
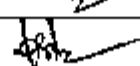


Ref. No.	Designation	Description	Qty	Remarks
		<u>Documents</u>		
	675-71-c6152CB	Assembly drawing		
		<u>Assembly Units</u>		
1	675-71-c6153	Body	1	Replacement with Ref.No.17 is allowed
2	675-71-c6154	Cover	1	Replacement with Ref.No.18 is allowed
3	675-71-c6155	Pipe	1	
4	765-71-c6402	Heater	1	
5	765-71-c6471	Tape	1	
6	765-71-c6472	Tape	1	
17	675-71-c6251	Body	1	Replacement with Ref.No.1 is allowed
18	675-71-c6252	Cover	1	Replacement with Ref.No is allowed
		<u>Parts</u>		
7	765-71-599	Brace	1	
8	765-71-1768	Shaft	2	
9	700-40-260-13	Gasket	1	
		<u>Standard Items</u>		
① 10	CHEESE HEAD SCREW M5X 12 TO IS: 1366-A-8 FULL THREADED, HEAD EDGE TO BE ROUNDED, SCREW END TO BE CHAMFERED. ZINC PLATED 9 MICRONS THICK	Screw B1.M5-8gx12.48.016 FOCT 17473-80 or B.M5-8gx12.66.016 FOCT 1491-80	16	
11		Washer 5.01.019 or 5.02.019 FOCT 11371-78	16	

APPROVED		675-71-Sb 152		
CHECKED		HEATER		WEIGHT
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		SCALE		
		SHT 1	SHTS 2	

Ref. No.	Designation	Description	Qty	Remarks
12		Washer 5T65F05 FOCT 6402-70	16	
14		<u>Materials</u> Wire KO 1,0 FOCT 792-67 L = (150±10) mm	1	

00354-ICV <i>Barb</i>	A <i>RWS</i>	IS EQUIVALENT FOR SCREW AT REF NO. 10 ADDED.
21-5-93 JCU NO. / ATE	ISSUE	NATURE OF AMENDMENTS.

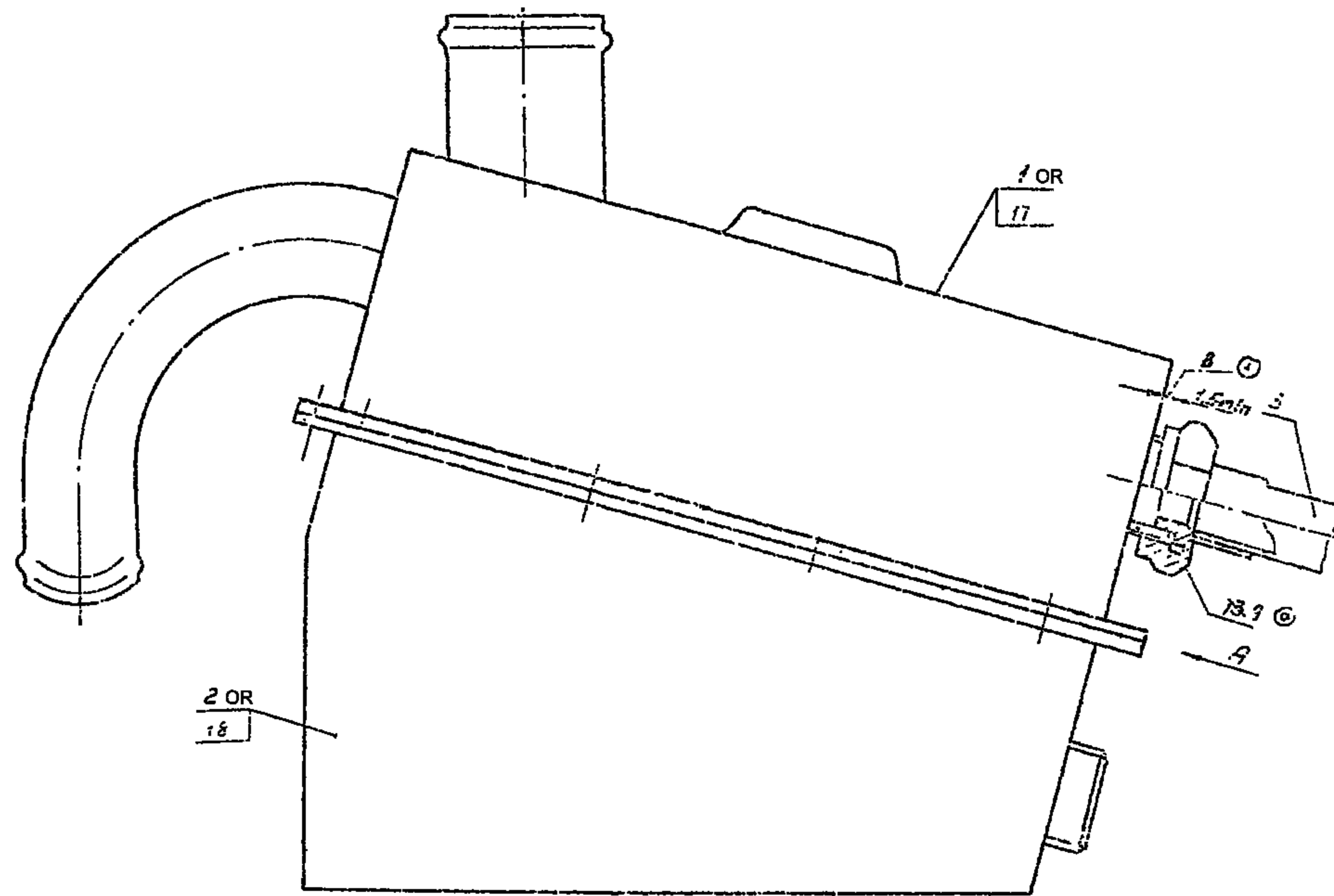
APPROVED

CHECKED *[Signature]*

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

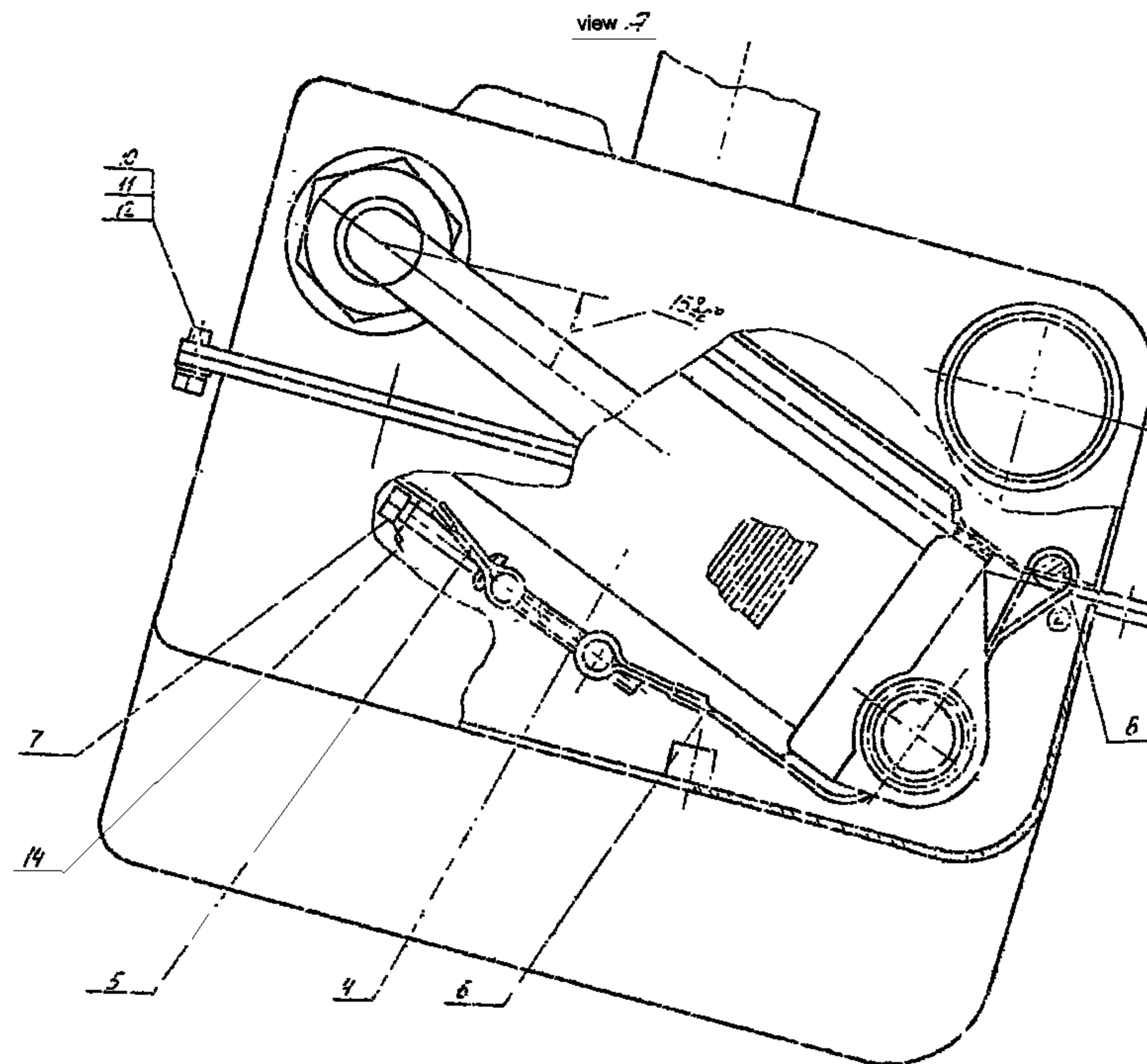
675-71-Sb 152

HEATER	WEIGHT	SCALE
	SHT 2	SHTS 2



TECHNICAL CONDITIONS

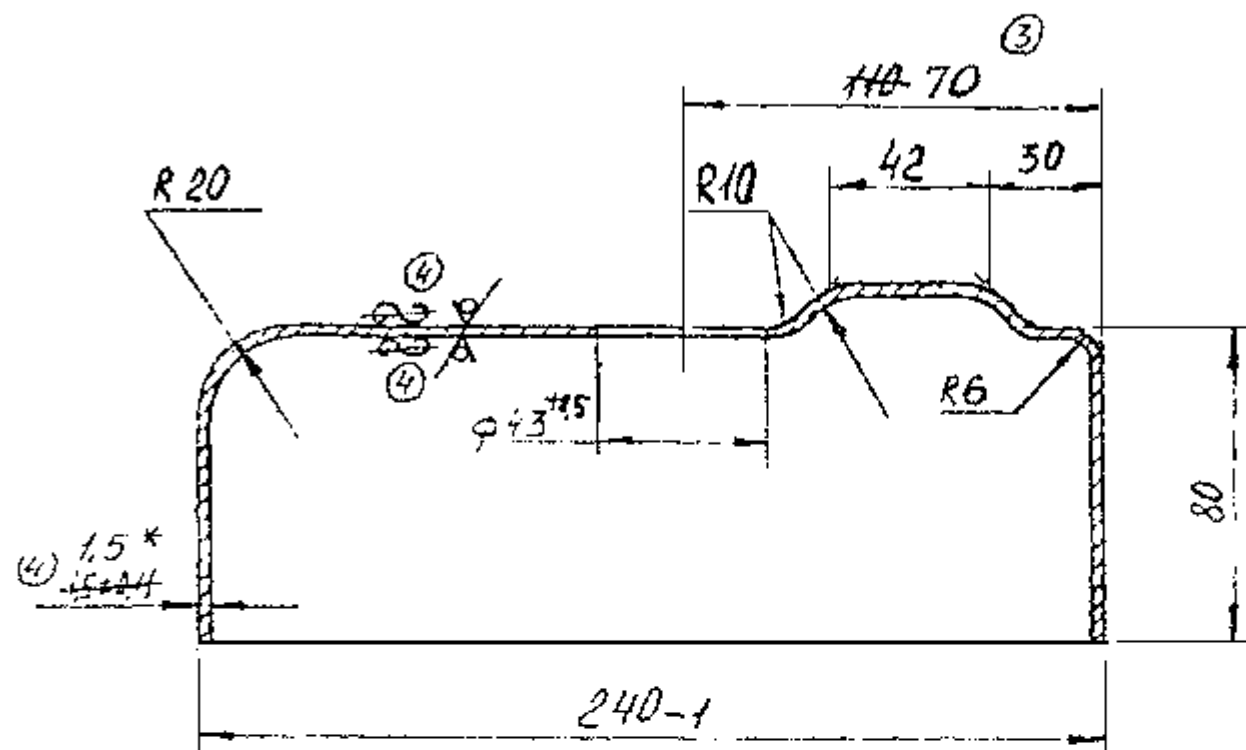
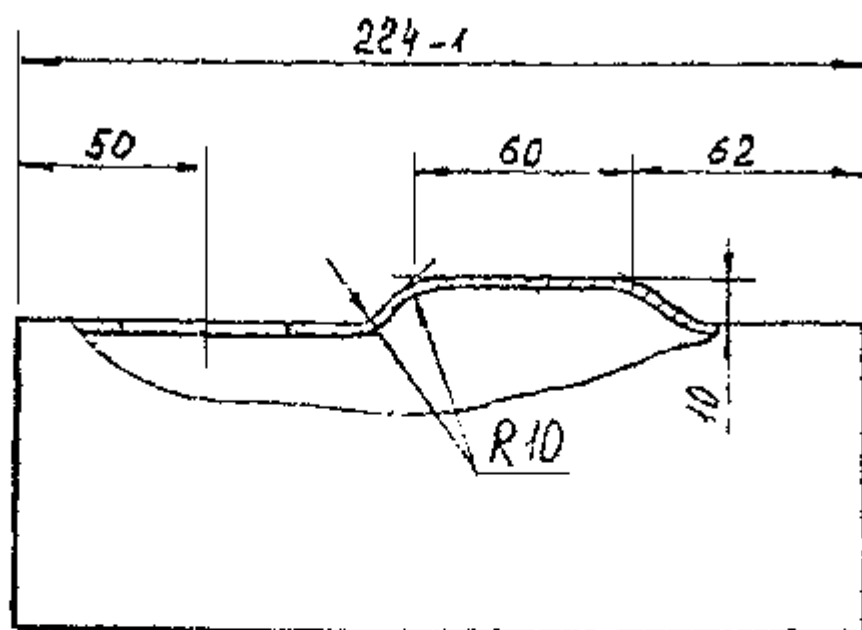
1. Heater should be reliably tightened to body. Rocking and displacement by hand force are not tolerable.
2. Check clearance between heater pipe connections and walls by screwing on nut 700-33-36. Clearance B between nut and box wall - 1.5 mm, minimum.
3. Projection of heater pipe connections from box wall - 10 mm, minimum.



APPROVED		675-71-Sb152Sb	
CHECKED		WEIGHT	SCALE
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		8.596	1:1
		SHT	SHTS

675-71-127

Rz 320/(V) ~~4/10~~
 (4)



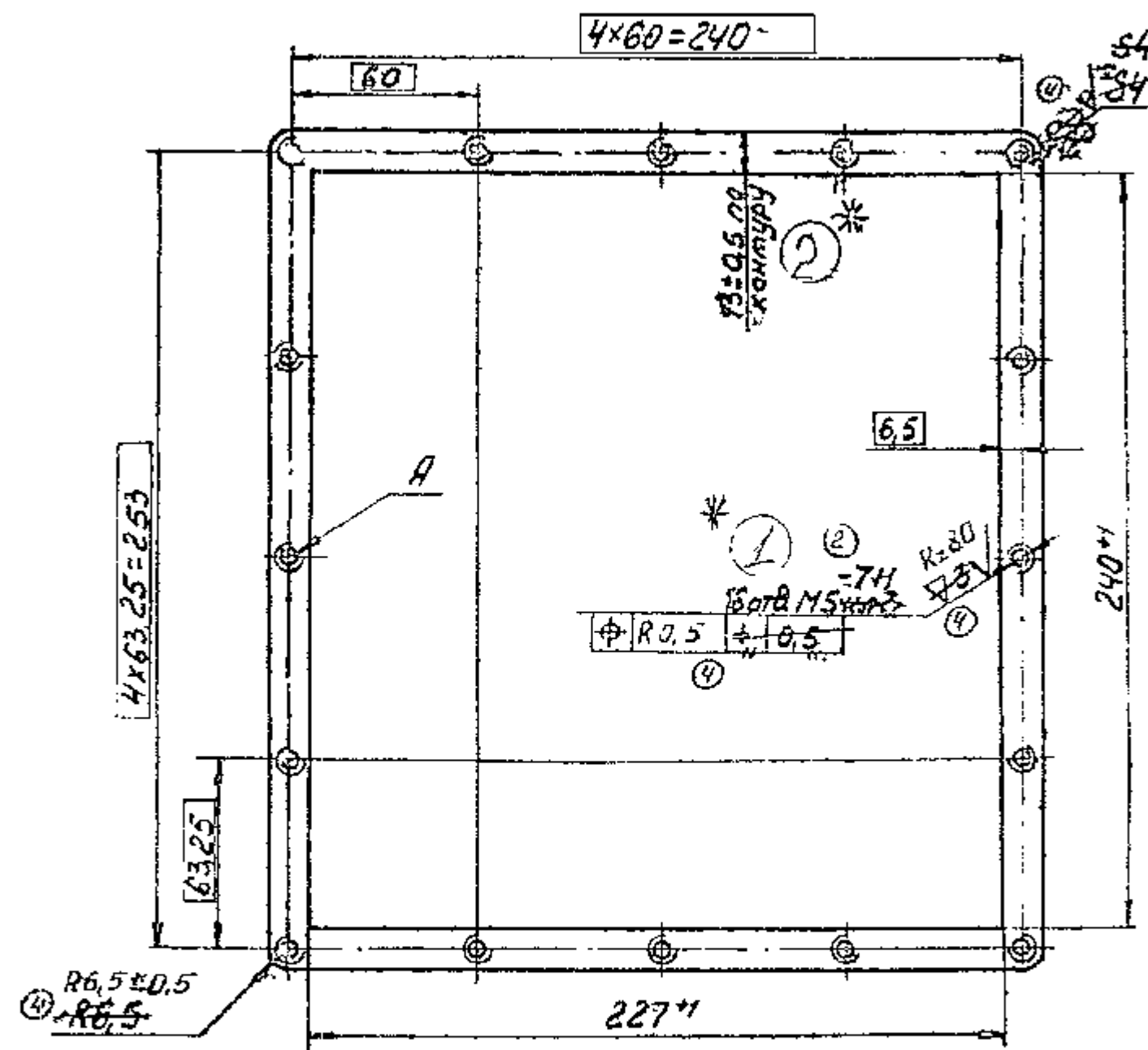
1. Substitute for material - sheets of steels 08кп, 10кп, 20 ГОСТ 1050-74.
2. Unspecified limit deviations of sizes - ±1 mm.
3. Radius of molding angles in plane view - R10.
4. At molding places contraction on side surfaces of 1 mm, maximum, is tolerable.
5. Check bending profile in depressed state.
6. ^нSize is given for reference.

APPROVED		675-71-127					
CHECKED							
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		BODY					
		<table border="1"> <tr> <td>WEIGHT</td> <td>SCALE</td> </tr> <tr> <td>1.013</td> <td>1:2</td> </tr> <tr> <td>SHT 1</td> <td>SHTS 1</td> </tr> </table>		WEIGHT	SCALE	1.013	1:2
WEIGHT	SCALE						
1.013	1:2						
SHT 1	SHTS 1						
Sheet		A-П4-0-1-5 Gost 19904-74 5-II-П-10 Gost 1653-70					

Kz 300/(√) ④

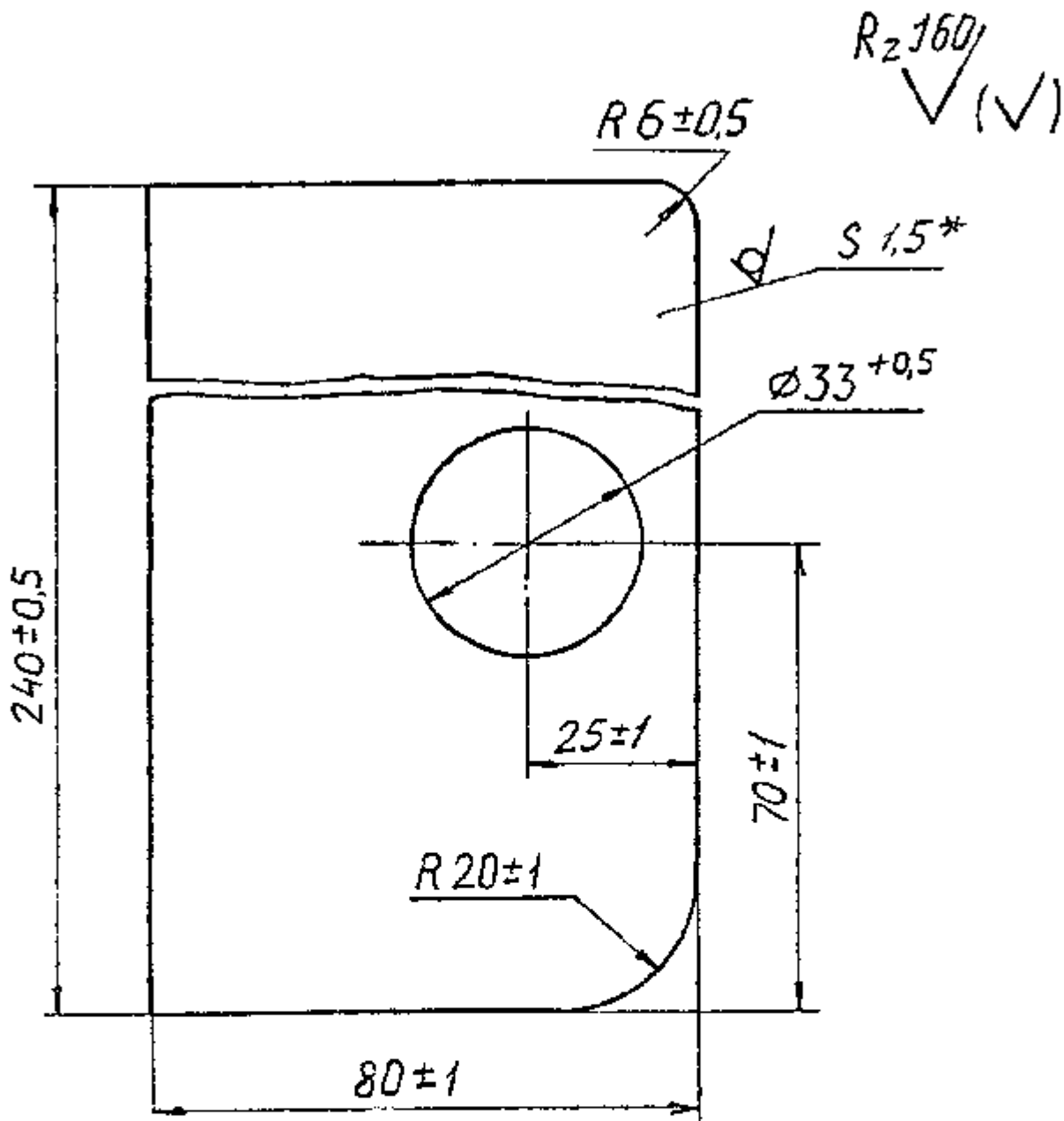
③ TECHNICAL CONDITIONS

- *① 16 holes
- *② around contour
- *③ 1. Substitute for material - sheets of steels 08kn, 10kn, 20
ГОСТ 1050-74.
- 2. Drilling of holes A in assembly is tolerable.
- 3. Stamping bevel of 0.4 mm, maximum, is tolerable.
- 4. ¹²Size is given for reference.



