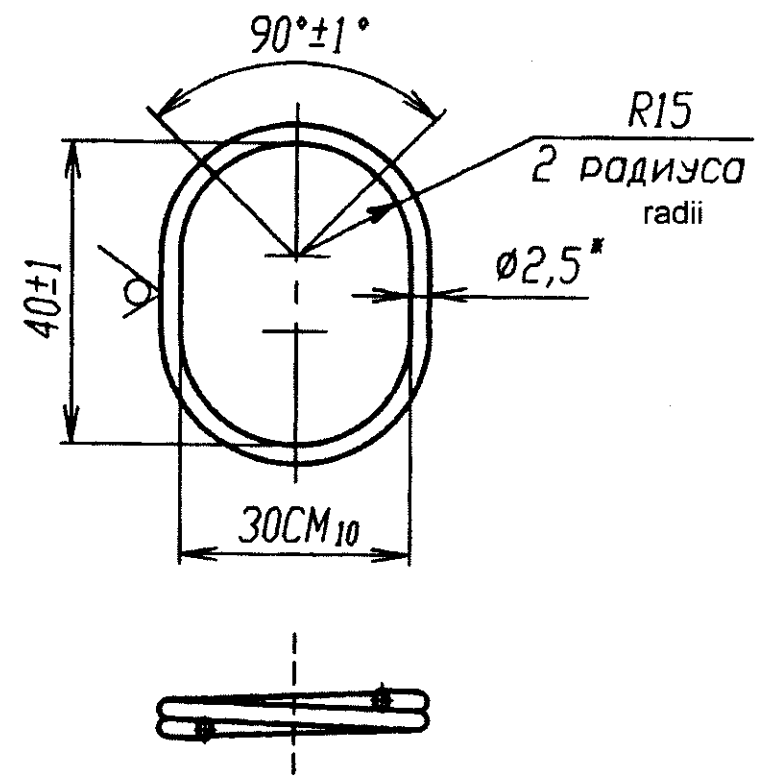
✓(✓)

1. Group I.
2. $G^* = 8000 \text{ kgf/mm}^2$. $\tau_3^* = 127 \text{ kgf/mm}^2$.
3. Unrolled length of spring $L^* = 275 \text{ mm}$.
4. Coiling direction- right.
5. $n = 7.5$.
6. $n_1 = 9.5 \pm 0.5$.
7. Heat treatment- tempering $240-260^\circ\text{C}$.
8. $D_g = 10A_5 \text{ mm}$.
9. D_s .
10. Pre deformation time (at H_z) -24 hours.
11. Coating Chem.phos. accel.Cr. Lacquer BF-4 with nigrozene, 2 coats, made as per OST 3-4123-78, IV, OM2.
12. * Dimensions and parameters for reference.
13. Other technical requirements as per GOST 16118-70.
14. Mark Ш, Ч and stamp K, И on tag.

					AK-630 106-21			
Amend.	Sheet	Doc.No.	Sign	Date	Spring	Type	Weight	Scale
Developed by						A	0.001	5:1
Checked by						Sheet	Sheets	1
Head of Q.C.D					Wire V-1-0.9 GOST 9389-75			
Approved by								

AK-630 106-24

Approved OGMet	Orig. Inv. No.	Sign and Date	Alternate Inv. No.	Approved Dsb	Dupl. Inv. No.	Sign and Date	Approved KTONI	Reference No.	Approved by shop	First use
	Sign and Date							Reference No.	Approved by shop	First use



1. Substitute material : Wheel $\frac{3-5 GOST 7417-75}{50-T-V GOST 1051-73}$
2. 69.72 HRA, Check on specimen.
- 3.* Reference dimension.
4. Blunt sharp edges ~0.4 mm.
5. Number of turns n = 1.8
6. Coating Cd 12.phos. Oil.
7. Mark Ш, Ч and stamp K, И on tag.

Amend.	Sheet	Doc. No.	Sign	Date

AK-630 106-24			
Ring	Type	Weight	Scale
	A	0.009	1:1
Sheet		Sheets 1	
Wire 2.5-50 GOST 17305-91			

Copied by

Format A4

First use

Reference No.