APPROVED	<i>[Signature]</i>	675-71-128	
CHECKED	<i>[Signature]</i>		
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	FLANGE	WEIGHT	SCALE
		0.41	1:2
		SHT 1	SHTS 1
Sheet 5-П4-0-4 Gost 19903-74		10 Gost 157;-81	

675-71-129



TECHNICAL CONDITIONS.

1. Substitute for material - sheets of steels 08кп, 10кп and 20 ГОСТ 1050-74.
2. ^нSize is given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-129

WALL

WEIGHT SCALE

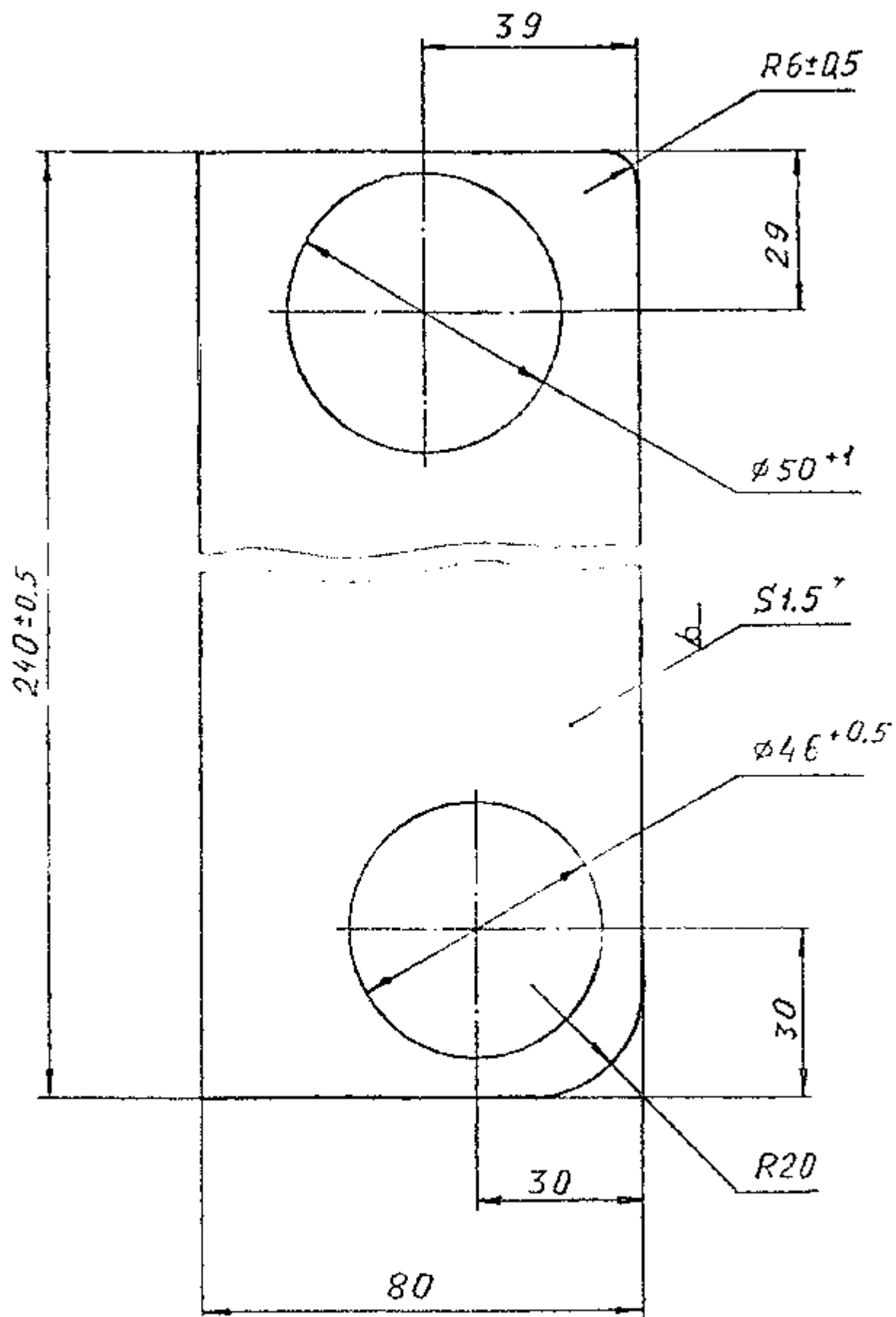
0.23 1:1

SHT 1 SHTS 1

Sheet A-09-0-1.5 ГОСТ 19904-74
5-II-7-10 ГОСТ 16523-70

675-71-130

Rz160
√(√)

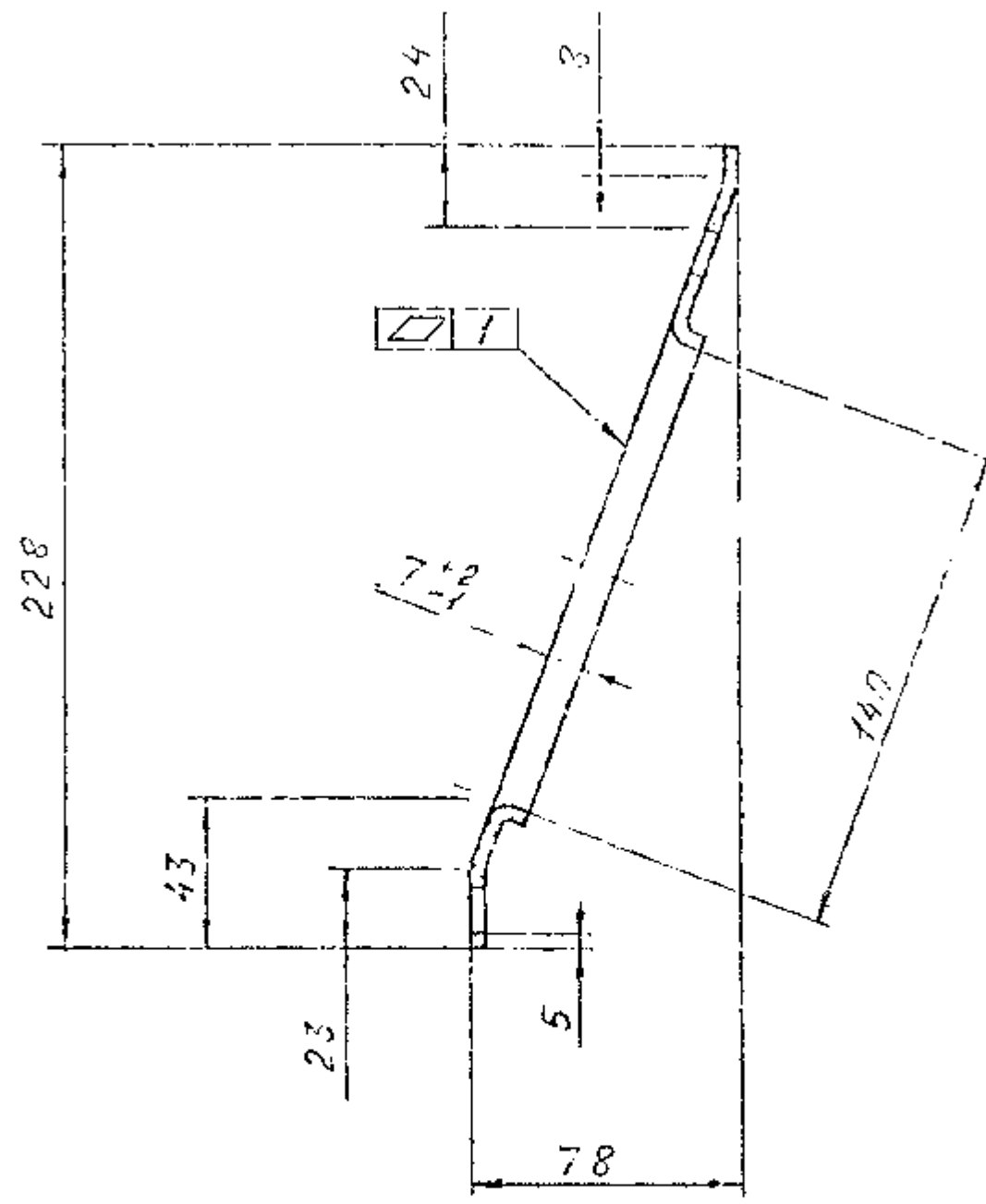
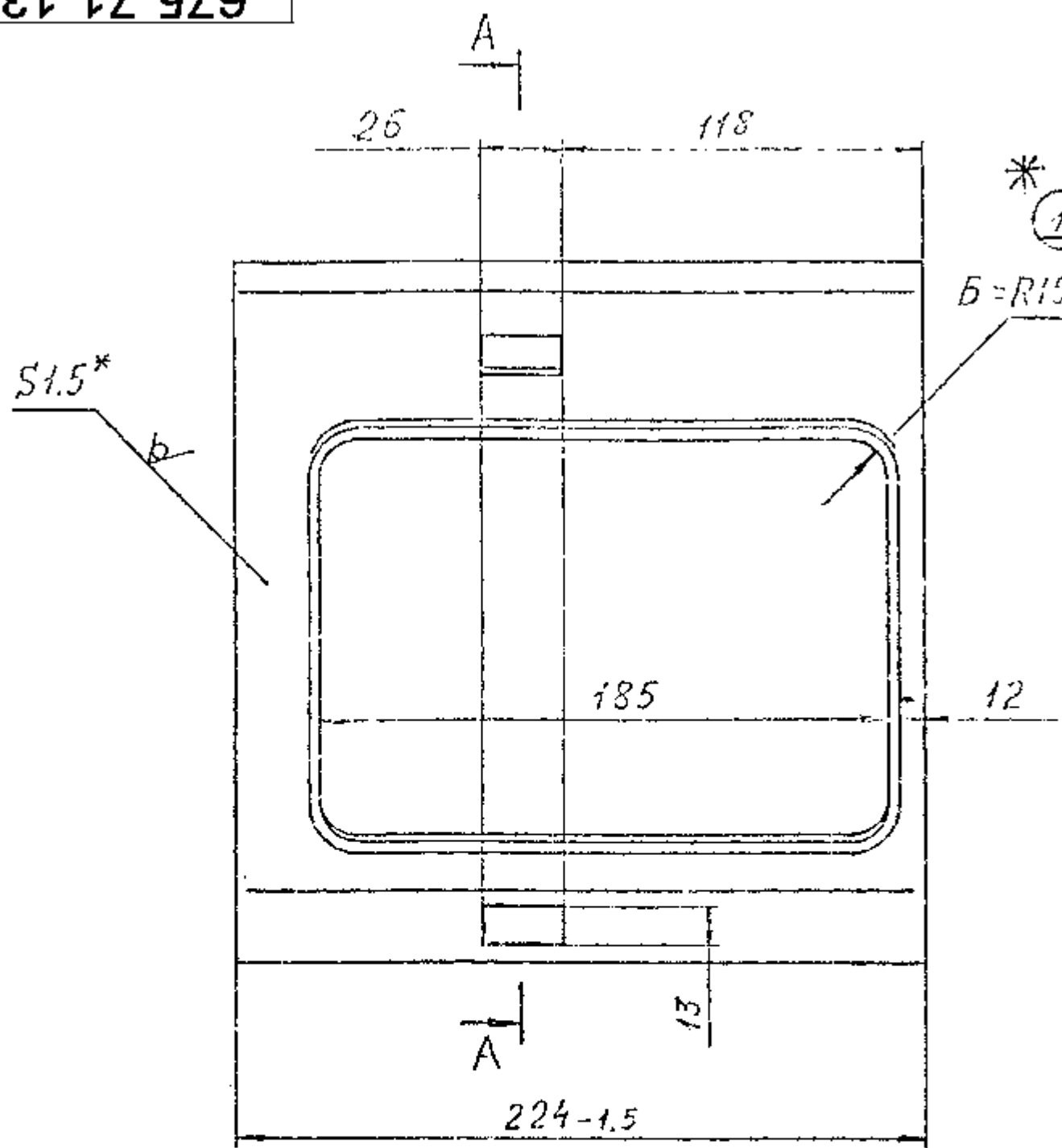


1. Substitute for material - sheets of steels 08кп, 10кп, 20 ГОСТ 1050-74.
2. Unspecified limit deviations of sizes - ± 1 mm.
3. [№]Size is given for reference.

APPROVED		675-71-130	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		WALL	
		WEIGHT	SCALE
		0.195	1:1
		SHT 1	SHTS 1
		Sheet A-ny-0-1-5 Gost 19904-74 5-11-F-10-Gost 16523-70	

675-71-131

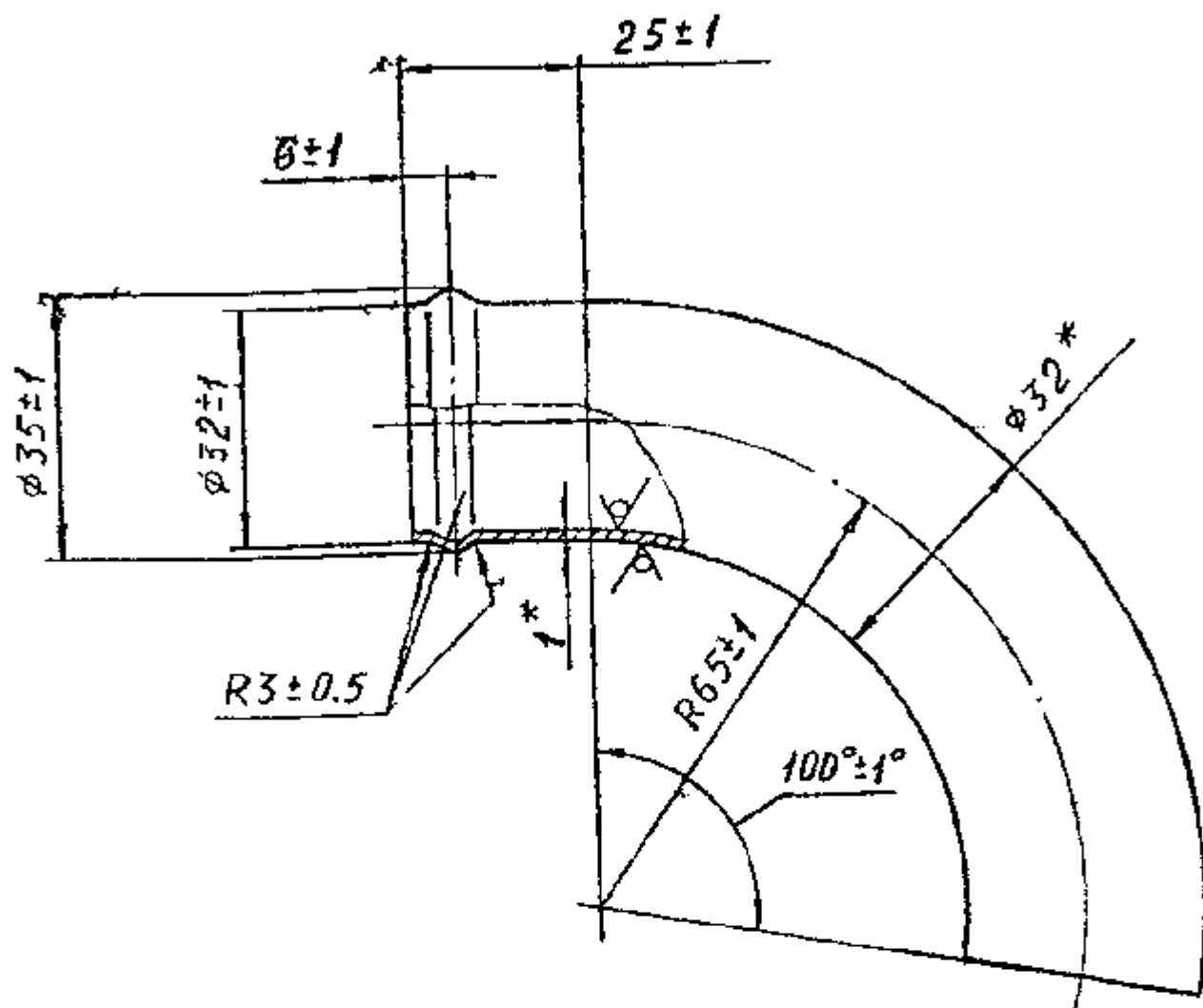
R_z 160
√(√)



* (2) TECHNICAL CONDITIONS

- * (1) B = R15 in bending plane
- * (2) 1. Substitute for material - sheets of steels 08кп, 10кп, 20 ГОСТ 1050-74.
- 2. Unspecified limit deviations of sizes - ± 0.5 mm to 80 mm, ± 1 mm over 80 mm.
- 3. Cracks with subsequent welding and dressing at points of bending B are tolerable.
- 4. Unspecified bending radii - 3 mm.
- 5. ¹²Size is given for reference.

APPROVED		675-71-131	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		WEIGHT	SCALE
		0.350	1:2
		SHT 1	SHTS 1
Sheet A-11-15-16523-70		Gost 19904-74	



1. At points of bending ovality of 2 mm, maximum, and corrugations of 3 mm, maximum, are tolerable.
2. Cutting-out of sectors with subsequent welding is tolerable.
3. * Sizes are given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-132

BRANCH PIPE

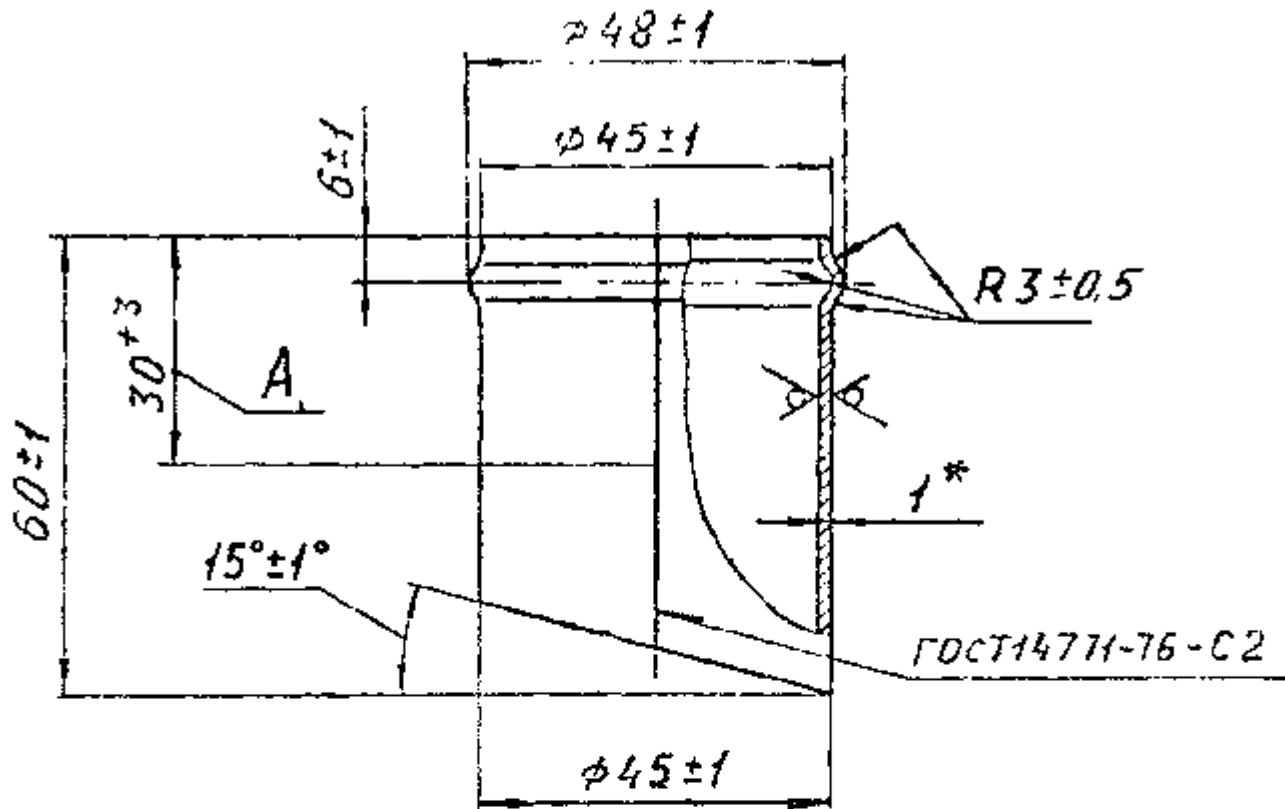
Pipe $\frac{32 \times 1 \text{ Gost } 8734-75}{810 \text{ Gost } 8733-74}$