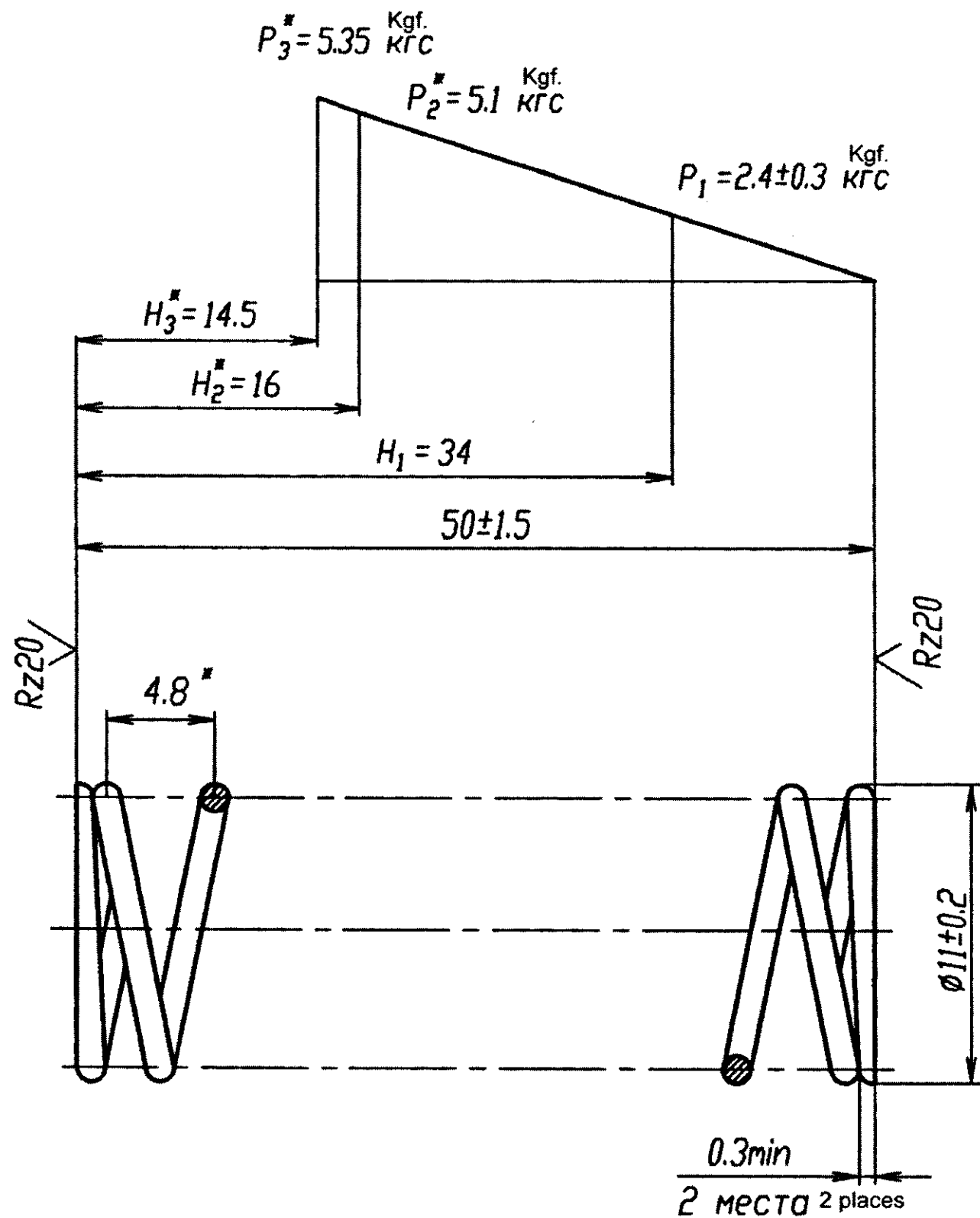
Sign and Date

Duplicate Inv. No

Alternate Inv. No

Sign and Date

Orig. inv. no.



✓(✓)

1. Group III.
2. $G^* = 8000 \text{ kgf/mm}^2$. $\tau_3^* = 118 \text{ kgf/mm}^2$.
3. Unrolled length of spring $L^* = 400 \text{ mm}$.
4. Coiling direction- left.
5. $n = 10$.
6. $n_1 = 12 \pm 0.5$.
7. Heat treatment- tempering $240-260^\circ\text{C}$.
8. $D_g = 11.8A_5$
9. D_s .
10. Pre deformation time (at H_2) -24 hours.
11. Coating Chem.phos. accel.Cr. Lacquer BF-4 with nigrozene, 2 coats, made as per OST 3-4123-78, IV, OM2.
- 12.* Dimensions and parameters for reference.
13. Other technical requirements as per GOST 16118-70.
14. Mark Ш, Ч and stamp K, И on tag.