WEIGHT SCALE

0.105 1:1

SHT SHTS

R_z160
√(√)



1. Substitute for material - sheets of steels 08кп, 10кп, 20 GOST 1050-74.
2. Dress weld flush at section A.
3. ^нSizes are given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-133

BRANCH PIPE

WEIGHT SCALE

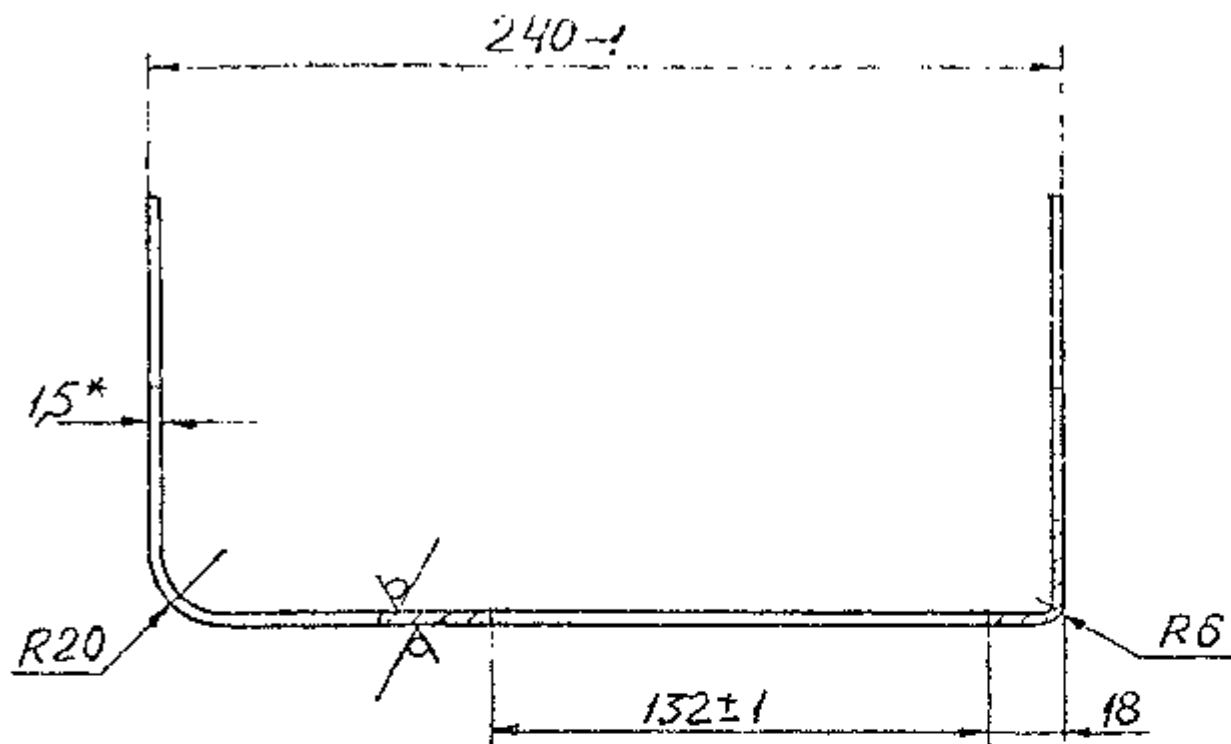
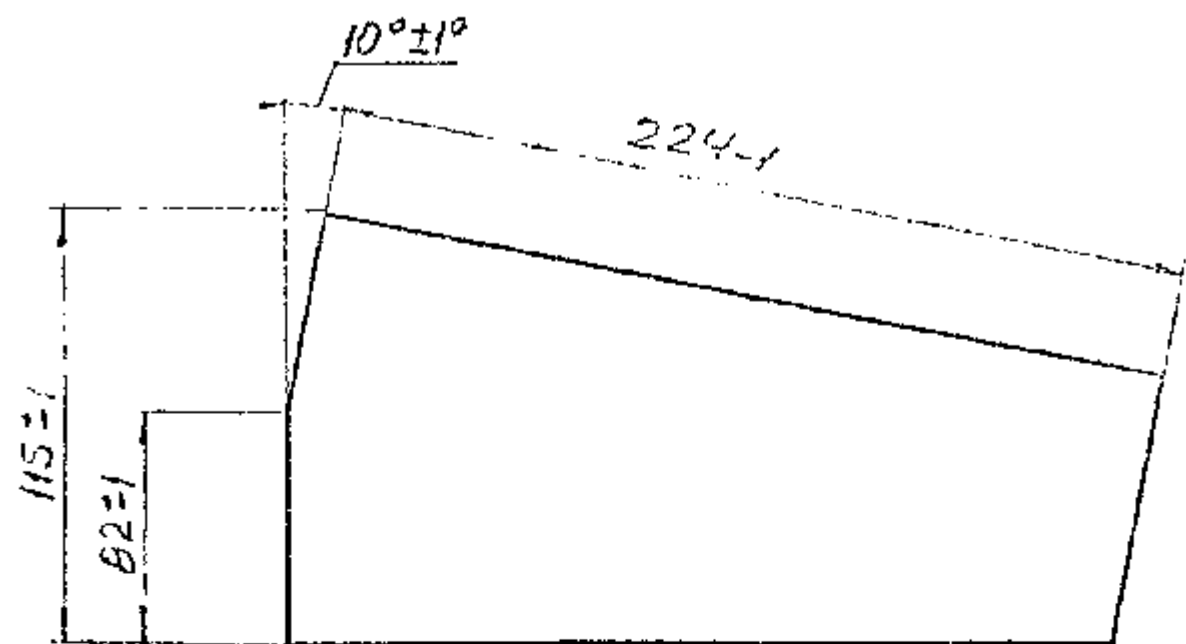
0.073 1:1

SHT SHTS

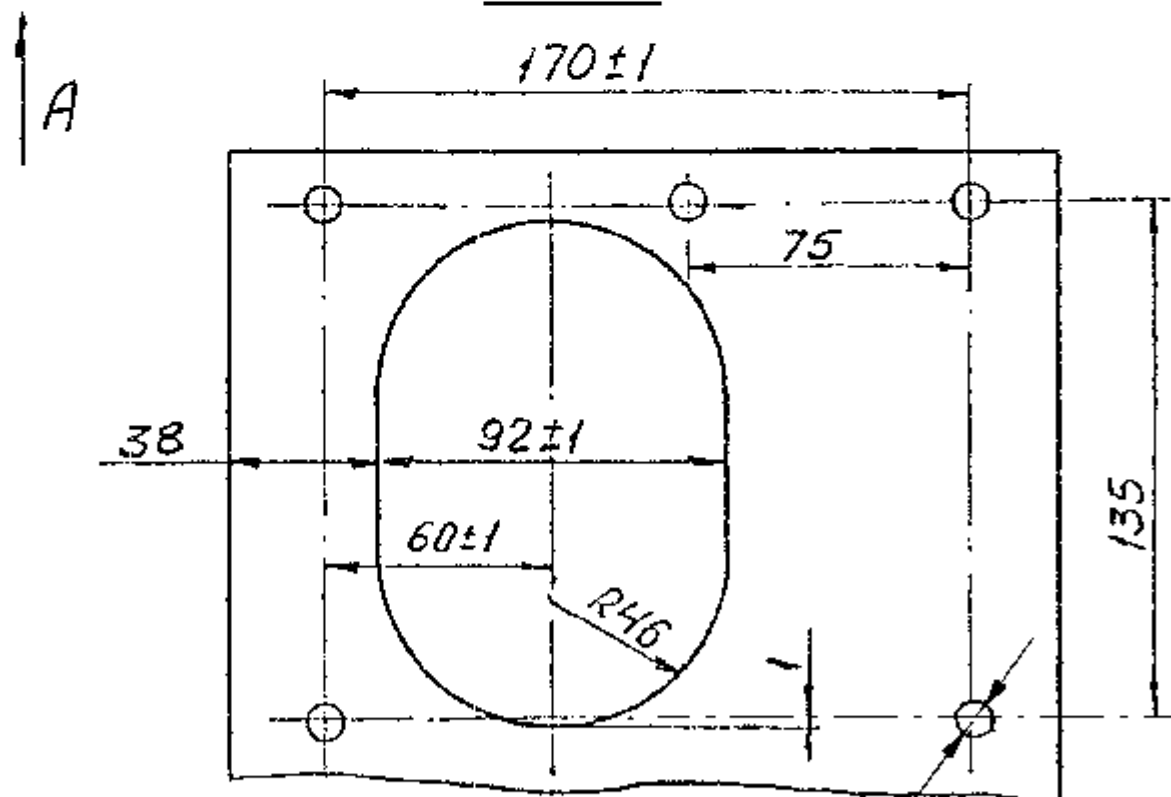
sheet A-ПУ-0-1 Gost 19904-74
5-II-T-0 Gost 16525-70

675-71-134

R_z160 ✓(✓)



View A



Five holes

3*

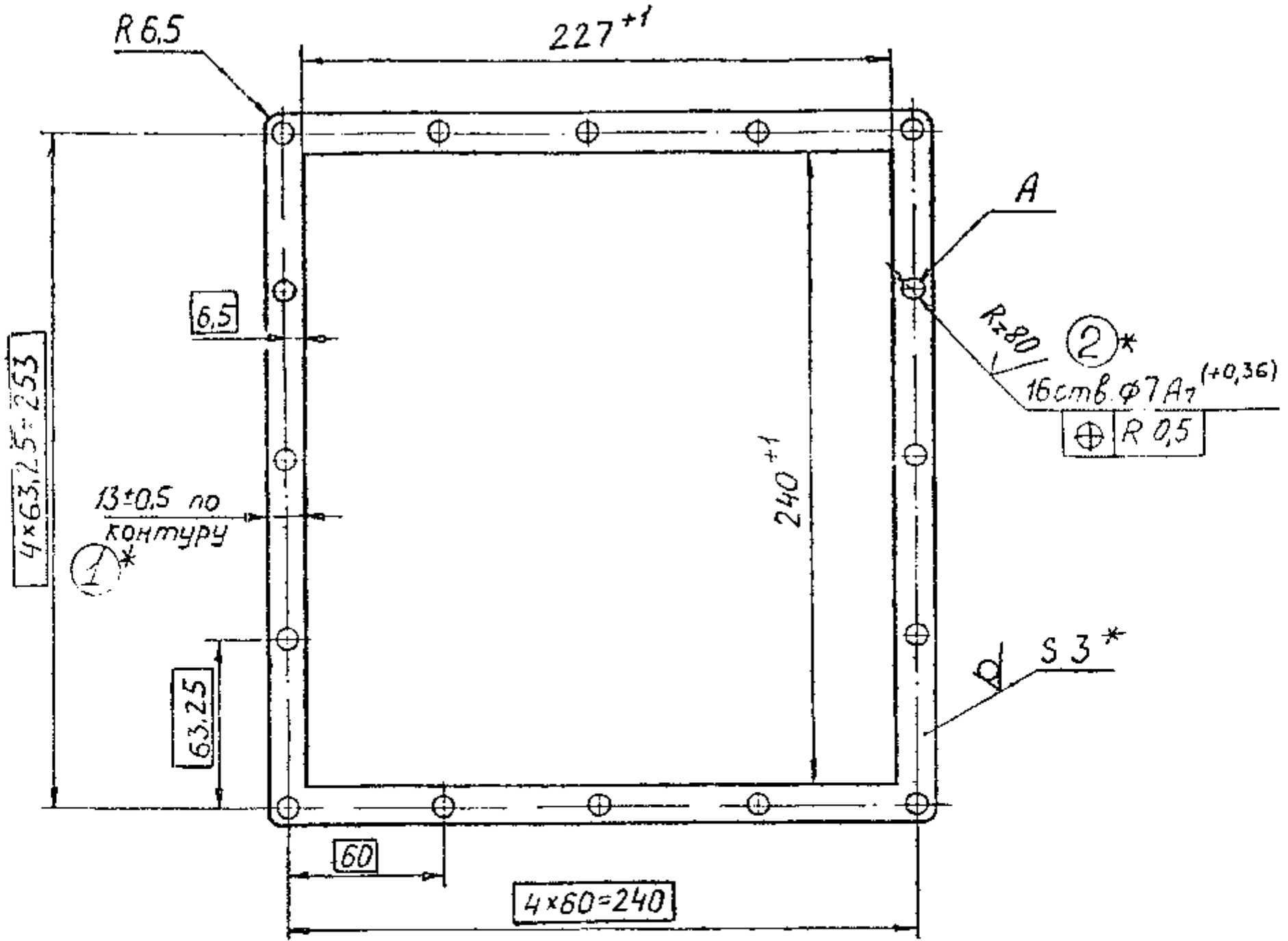
TECHNICAL CONDITIONS

- *3) 1. Substitute for material - sheets of steels 08кп, 10кп, 20 ГОСТ 1050-74.
- 2. Unspecified limit deviations of sizes - ±0.5 mm.
- 3. *Size is given for reference.

APPROVED		675-71-134	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		COVER	
		0.041	1:2
Sheet		SHT	SHTS
		A-11-0-1.5 Gost 19904-74	
		5-11-7-10 Gost 16523-70	

675-71-135

Rz160
√(V)



③*

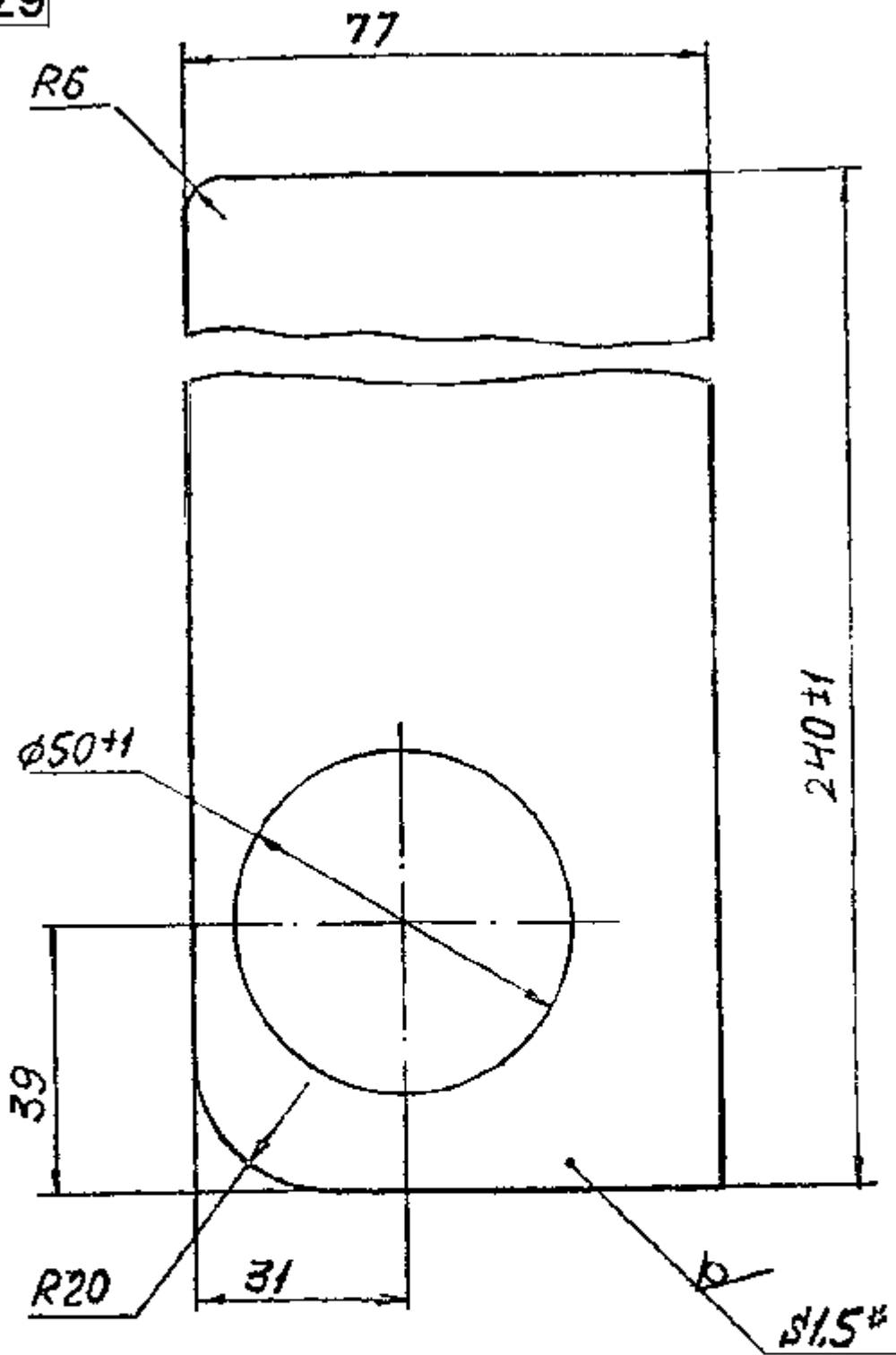
TECHNICAL CONDITIONS

- *① 13 ± 0.5 around contour
- *② Sixteen holes
- *③ 1. Substitute for material - sheets of steels ст.3сп, 08кп, 10кп, 20 ГОСТ 1050-74.
2. Drilling of holes A in assembly is tolerable.
3. ¹²Size is given for reference.

APPROVED	<i>[Signature]</i>	675-71-135		
CHECKED				
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	FLANGE		WEIGHT	SCALE
			0.3	1:2
			SHT 1	SHTS 1
Sheet 5-IV-0-3 Gost 19903-74		5-III-P-10 Gost 16523-70		

981-12-929
675-71-136

K₂₁₀₀ ✓(✓)



1. Substitute for material - sheets of steels 08кп, 10кп, 20 ГОСТ 1050-74.
2. Unspecified limit deviations of sizes - ± 0.5 mm.
3. [#]Size is given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-136

WALL

WEIGHT SCALE

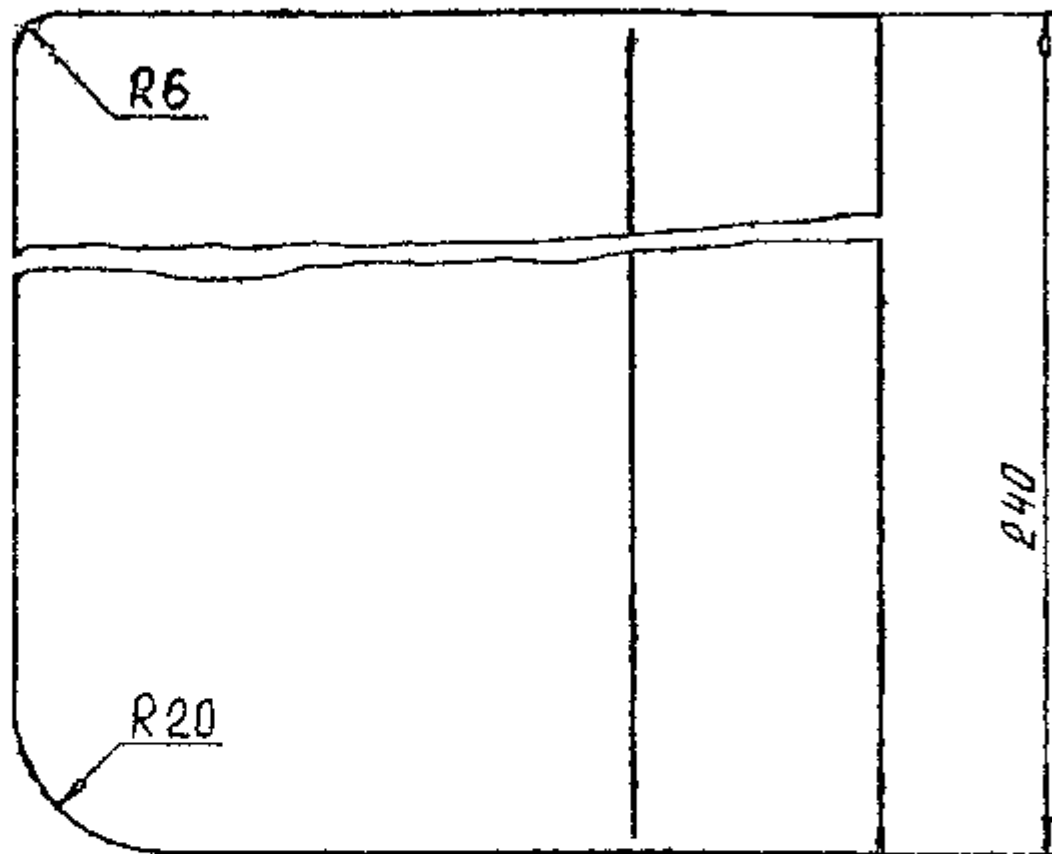
0.195 1:1

SHT SHTS

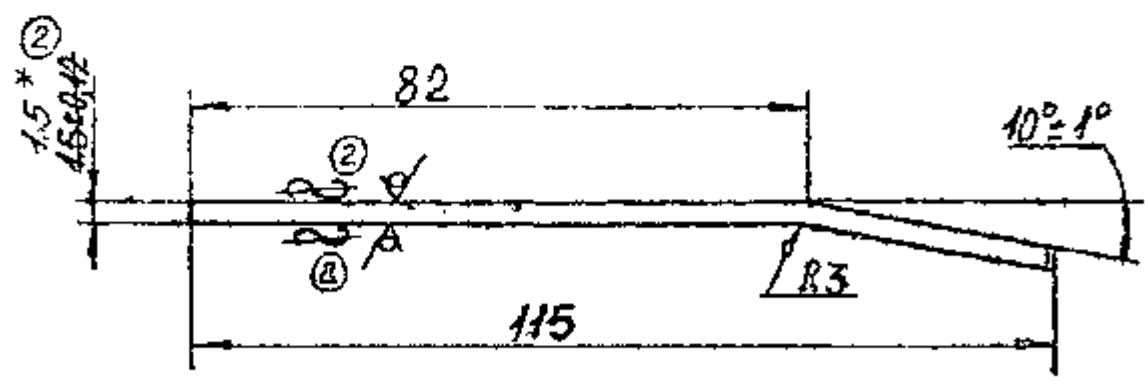
sheet
A-ny-D-1,5 Gost 19904-74
5-II-7-10 Gost 16523-70