					AK-630 106-25			
Amend.	Sheet	Doc.No.	Sign	Date	Inner Spring	Type	Weight	Scale
Developed by						A	0.002	5:1
Checked by						Sheet	Sheets 1	
Head of Q.C.D					Wire V-1-1.1 GOST 9389-75			
Approved by								

First use

Reference No.

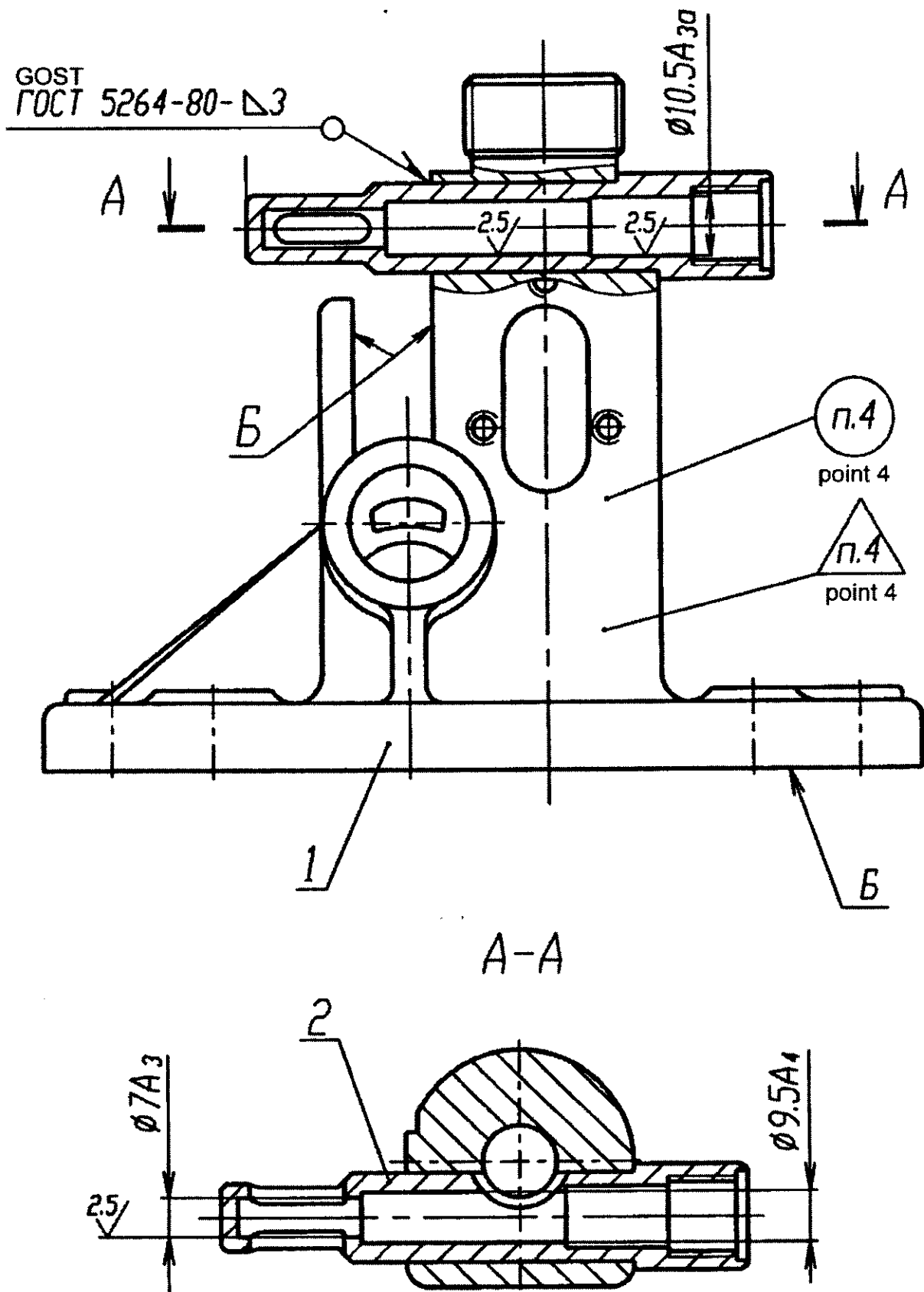
Sign and Date

Duplicate Inv. No

Alternate Inv. No

Sign and Date

Orig. inv. no.



1. Argon-arc welding as per GOST 14771-76 with filler wire 5Sv.06 Cr.19Ni9Ti GOST 2246-70 is permissible.
Welding rod UONII 13/45 3.0-3 GOST 9466-75.
2. Remove stress after welding.
3. Coating of inner surfaces, surface B and thread- Chem.phos., for others:
Primer AK-070, yellow, (2)
Enamel KhV-124, gray, (4), IV OM2.
AK-070 GOST 25718-83
KhV-124 GOST 10144-89.
4. Mark Ш, Ч and stamp K as per AK-630, AK-630M TU I.

					AK-630 Sb 106-1 SB			
Amend.	Sheet	Doc.No.	Sign	Date	Assembled body Assembly drawing	Type	Weight	Scale
Developed by						A	3.350	1:1
Checked by						Sheet	Sheets 1	
Head of Q.C.D								
Approved by								

First use

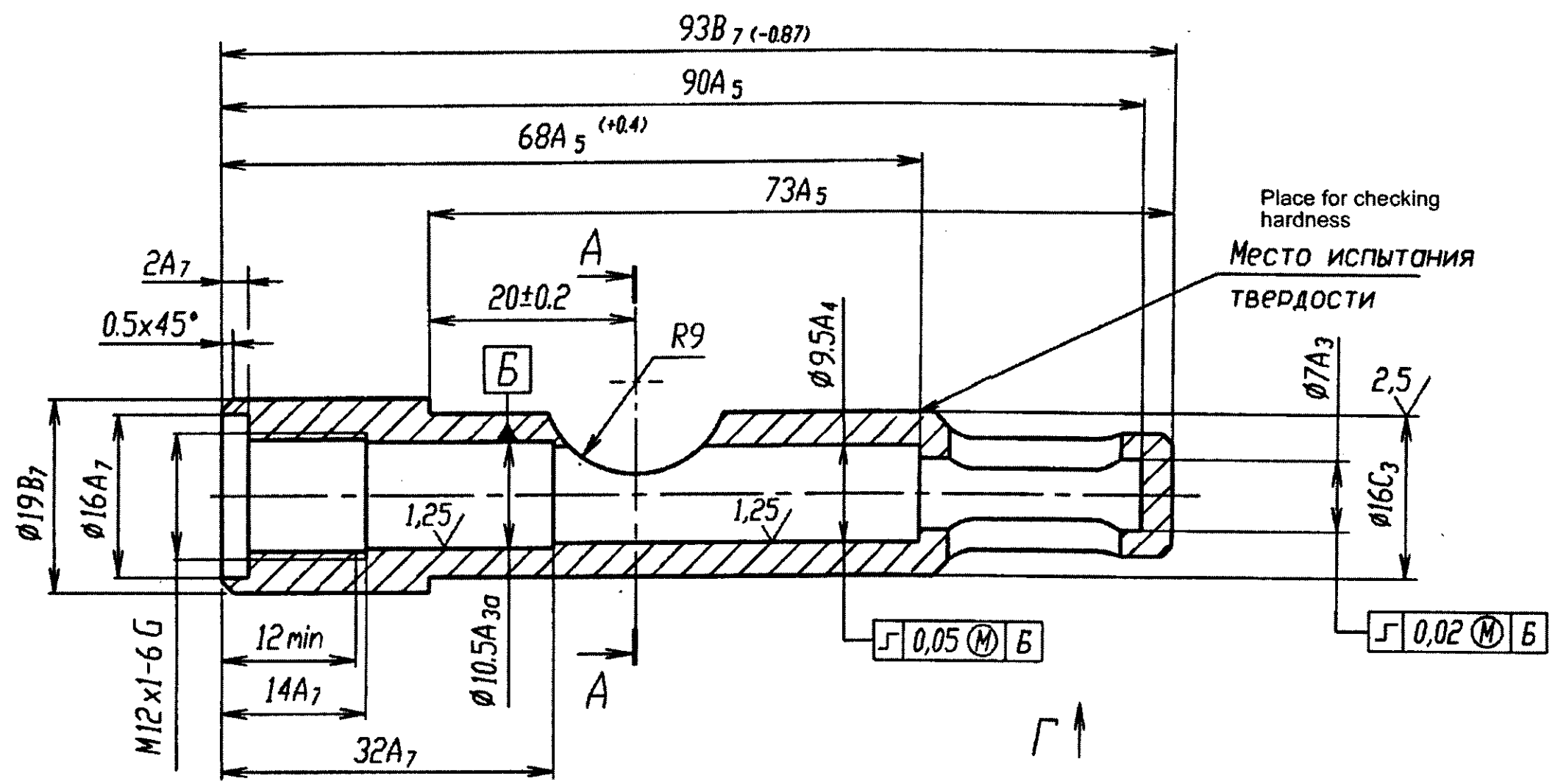
Reference No.