675-71-137

R₂₃₂₀ ✓ (1/1) ✓ (1/1) ②



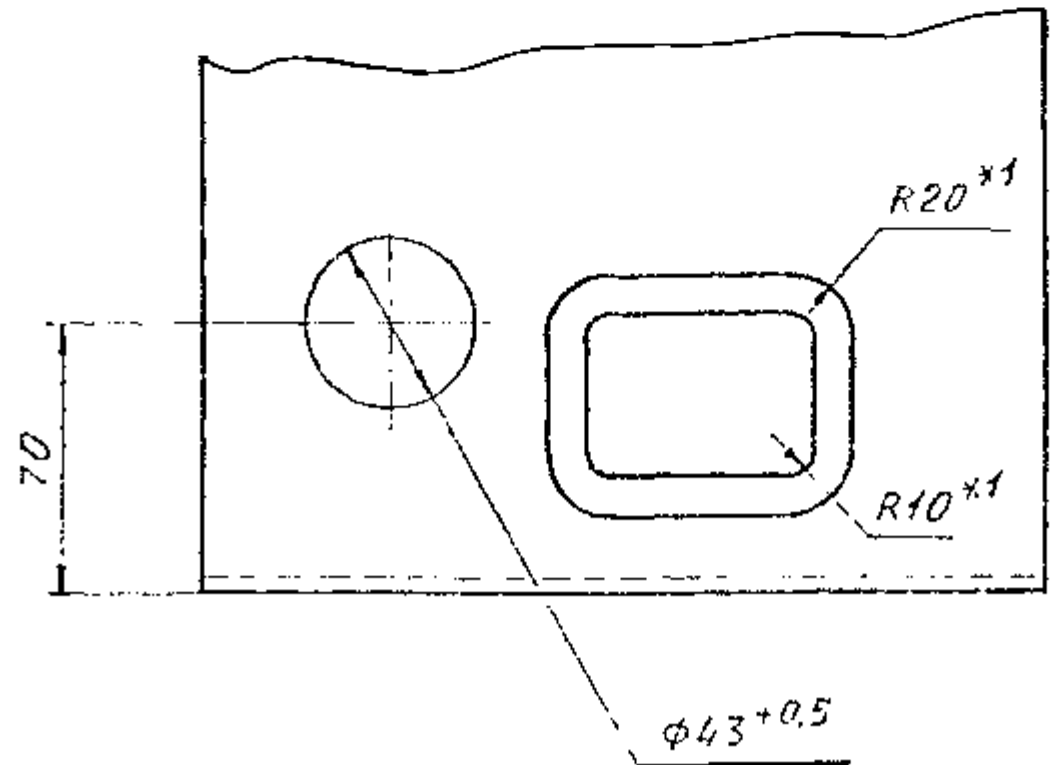
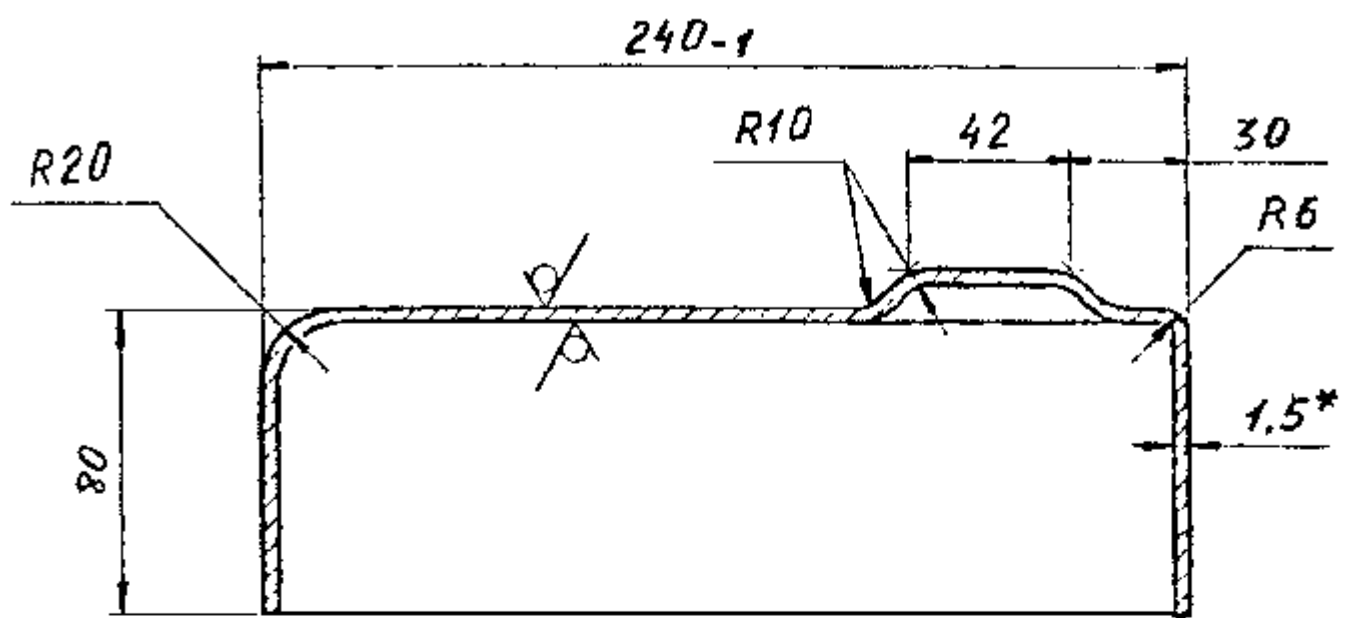
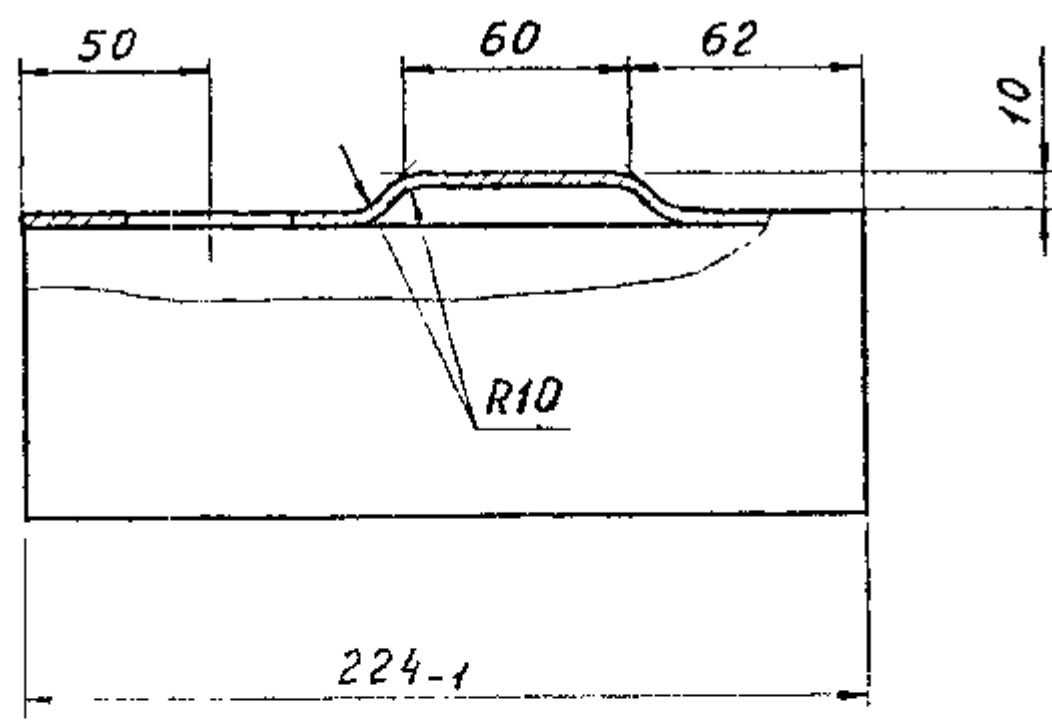
1. Substitute for material - sheets of steels 08кп, 10кп, 20 ГОСТ 1050-74.
2. Unspecified limit deviations of sizes - ± 1 mm.
3. ¹⁵Size is given for reference.



APPROVED		675-71-137	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	WALL	WEIGHT	SCALE
		0.344	1:1
		SHT 1	SHTS 1
sheet A-11-0-1.5 Gost 19904-74 5-II-P-10 Gost 16523-70			

675-71-357

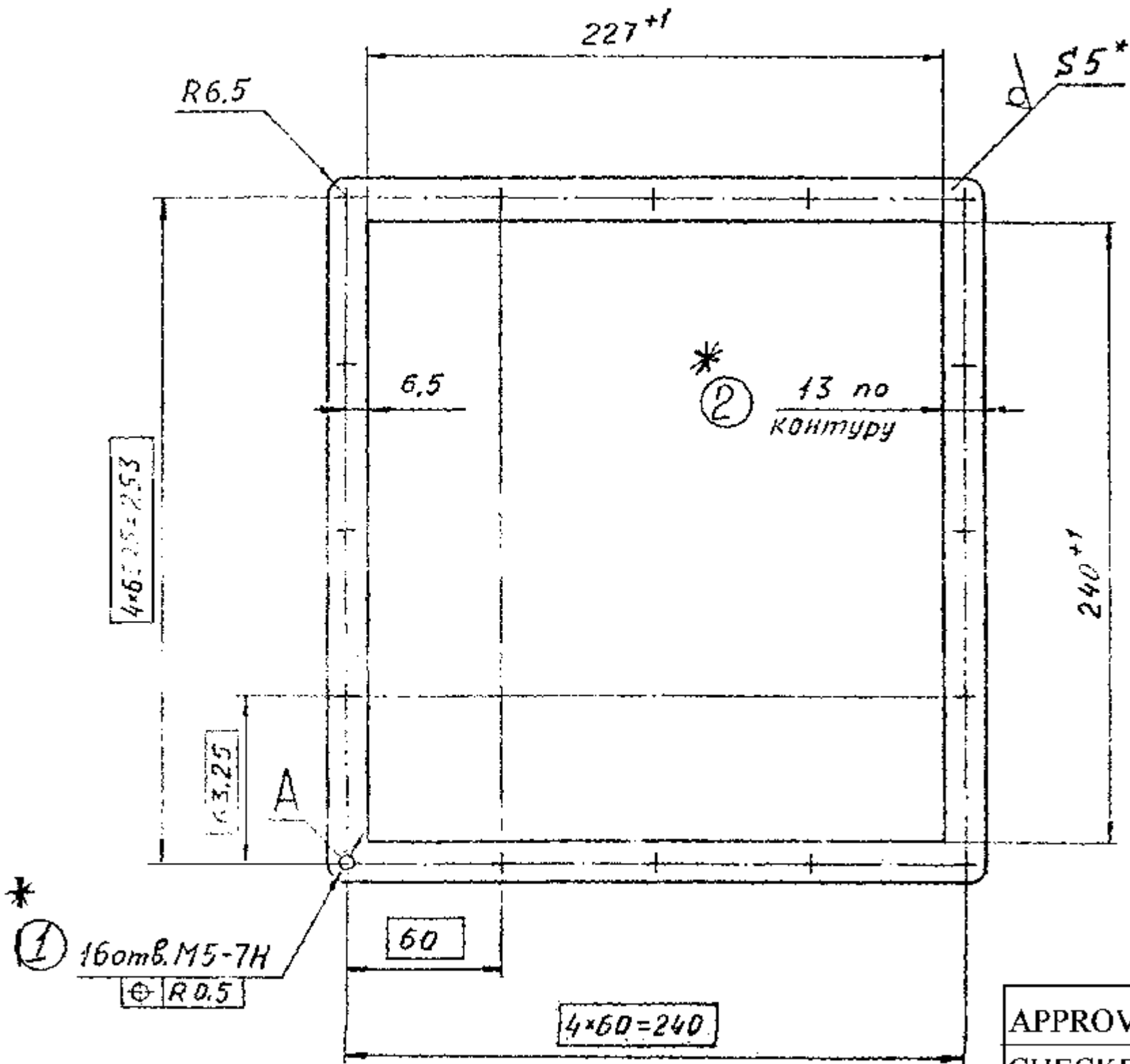
Rz160/ (✓) (✓)



1. Substitute for material - sheet AMr6EM-1,5 ГОСТ 21631-76.
2. Unspecified limit deviations of sizes - ± 1 mm.
3. It is allowed to check profile of bending against templet in pressed state.
4. *Sizes are given for reference.
5. *1 Sizes are ensured by means of tools.

APPROVED	<i>[Signature]</i>	675-71-357	
CHECKED	<i>[Signature]</i>		
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	BODY	WEIGHT	SCALE
		0.367	1:2
		SHT	SHTS
	AMr5M-1,5 Gost 21631-76		

675-71-358



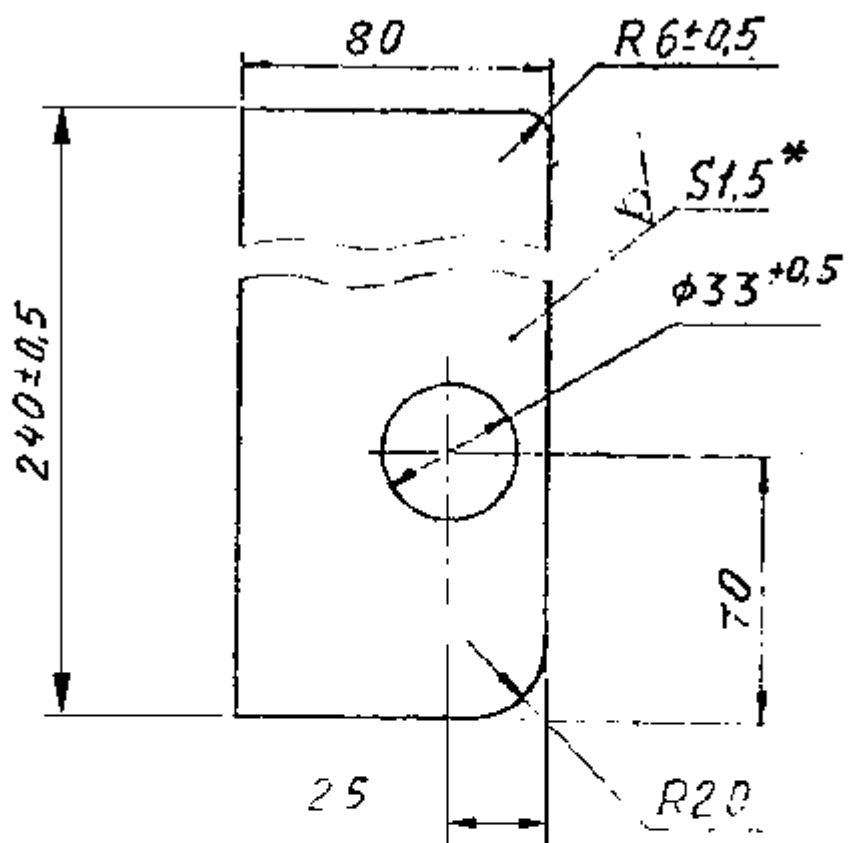
TECH. CONDITIONS

- * (1) Sixteen holes
- * (2) 13 around contour
- * (3) 1. Substitute for material - sheet AMr5M-5,0 ГОСТ 21631-7
- 2. Unspecified limit deviations of sizes - ± 0.5 mm.
- 3. Stamping bevel not in excess of 0.5 mm is tolerable.
- 4. It is allowed to make size A in assembly.
- 5. * Size is given for reference.

APPROVED	<i>[Signature]</i>	675-71-358	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		FLANGE	
SHEET AMr 6b-5, GOST 21631-76		0.124	1:1
		SHT 1	SHTS 1

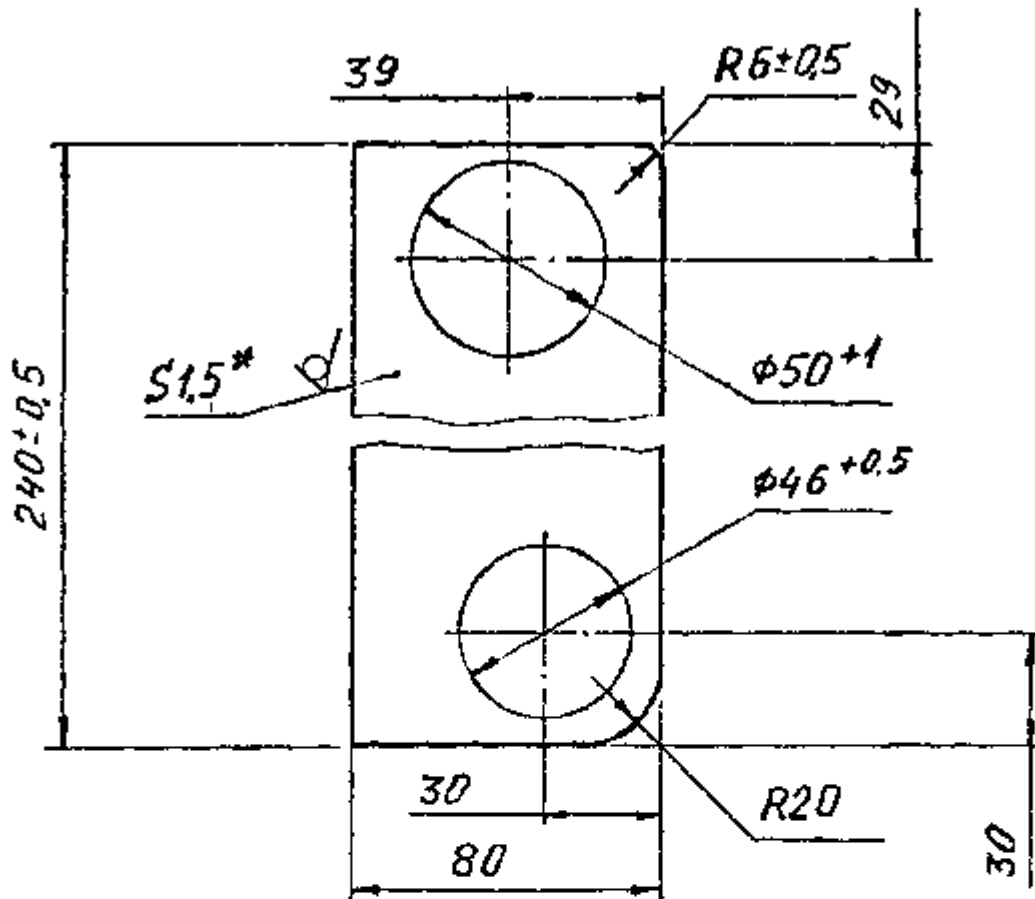
675-71-359

1/2/00 (✓) (✓)



1. Substitute for material - sheet AMr6EM-1,5 ГОСТ 21631-76.
2. Unspecified limit deviations of sizes - ± 1 mm.
3. *Size is given for reference.