Duplicate Inv. No Sign and Date

Alternate Inv. No

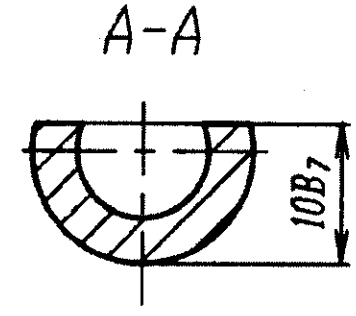
Sign and Date

Orig. inv. no.

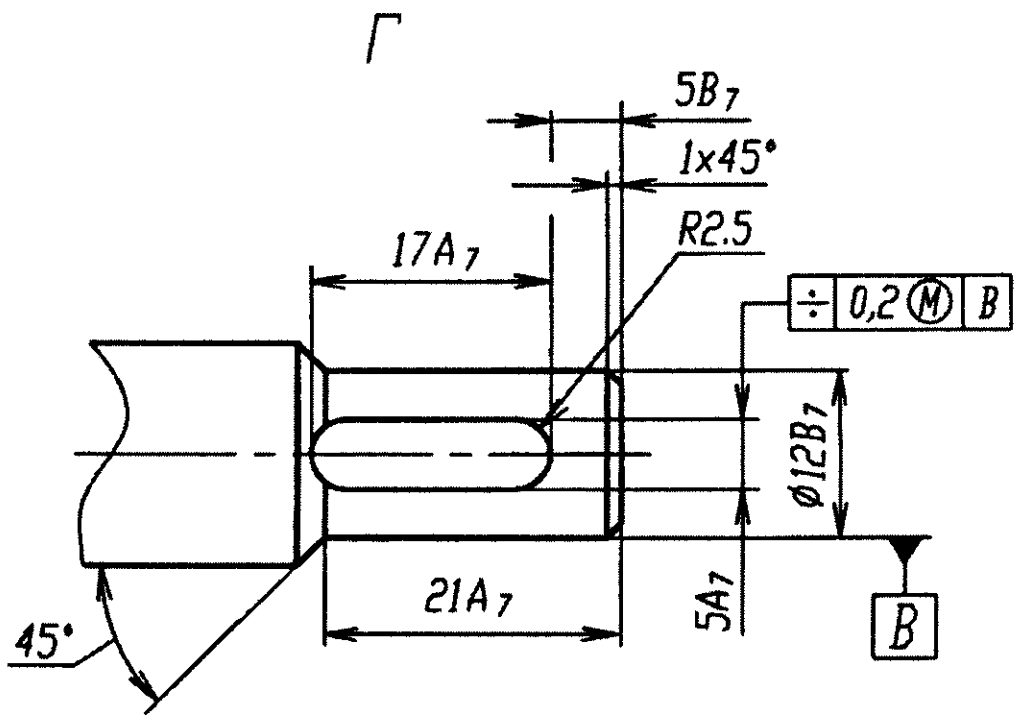


Rz80
✓ (✓)

Place for checking hardness
Место испытания твердости



- 34..39.5 HRC_E. Check hardness of 3-5% from the batch but not less than 3 nos.
- Inner angles R~0.4 mm.
- Blunt sharp edges ~0.6 mm.
- Mark Ш, Ч and stamp K, И on tag.



					AK-630 106-36		
					Sleeve		
					Type	Weight	Scale
					A	0.085	2:1
					Sheet	Sheets 1	
					Steel 35 GOST 1050-88		
Amend.	Sheet	Doc.No.	Sign	Date			
Developed by							
Checked by							
Head of Q.C.D							
Approved by							