APPROVED		675-71-359			
CHECKED					
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		WALL		WEIGHT	SCALE
				0.076	1:2
				SHT 1	SHTS 1
		Sheet AMr5M-1,5			
		Gost 21631-76			



1. Substitute for material - sheet AMr6BM-1,5 ГОСТ 21631-76.
2. Unspecified limit deviations of sizes - ± 1 mm.
3. *Size is given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-360

WALL

Sheet AMr5M-1.5
Gost 21631-76

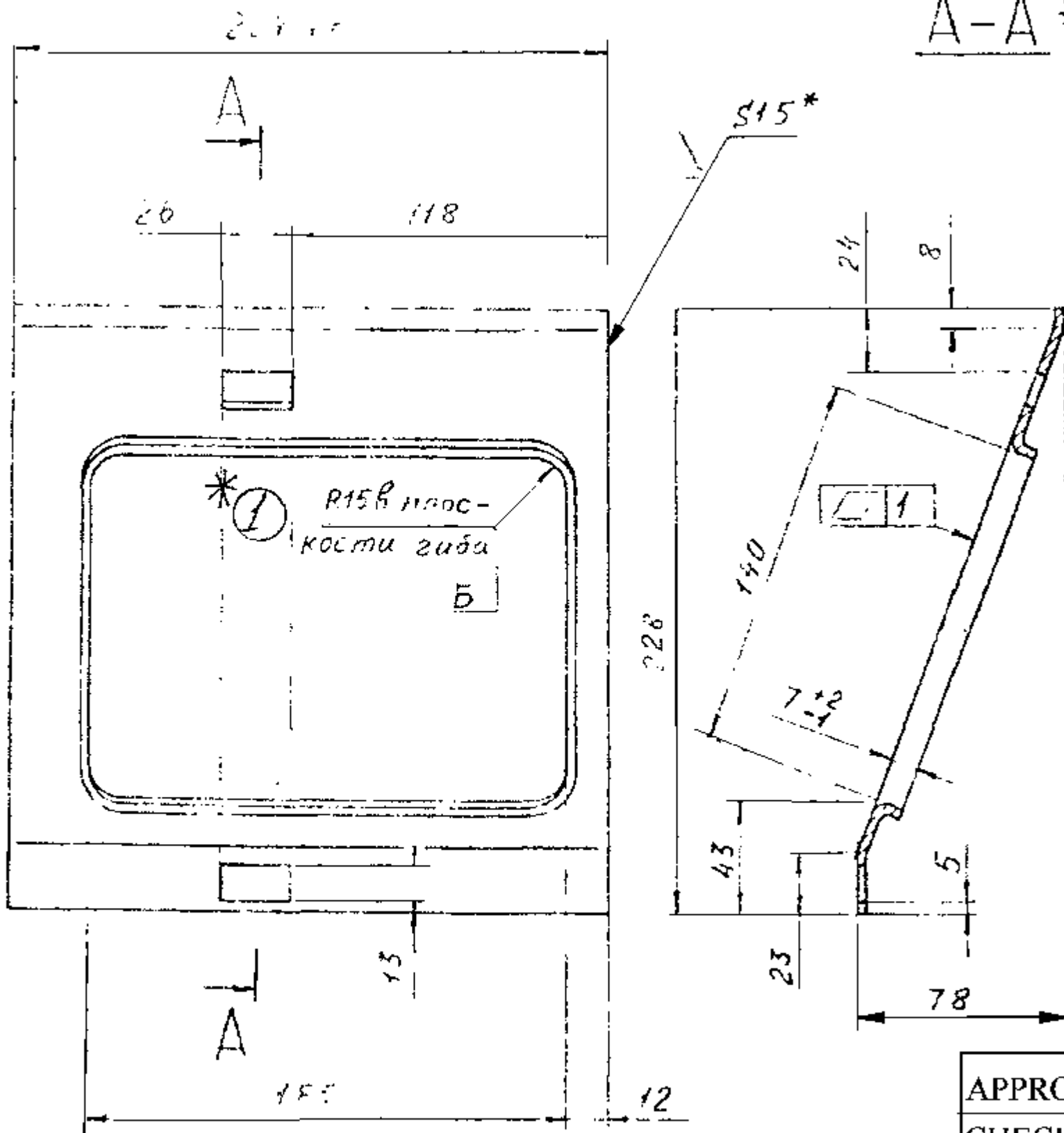
WEIGHT	SCALE
0.065	1:2
SHT 1	SHTS 1

675-71-361

R_z160 / (✓) (✓)

A-A * (2) TECH. CONDITIONS

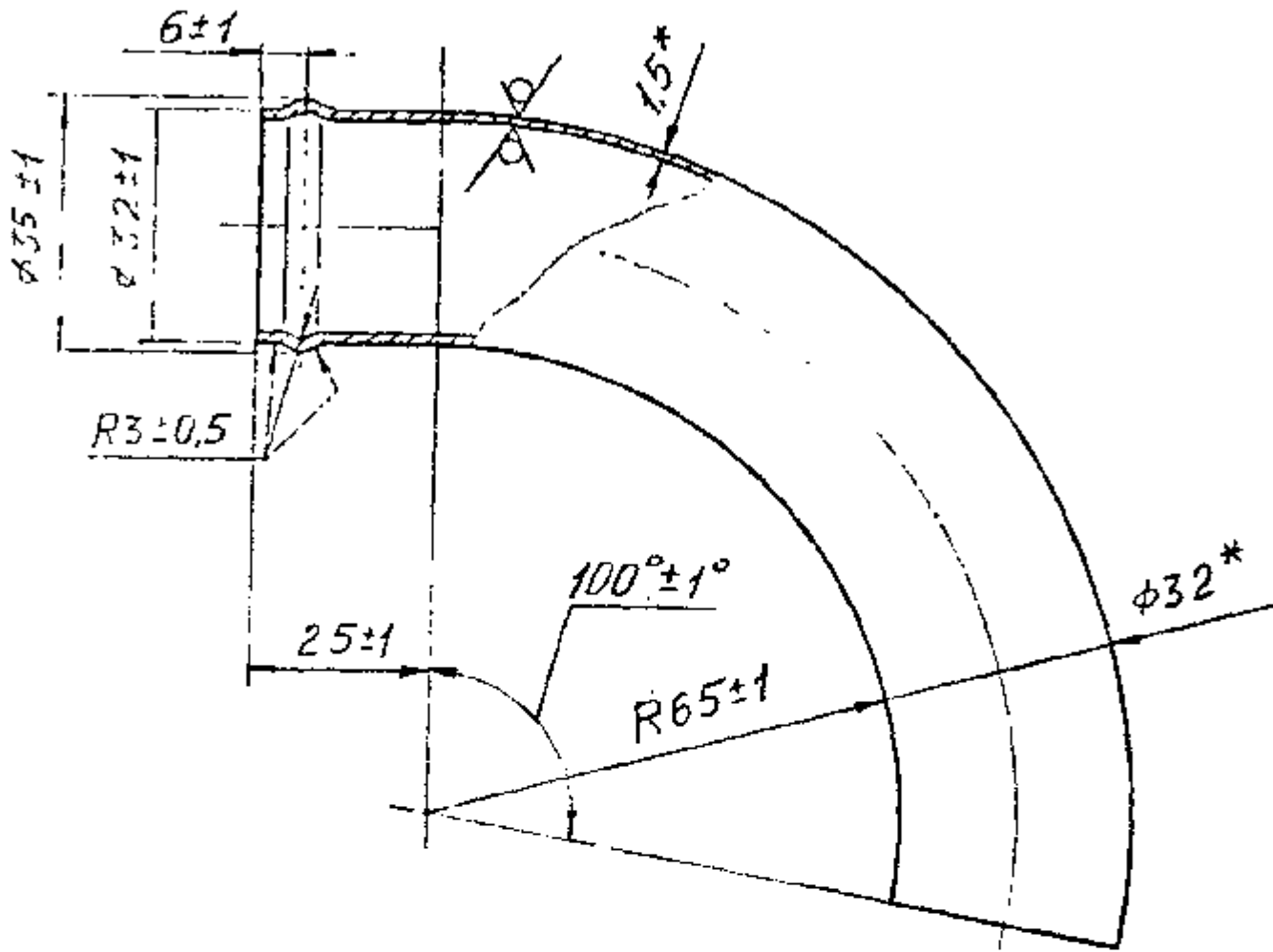
- * (1) R15 in plane of bending
- * (2) 1. Substitute for material - sheet AMr6EM-1,5 ГОСТ 21631-76.
- 2. Unspecified limit deviations of sizes - ± 0.5 mm up to 80 mm and ± 1 mm in excess of 80 mm.
- 3. Unspecified stamping radii - 3 mm.
- 4. Cracks on bead over size 5 are tolerable with subsequent welding and dressing.
- 5. *Size is given for reference.



APPROVED		675-71-361	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		WEIGHT	SCALE
		0.137	1:2
		SHT 1	SHTS 1
		Sheet AMr5M-1,5 Gost 21631-76	

675-71-362

Rz 160 / (✓)



1. Substitute for material - round pipe 32x1,5 AMr6M ГОСТ 18475-73.
2. Ovality and corrugations not in excess of 3 mm at points of bending are tolerable.
3. Tool traces not in excess of negative tolerance limit are allowed.
4. Manufacture from several parts with subsequent welding is allowed.
5. *Size is given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-362

BRANCH PIPE

Round pipe 32x1.5 AMr5M
ГОСТ 18475-73

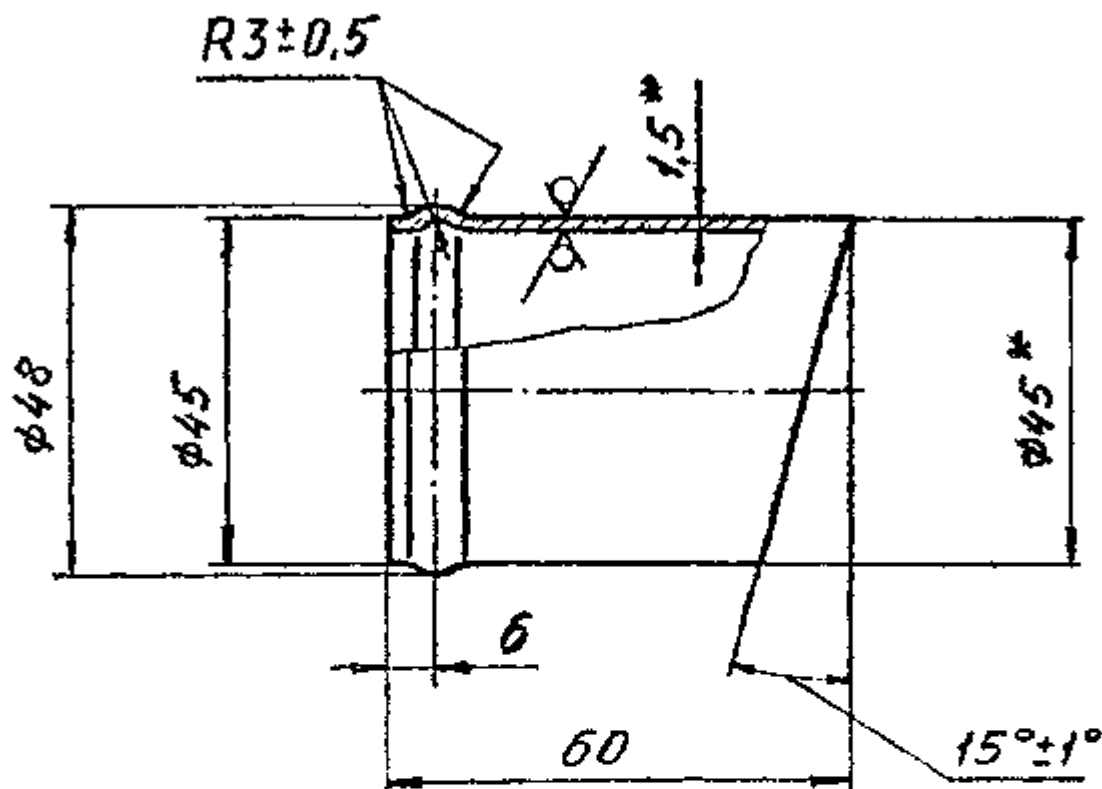
WEIGHT SCALE

0.068 1:1

SHT 1 SHTS 1

675-71-363

Rz160 ✓(✓)



1. Substitute for material - round pipe 45x1.5 AMr6M ГОСТ 18475-73.
2. Unspecified limit deviations of sizes - ± 1 mm.
3. *Sizes are given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-363

BRANCH PIPE

Round pipe 45x1.5
AMr5M Gost 18475-73

WEIGHT

SCALE

0.032

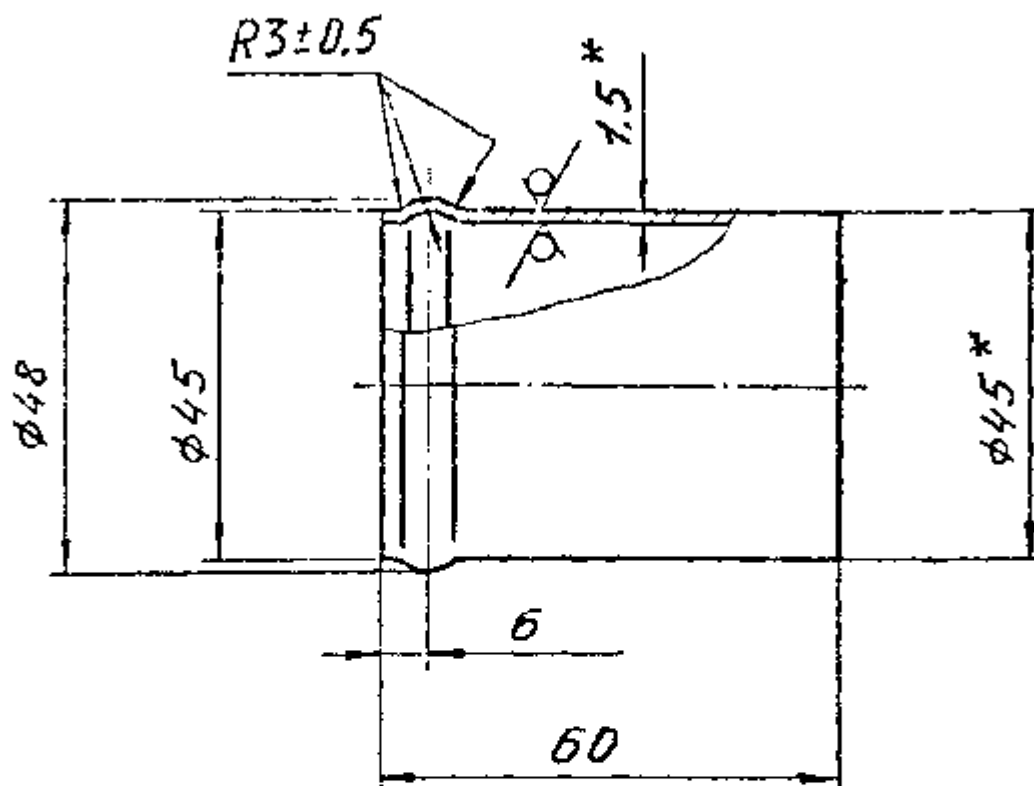
1:1

SHT 1

SHTS 1

675-71-364

Rz160/(✓)



1. Substitute for material - round pipe 45x1.5 AMr5M
ГОСТ 18475-73.
2. Unspecified limit deviations of sizes - ± 1 mm.
3. *Sizes are given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-364

BRANCH PIPE

ROUND PIPE 45X1.5 AMr5M
ГОСТ 18475-73.

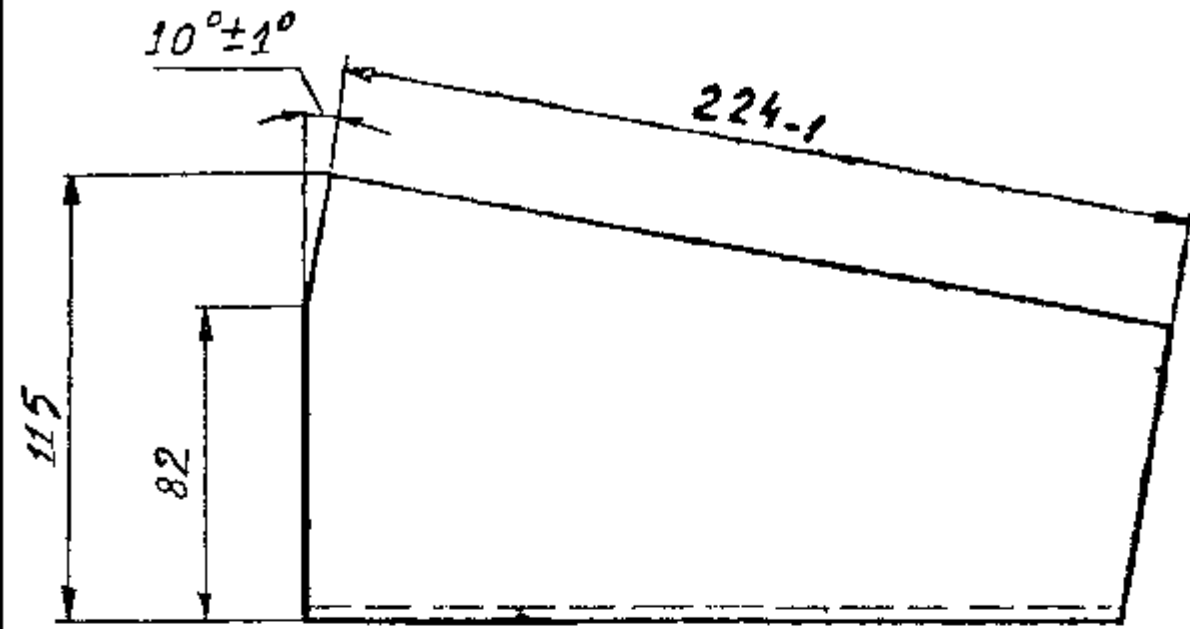
WEIGHT SCALE

0.035 1:1

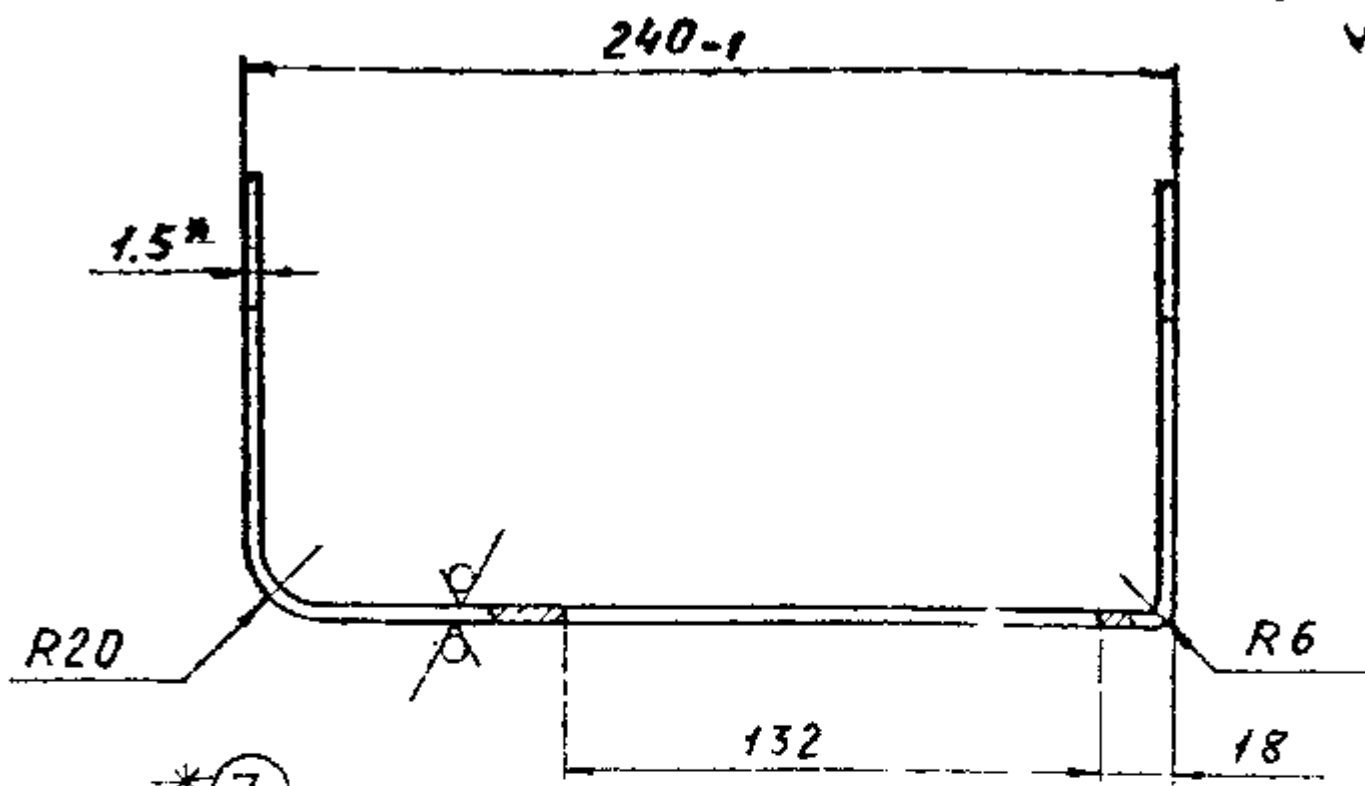
SHT 1 SHTS 1

675-71-365

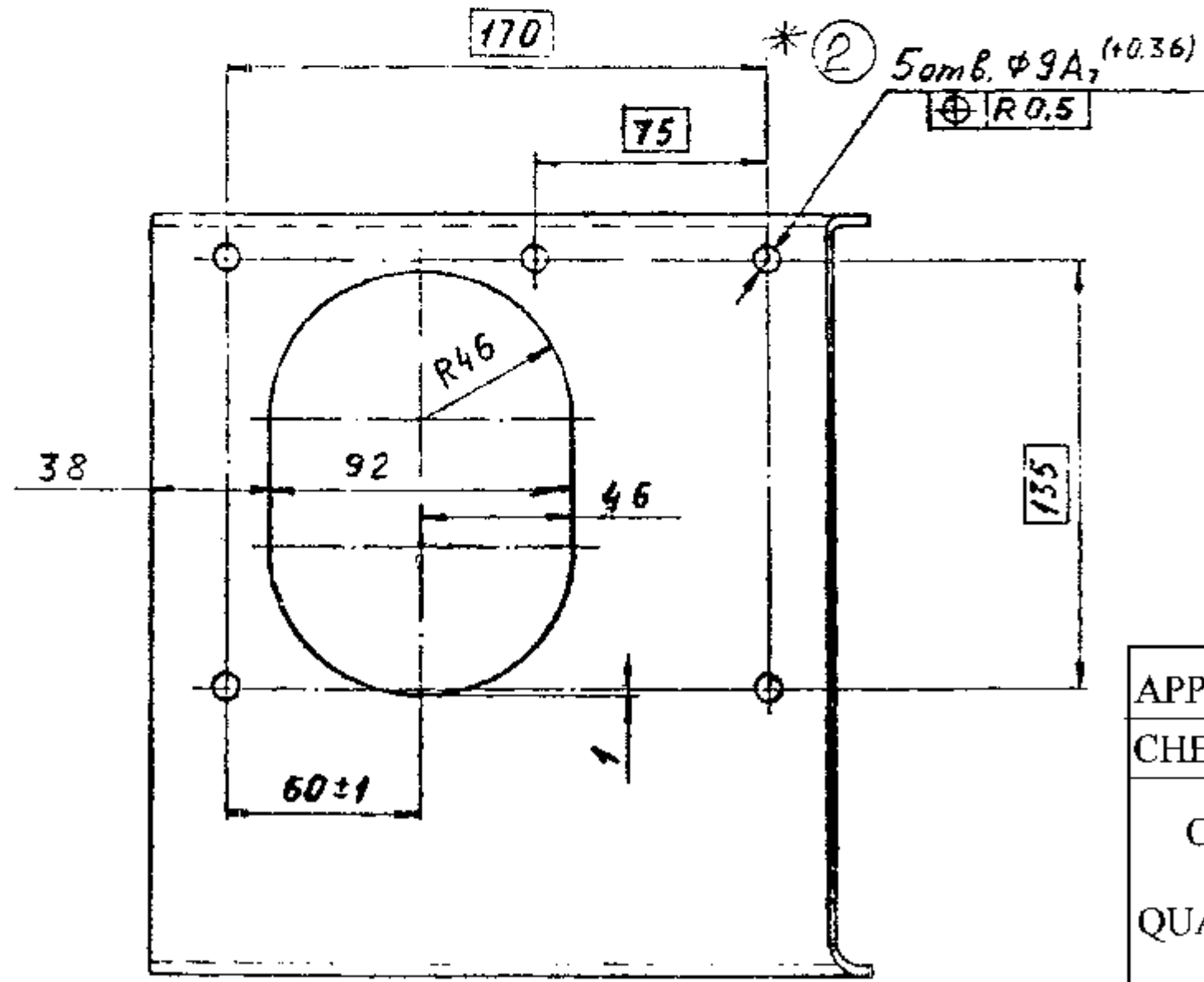
K₂16U/√(√)



A1
* (1) ВудА



* (3)
TECH. CONDITIONS

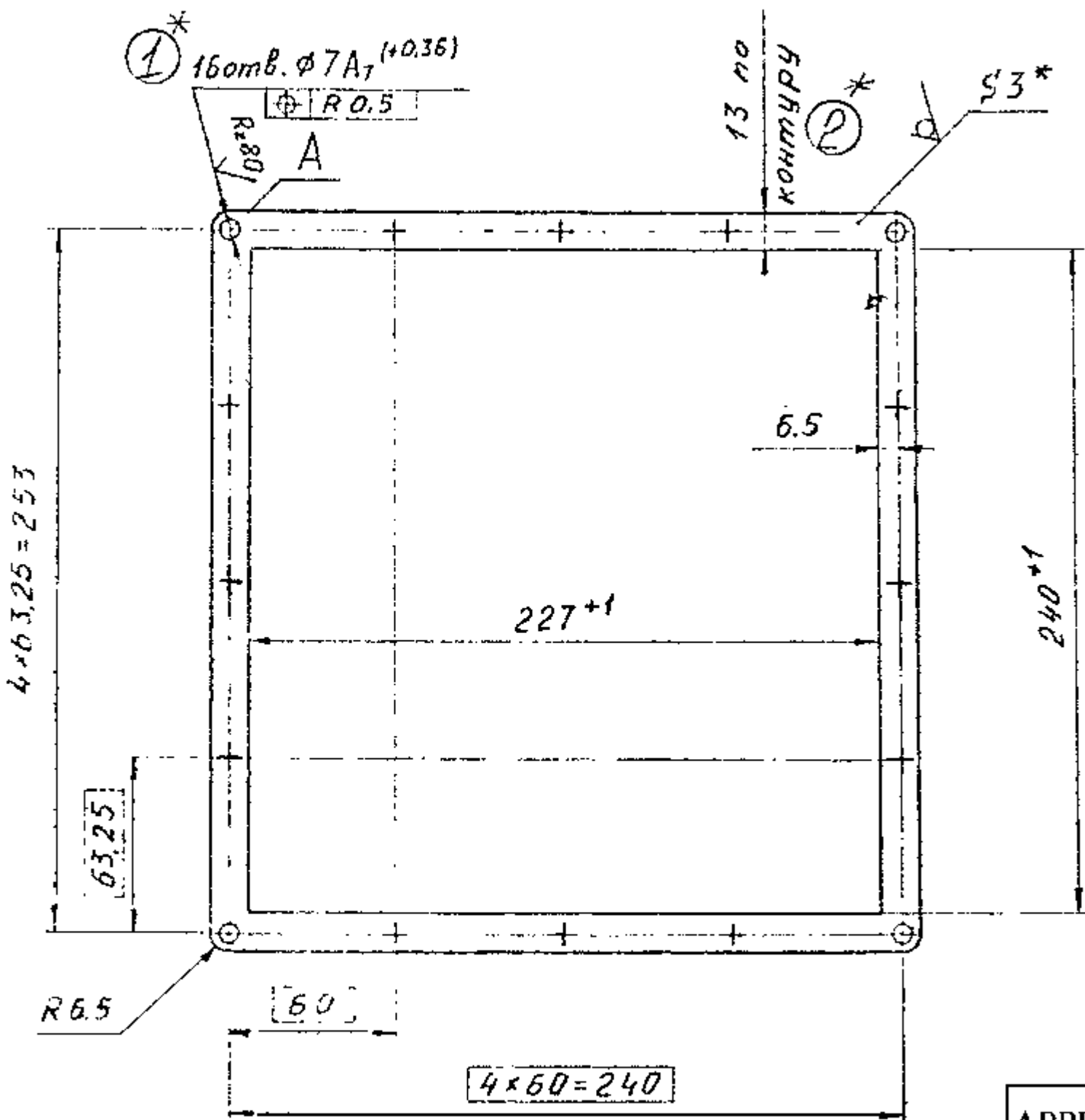


- * (1) View A
- * (2) Five holes
- * (3) 1. Substitute for material - sheet AMr6EM-1,5 ГОСТ 21631. 6.
2. Unspecified limit deviations of sizes - ± 0.5 mm up to 80 mm, ± 1 mm in excess of 80 mm.
3. It is allowed to check profile of bending against templet in pressed state.
4. *Size is given for reference.

APPROVED		675-71-365		
CHECKED				
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	BODY		WEIGHT	SCALE
			0.338	1:2
			SHT 1	SHTS 1
		Sheet AMr5M-1.5 Gost 21631-76		

675-71-366

Rz320 (✓)



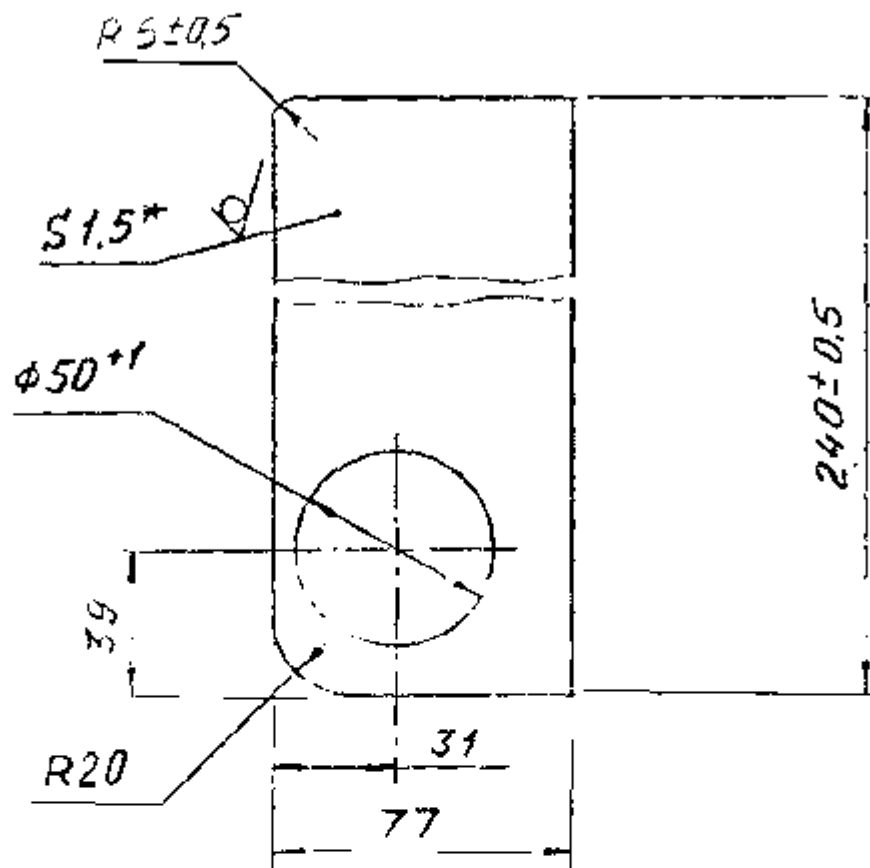
*
3 TECH. CONDITIONS

- *(1) Sixteen holes
- *(2) 13 around contour
- *(3) 1. Substitute for material - sheet AMr6EM-3,0 ГОСТ 21631-76.
2. Unspecified limit deviations of sizes - ± 0.5 mm.
3. It is allowed to make size A in assembly.
4. Stamping bevel not in excess of 0.4 mm is tolerable.
5. *Size is given for reference.

APPROVED		675-71-366		
CHECKED				
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	FLANGE		WEIGHT	SCALE
			0.072	1:2
			SHT 1	SHTS 1
SHEET AMr5M-3,0 GOST 21631-76.				

675-71-367

R_z160/ (✓)



1. Substitute for material - sheet AMr6BM-1,5 ГОСТ 21631-76.
2. Unspecified limit deviations of sizes - ± 1 mm.
3. *Size is given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-367

WALL

Sheet AMr5M-1.5
Gost 21631-76

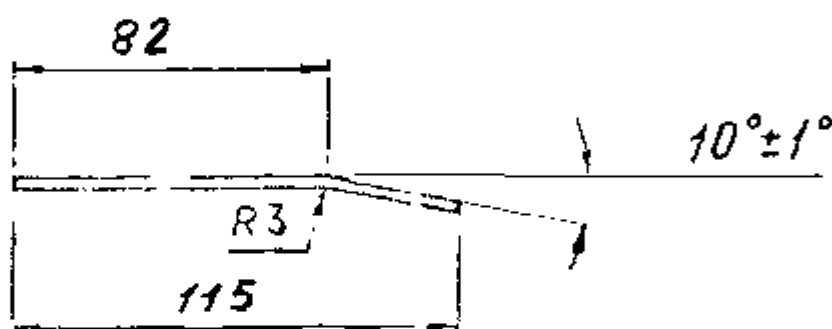
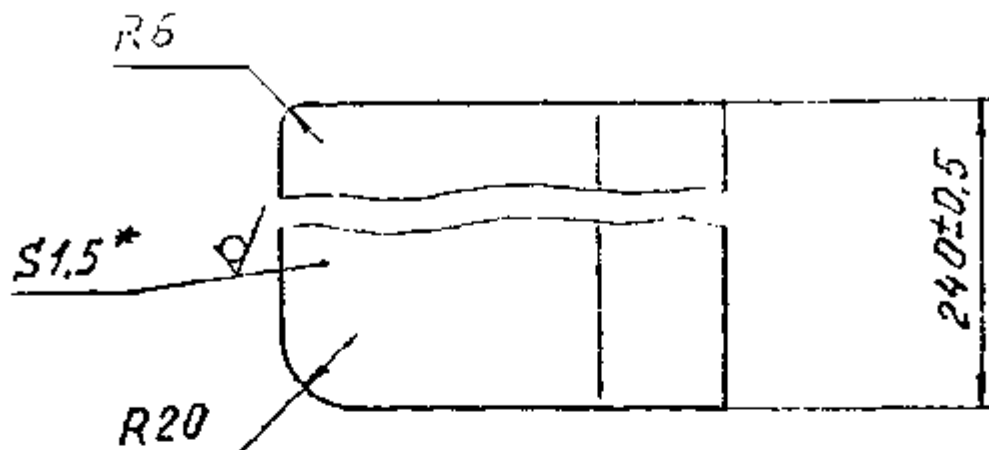
WEIGHT SCALE

0.069 1:2

SHT 1 SHTS 1

898-11-979

Rz150/(✓)



1. Substitute for material - sheet AMr6BM-1,5 ГОСТ 21631-76.
2. Unspecified limit deviations of sizes - ± 0.5 mm up to 80 mm and ± 1 mm in excess of 80 mm.
3. *Size is given for reference.

APPROVED

CHECKED

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

675-71-368

WALL

Sheet AMr5M-1,5
Gost 21631-76

WEIGHT SCALE

0.116 1:2

SHT 1 SHTS 1

Ref. No.	Designation	Description	Qty	Remarks
	675-71-06153CB	<u>Documents</u> Assembly drawing		
		<u>Parts</u>		
1	675-71-127	Body	1	
2	675-71-128	Flange	1	
3	675-71-129	Wall	1	
4	675-71-130	Wall	1	
5	675-71-131	Bed	1	
6	675-71-132	Branch pipe	1	
7	675-71-133	Branch pipe	1	
10	765-71-1187	Gasket	1	
11	765-71-1296	Branch pipe	1	

APPROVED
CHECKED

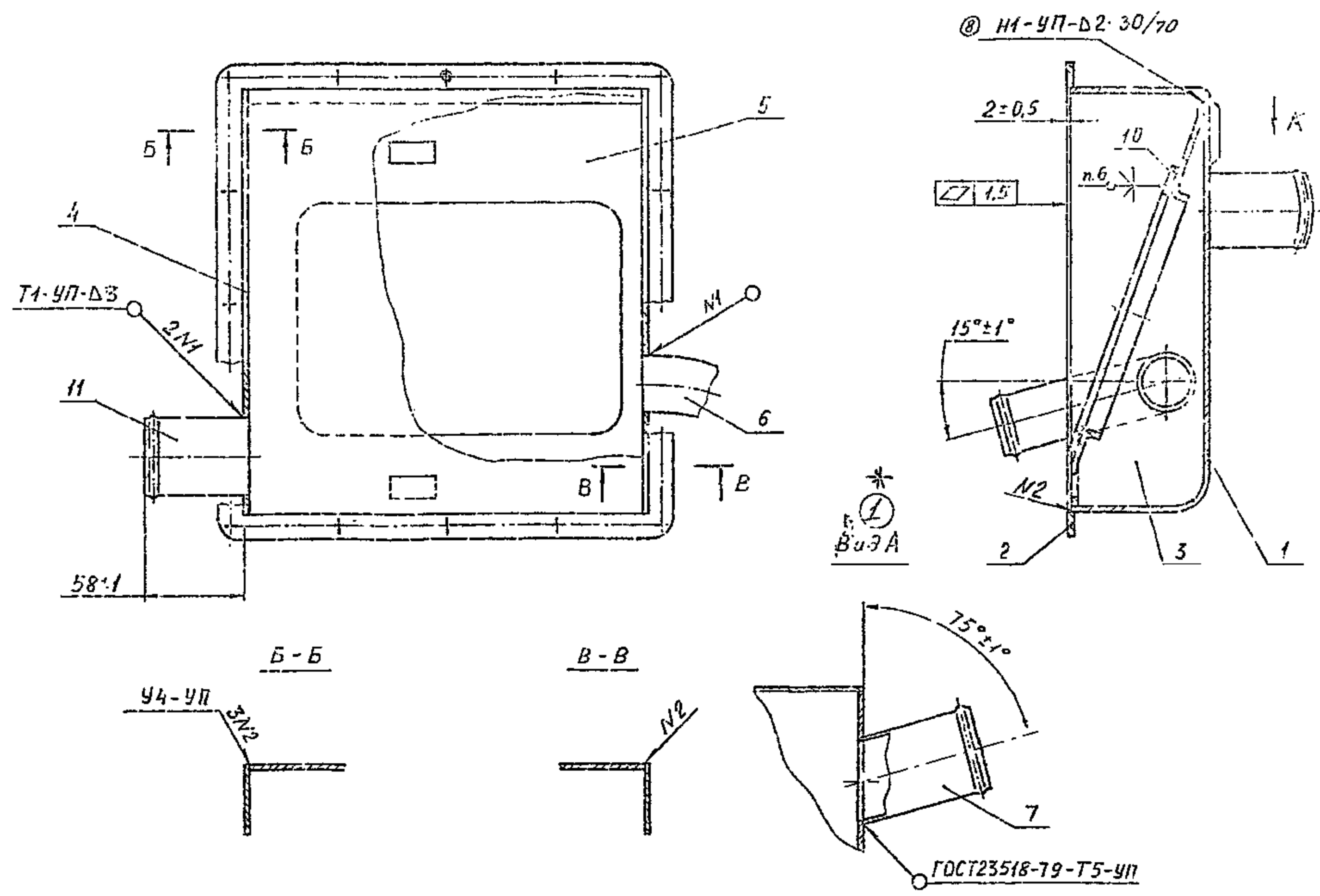
[Signature]

675-71-Sb153

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

BODY

	WEIGHT	SCALE
SHT	SITS	



*E TECHNICAL CONDITIONS

- (1) View A
- (2) 1. Other weld seams - according to ГОСТ 14771-76.
- 2. After welding check threaded holes.
- 3. Gas welding is tolerable.
- 4. Tack welding of flange Ref. No. 2 to body between holes from outside is tolerable.
- 5. Other requirements for quality of welds - according to OCT 3-4001-76 for off-design welded joints.
- 6. Cement BB-III TY38-105540-73.
- 7. Coating; except for thread and part Ref. No. 10: primer 2N-03K ГОСТ 9109-81; enamel ИФ-223, white 1, ГОСТ 14923-78.

APPROVED	<i>[Signature]</i>	675-71-Sb153Sb	
CHECKED	<i>[Signature]</i>		
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	BODY	WEIGHT	SCALE
		2.475	1:2
		SHT 1	SHTS 1

Ref. No.	Designation	Description	Qty	Remarks
	675-71-c6154CB	<u>Documents</u>		
		<u>Parts</u>		
1	675-71-134	Cover	1	
2	675-71-135	Flange	1	
3	675-71-136	Wall	1	
4	675-71-137	Wall	1	
		<u>Standard Items</u>		
⑤	4368-0612 EQ. MATERIAL:-C 20 87 C 25 Mm15 TO IS: 2075 -73	Boss M6x12x12 OCT 3-1496-72	5	
		00823 -ICV Kup 7th 10. 2000	⑤	EQ. MATERIAL ADDED FOR REF. NO: 6.
		DC/NO DATE	ISSUE	NATURE OF AMENDMENTS

APPROVED
CHECKED

[Signature]

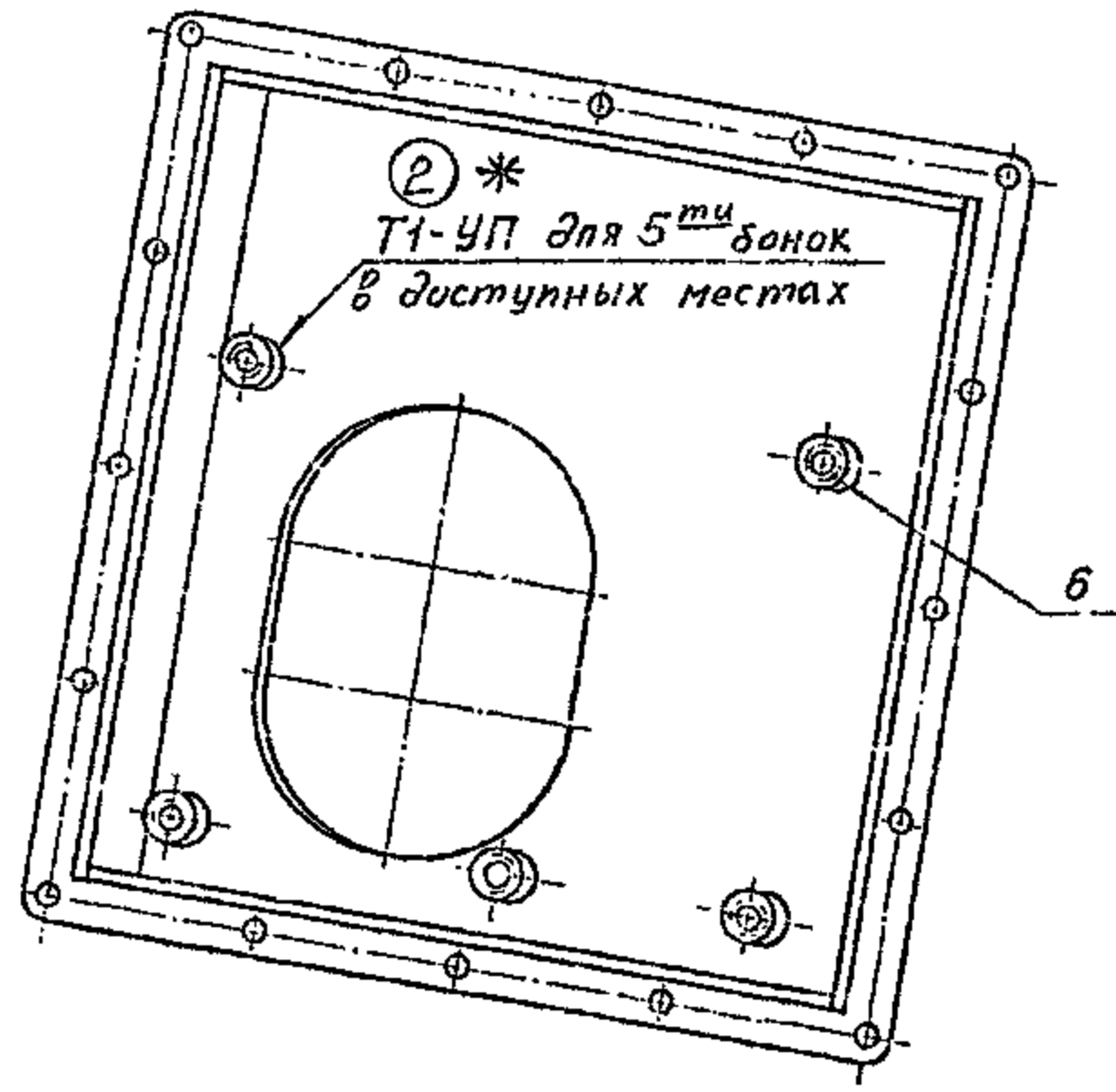
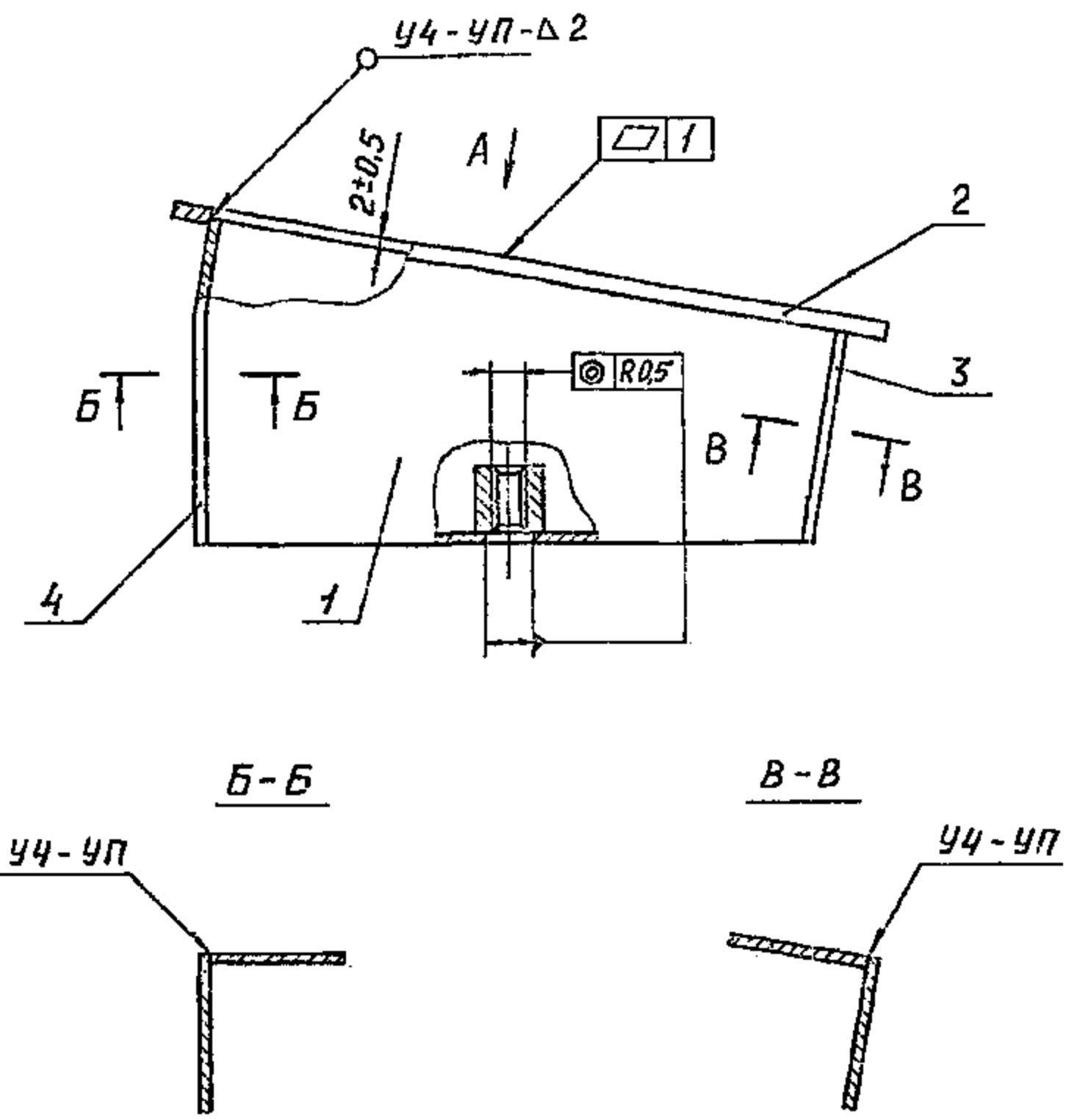
675-71-Sv154

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

COVER

WEIGHT	SCALE
SHT	SITS

(1)*
Вид А



(3)*
TECHNICAL CONDITIONS

- * (1) View A
- * (2) Т1-УП for five bosses in accessible places
- * (3) 1. Weld seams - according to ГОСТ 14771-76.
Welding wire св.08Г20 ГОСТ 2246-70.
- 2. Gas welding is tolerable.
- 3. Tack welding of flange Ref. No. 2 to body between holes from outside is tolerable.
Welding - according to ГОСТ 14771-76 Т1-УП-Δ2.
- 4. Other requirements for quality of welds - according to OCT 3-4001-77 for off-design welded joints.
- 5. Coating, except for threaded surfaces:
primer ЭП-03К ГОСТ 9109-81;
enamel ПЭ-223, white 1, ГОСТ 14923-78.
It is allowed to apply coating to outer surfaces in assembly 675-71-c6152.

APPROVED		675-71-Sb154Sb		
CHECKED				
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	COVER	WEIGHT	SCALE	
		1.775	1:2	
		SHT	SHTS	

Ref. No.	Designation	Description	Qty	Remarks
	675-71-c6155CB 7117-524 053 252 73.000.10	<u>Documents</u> Assembly drawing Instructions for bakelizing parts made of silumin, cast iron, steel and bronze		
2	700-33-36	<u>Parts</u> Union nut	1	
3	700-33-136	Union nut	1	
4	700-57-416	Nipple	1	
5	701-13-27	End-piece	1	
1	675-71-139	Pipe Pipe <u>18x1 POCT 8734-75</u> Pipe <u>B-20 POCT 8733-74</u>	1	Mass 0.125 kg

APPROVED

CHECKED

675-71-Sb155

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

PIPE

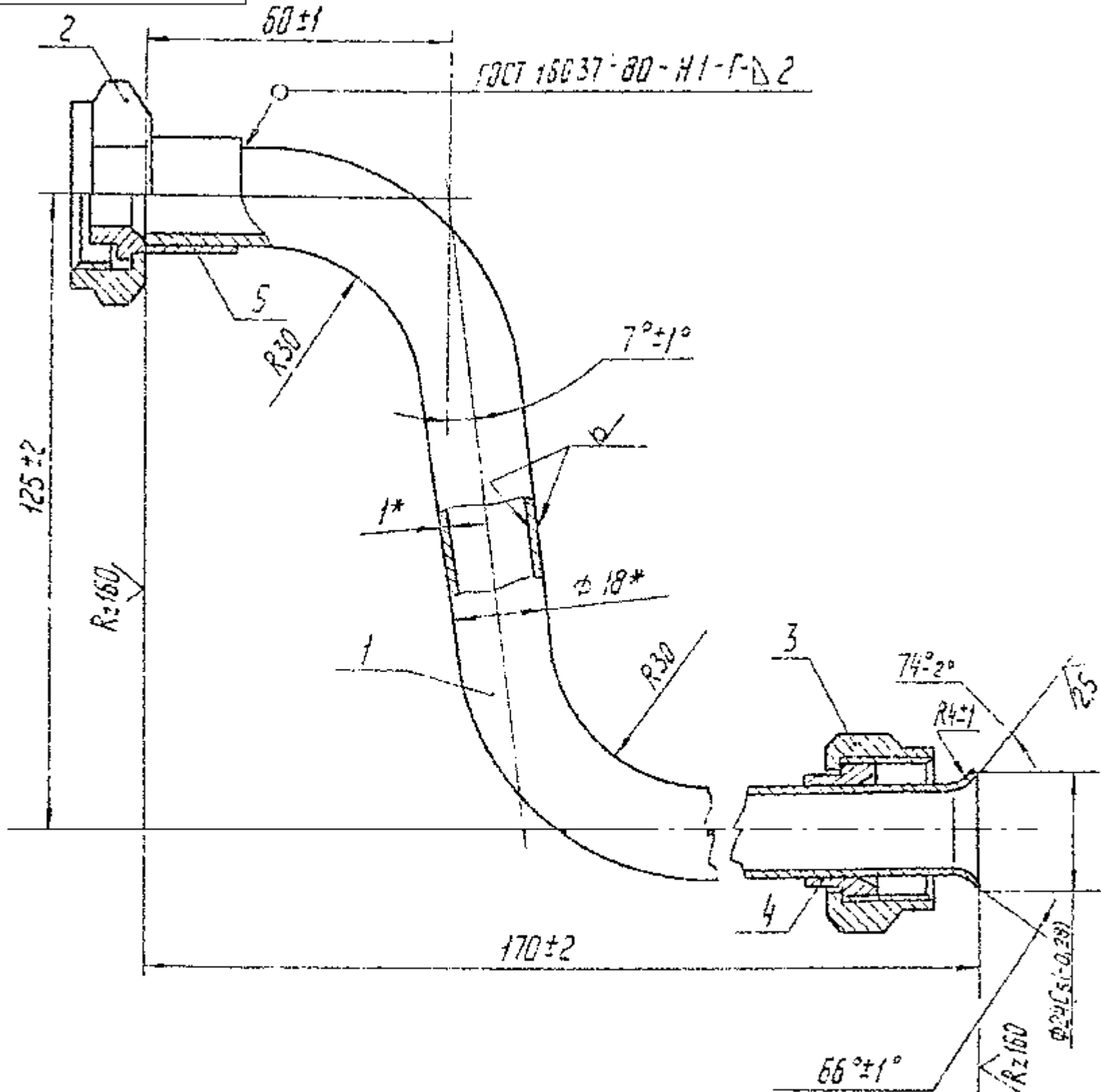
WEIGHT

SCALE

SHT

SHTS

675-71-Sb155Sb

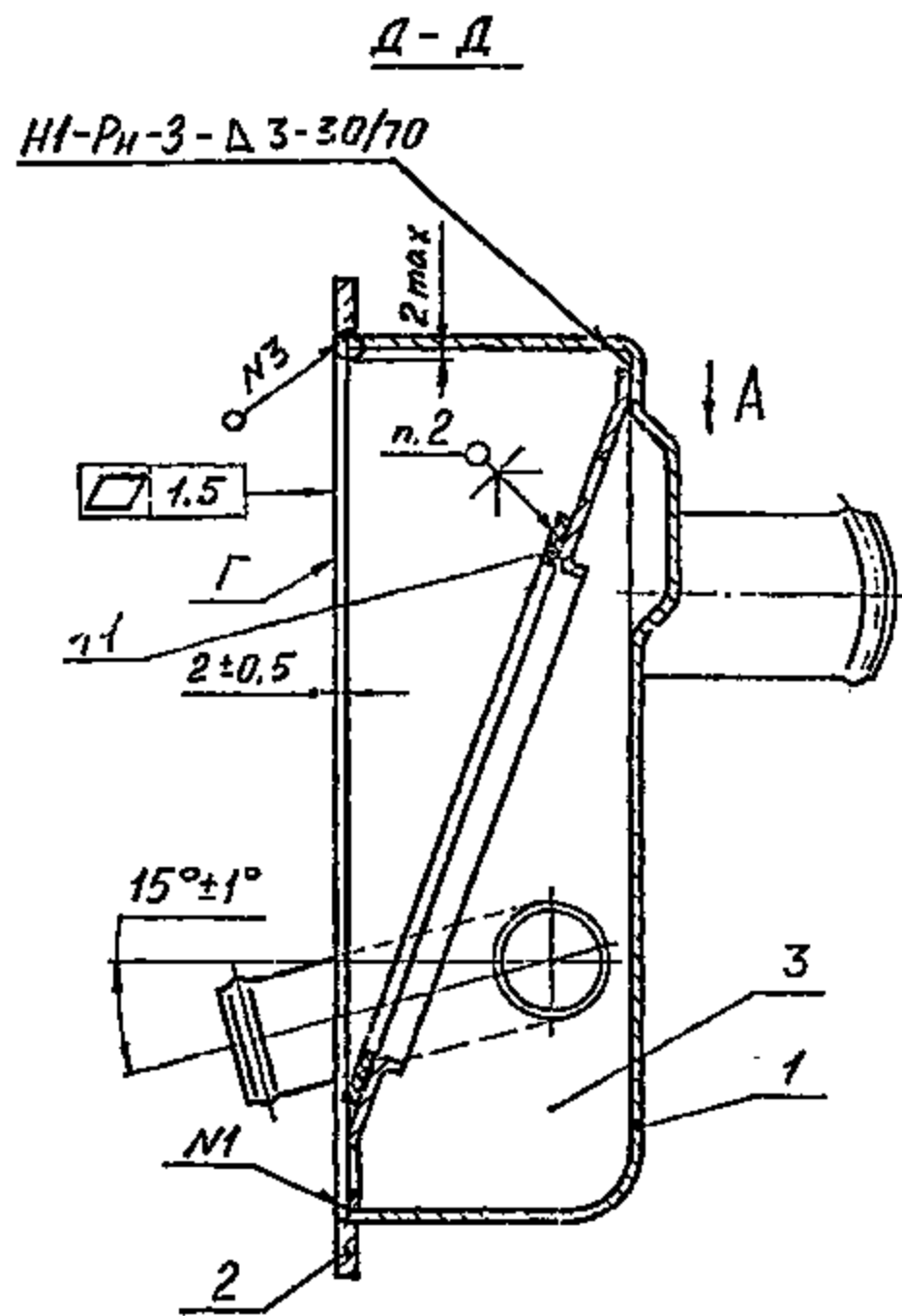
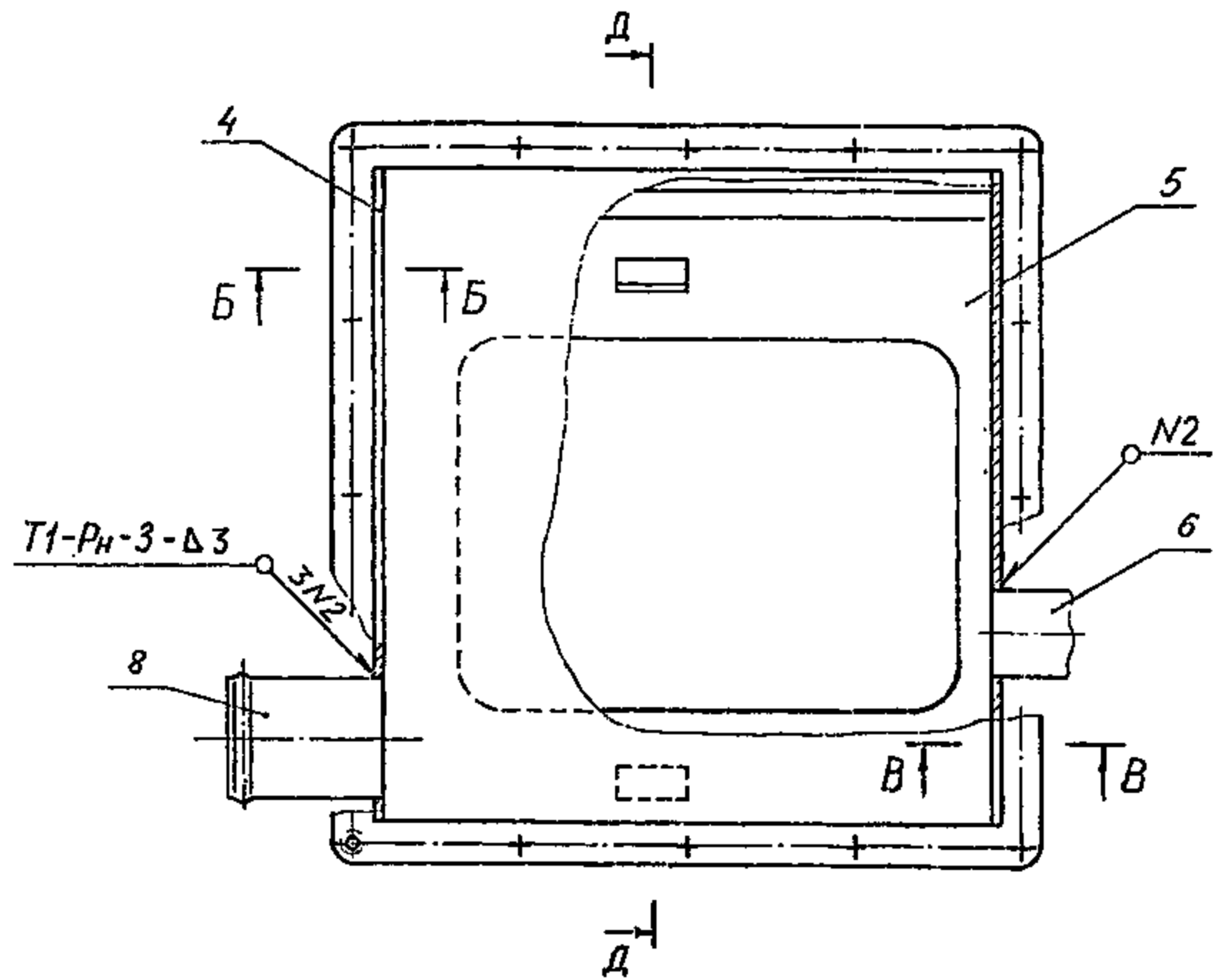


1. Pipe Ref. No. 1:
 - (a) anneal and clean off scale;
 - (b) bend and redetermine length according to standard manufactured to location;
 - (c) ovality - 1 mm, maximum; corrugation at bending places - 2 mm, maximum.
2. Test for leakage in water bath at air pressure of $(0.44^{+0.049})$ MPa or $(4.5^{+0.5})$ kgf/cm² for at least 0.5 min. Air leakage is not tolerable. Backing run with subsequent testing is tolerable.
3. Bakelize inner surfaces, except for thread and mating faces, with phenol-formaldehyde lacquer ГОСТ 901-78 in compliance with Instructions 053.25273.000.10. It is allowed to bakelize around, except for thread and mating faces.
4. Coat outer surfaces, except for thread mating faces and under nipple, with primer 01-03K ГОСТ 9109-81 and paint with green enamel ИЭ-223 ГОСТ 14923-78.
5. Soldering with brass И-63 ГОСТ 15527-70 is tolerable.
6. Other requirements for quality of welds - according to OCT 3-4001-77 for off-design welded joints.
7. *Sizes are given for reference.

APPROVED		675-71-Sb155Sb	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		PIPE	
		WEIGHT 0.249	SCALE 1:1
		SHT 1	SHTS 1

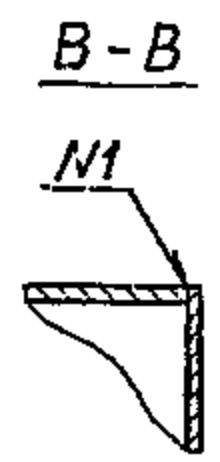
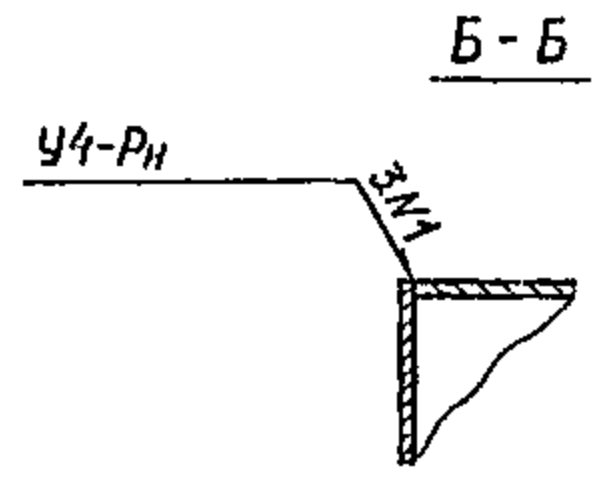
Ref. No.	Designation	Description	Qty	Remarks
	675-71-c6251CB	<u>Documents</u> Assembly drawing		
		<u>Parts</u>		
1	675-71-357	Body	1	
2	675-71-358	Flange	1	
3	675-71-359	Wall	1	
4	675-71-360	Wall	1	
5	675-71-361	Bed	1	
6	675-71-362	Branch pipe	1	
7	675-71-363	Branch pipe	1	
8	675-71-364	Branch pipe	1	
11	765-71-1187	Gasket	1	

APPROVED	675-71-Sb251		
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	BODY	WEIGHT	SCALE
		SHT 1	SHTS 1

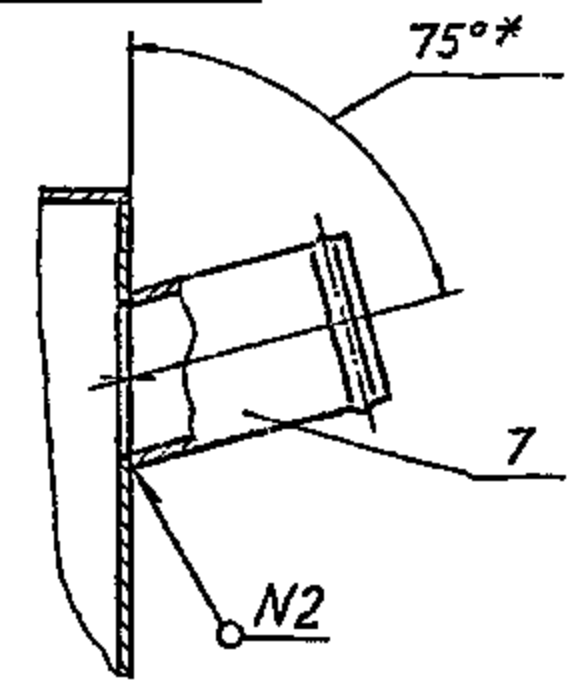


TECHNICAL CONDITIONS

1. Weld No. 3 - manual argon-arc welding. Other welds - according to GOCT 14806-69. Projection of weld beyond surface Γ is not tolerable. Other requirements for quality weld - according to GOCT 3-4001-77 for off-design welded joints.
2. Cement 88-III TY 38-105540-73.
3. Coating, except for thread and gasket Ref. No. 11: primer 6M-03E GOCT 9109-81; enamel HP-223, white 1, GOCT 14923-78. Painting of outer surfaces in assembly 675-71-cd152 is tolerable.
4. Packing of flange Ref. No. 2 to body from inside between holes is tolerable. Welding - according to GOCT 14806-69 T1-PH-3-Δ3.
5. *Size is given for reference.



View A

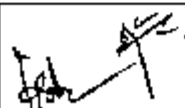


APPROVED
 CHECKED
 CONTROLLERATE
 OF
 QUALITY ASSURANCE
 (ICV)

675-71-Sb251Sb		
BODY	WEIGHT	SCALE
	1.04	1:1
	SHT 1 SHTS 1	

Ref. No.	Designation	Description	Qty	Remarks
		<u>Documents</u>		
	675-71-c625205	Assembly drawing		
		<u>Parts</u>		
1	675-71-365	Body	1	
2	675-71-366	Flange	1	
3	675-71-367	Wall	1	
4	675-71-368	Wall	1	
		<u>Standard Items</u>		
10	1497-0616	Boss M6x16x16 OCT 3-1497-72	5	

APPROVED
CHECKED



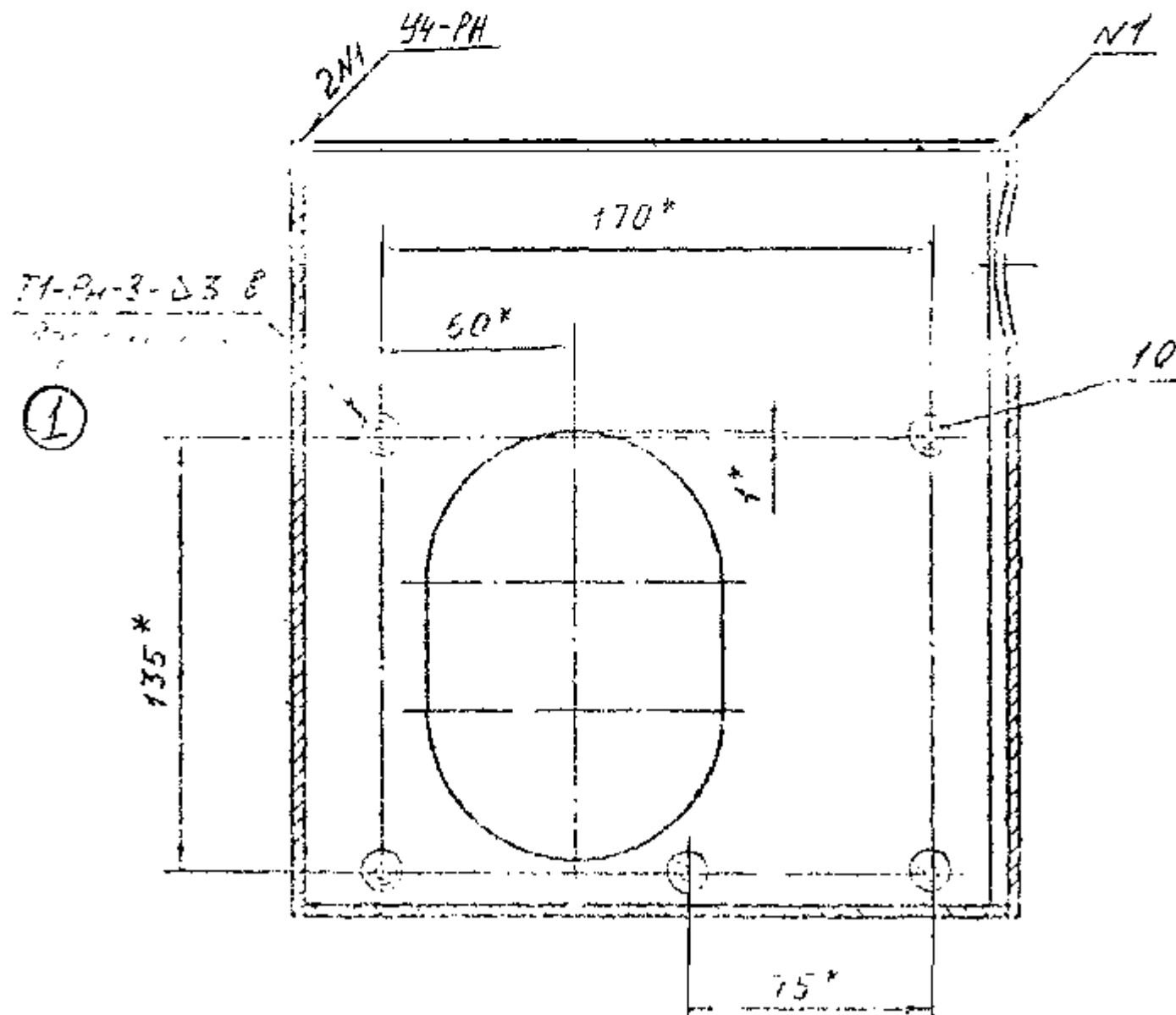
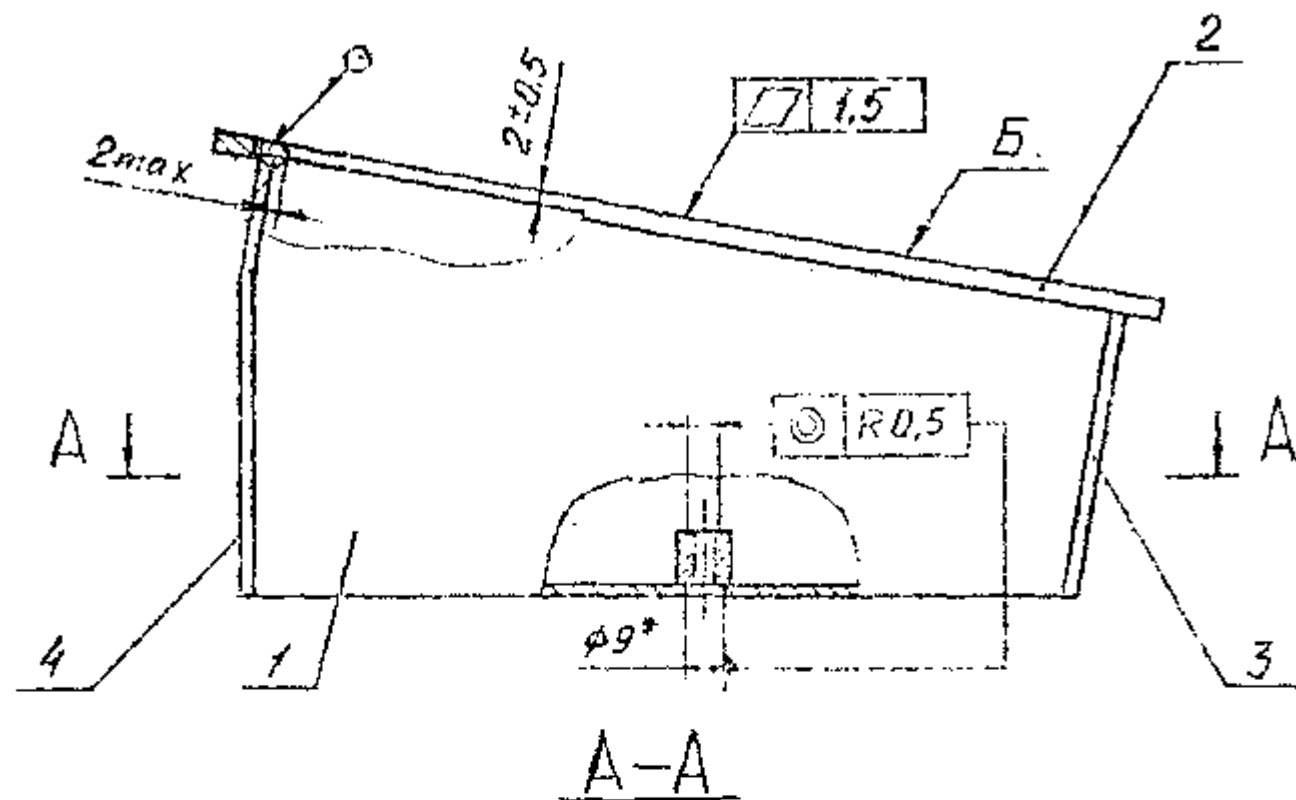
675-71-Sb252

CONTROLLERATE
OF
QUALITY ASSURANCE
(ICV)

COVER

	WEIGHT	SCALE
SHT 1		SITS 1

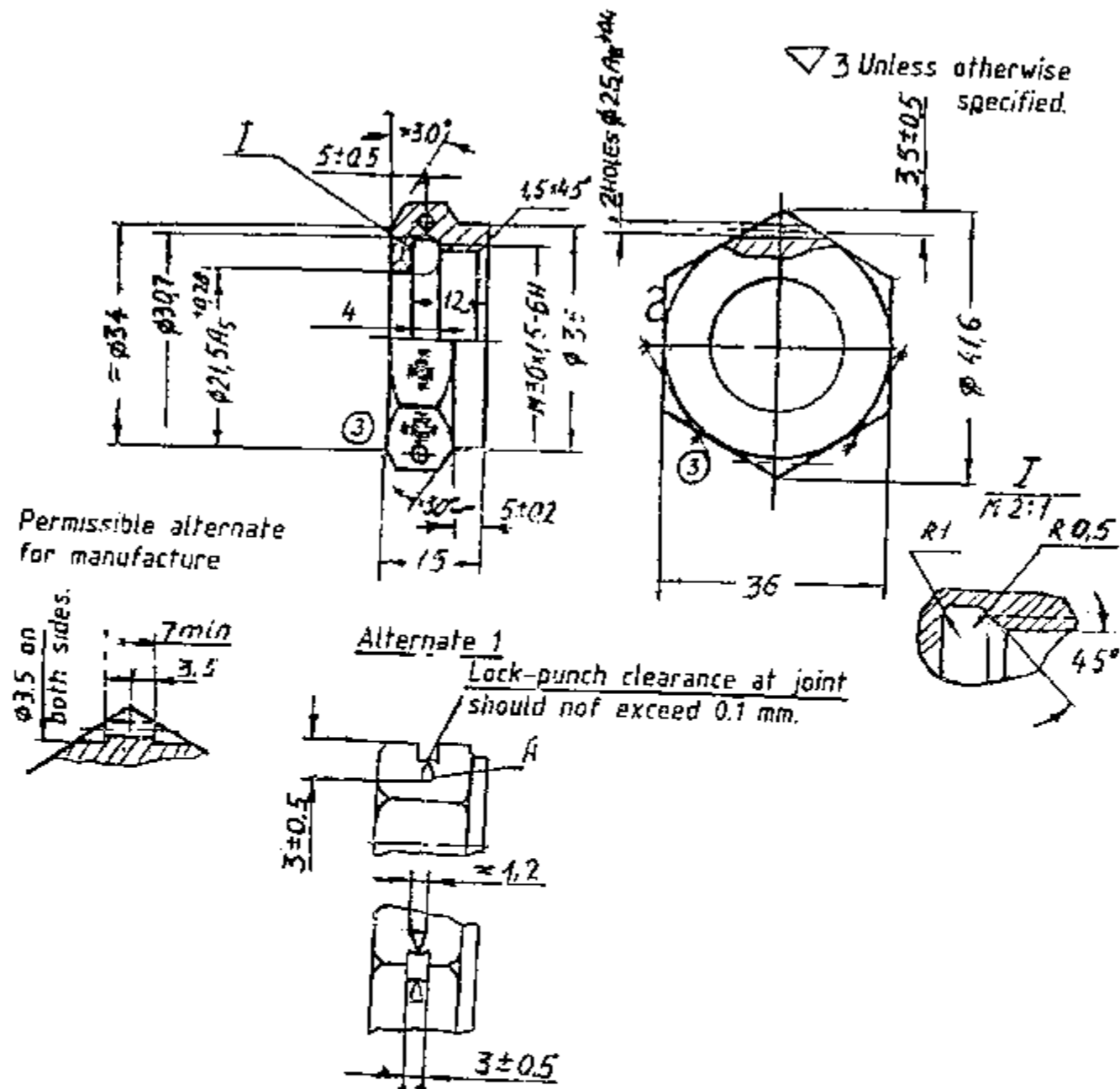
675-71-Sb252Sb



TECHNICAL CONDITIONS

- * (1) in accessible places
- * (2) 1. Welds - according to GOCT 14806-69. Projection of weld beyond surface B is not tolerable. Other requirements for quality of welds - according to OCT 3-4001-77 for off-design welded joints.
- 2. Coating, except for thread: primer ФН-031 GOCT 9109-81; enamel ИБ-223, white 1, GOCT 14923-78. Painting of outer surfaces in assembly 675-71-c6152 is tolerable.
- 3. Tacking of flange Ref. No. 2 to body from outside between holes is tolerable. Welding - according to GOCT 14806-69 Т1-PH-3-Δ3.
- 4. * Sizes are given for reference.

APPROVED		675-71-Sb252Sb	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		COVER	
		WEIGHT	SCALE
		0.66	1:2
		SHT 1	SHTS 1

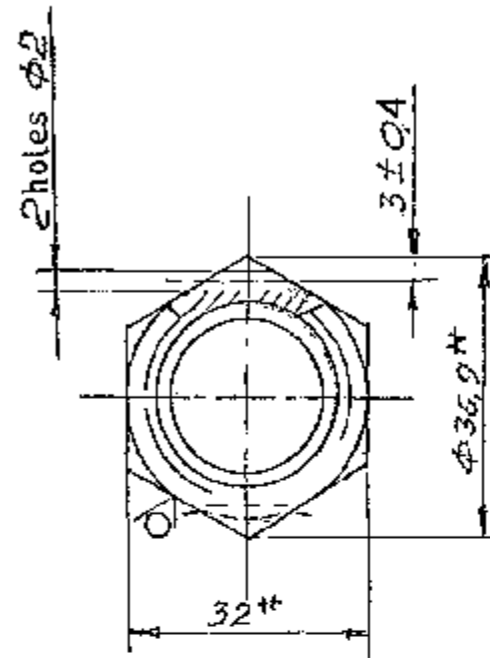
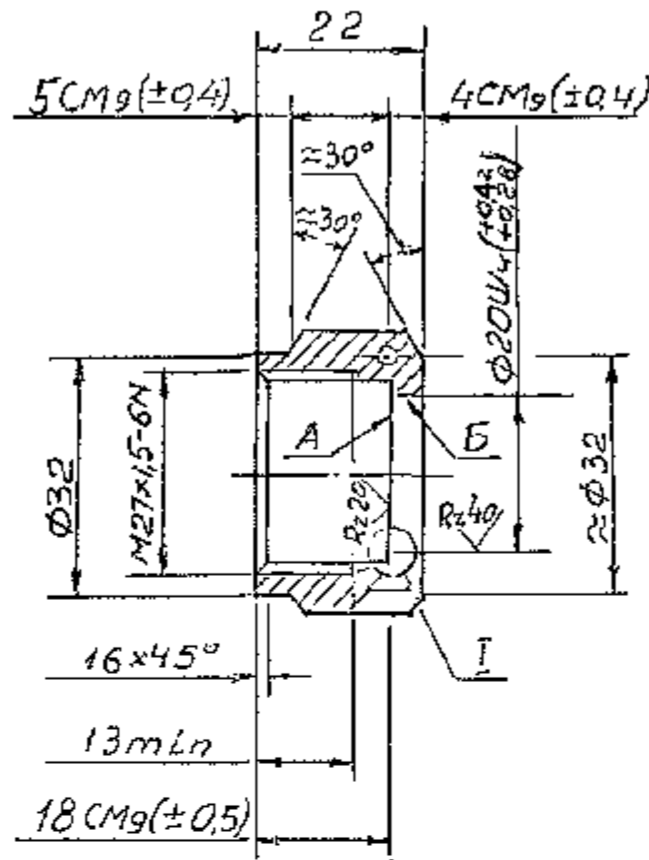


TECHNICAL CONDITIONS

1. Perform dimensions without deviations as per 7th class of accuracy. OSI 1010.
2. Alternate material is Steel 5, GOST 380-71 and 20, 25, 30, 35 and 40 GOST 1050-74
3. Coating: Zinc-plated, 9 microns thick, chromated.
Remove hydrogen embrittlement
Check dimensions before coating.
- 4k. Rod of diameter r should pass through hole A.

NOTE:-
 1. All Dimensions are in mm.
 2. The abbreviations and symbols are based on Russian Specifications.

NEAREST EQ. MATERIAL		00814-ICV	DRAWING REVISED AND RETRACED.
CARBON STEEL BLACK BAR GRADC30, C40 or C45 TO IS; 2073-70		03 OCT 00	
ORGL MATERIAL:- 45 GOST - 1050-74		DC(I)No. & DATE	ISSUE AMENDMENTS
ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF	ALL THREADS TO CONFORM TO SPECIFICATION	STAMP OR ETCH, PART No. MANUFACTURER'S NAME & YEAR OF MFR.	
DRG. NOT TO BE SCALED	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE SPECIFIED	USED ON: 765-08-Sb376	
SCALE: 1:1	DATE: 03 OCT 2000		
DRN.	WT :- (Kg)	700-33-36	
TCD.	0.063		
CHD APPD	UNION NUT	DS CAT No.	
CONTROLLERATE OF QUALITY ASSURANCE (INFANTRY COMBAT VEHICLES)			

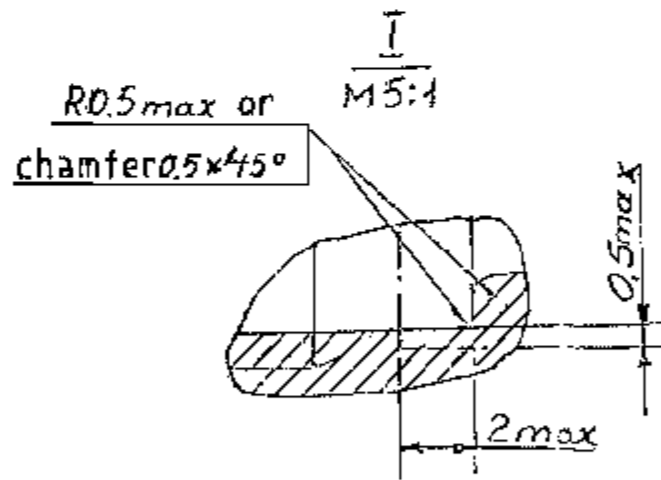


TECHNICAL CONDITIONS

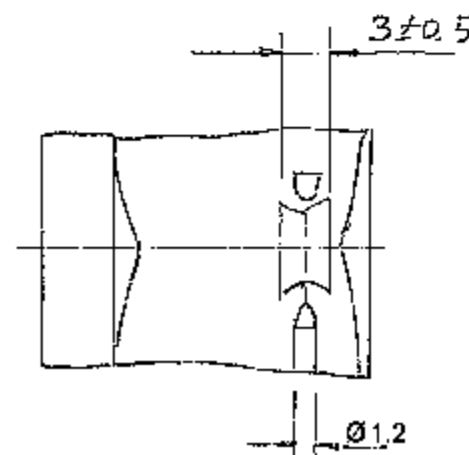
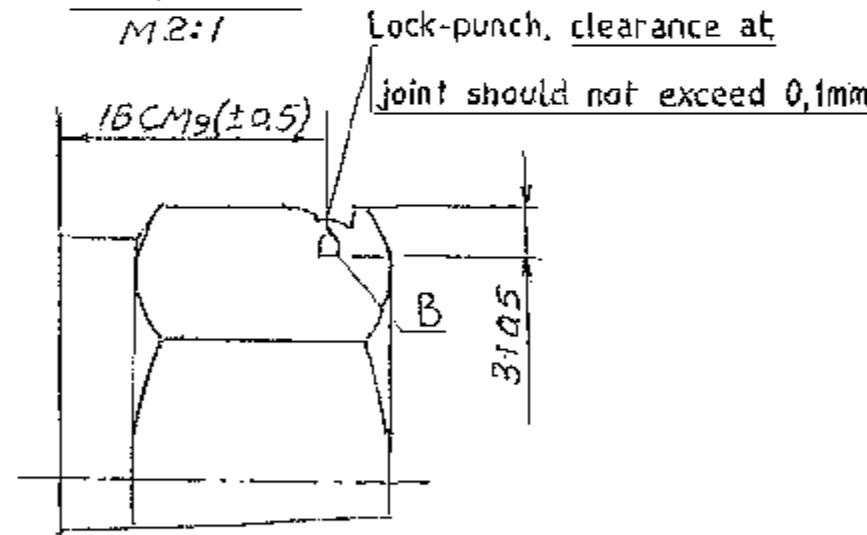
1. Unspecified limit deviations of dimensions are as follows: for holes-as per A7, for shafts-as per B7, others-as per CM7.
2. End-play of surface A with respect to angle diameter should not exceed 0,1mm (qualified tolerance).
3. Radial run-out of surface B with respect to angle diameter of thread should not exceed 0,12mm (qualified tolerance).
4. Manufacture as per dash-dot line is allowed.
5. Rod of diameter not less than 1mm should pass through hole B.
6. * Dimension is given for reference.
7. Coating: Anodically oxidized, chromated.

Ⓐ EQ. MATERIAL:- Gde 24534 TO IS: 733-83

Ⓑ EQ. MATERIAL:- AL. ALLOY EXTRUDED BAR GRADE 24534 TO IS: 733-83.



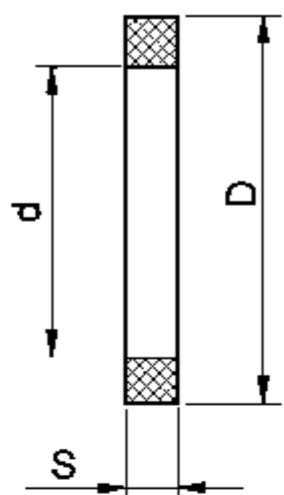
1 Alternate
M2:1



00820-ICV 17-10-2000	Ⓑ	EQ. MATERIAL ADDED.
00662-ICV 30 NOV 98	Ⓐ	Gde 24534 TO IS: 733-83 ADDED AS EQUIVALENT MATERIAL
DATE	ISSUE	NATURE AMENDMENT

APPROVED <i>[Signature]</i>	700-33-136		
CHECKED <i>[Signature]</i>			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	UNION NUT		WEIGHT SCALE
	BAR A 16T W32n		0.022 1:1
	GOST 21488-76		SHT SHTS

700-40-260



- 1) OTHER TECHNICAL REQUIREMENTS ARE AS PER TECHNICAL SPECIFICATION TY B1-04-395-75.
- 2) PART SHOULD CORRESPOND TO APPROVED STANDARD. DIMENSIONS MM.

DESIGNATION	d		D		S		MASS kg	D S CAT PART No.
	NOMINAL	DEVIATION	NOMINAL	DEVIATION	NOMINAL	DEVIATION		
-23	42	+0.7	52	2.0	±0.20		0.0018	
-24	45		55			0.0018		
-25	45		66			0.0044		
-26	50		56			0.0012		
-27	50		60			0.0020		
-28	52	+1.0	62	1.0		0.0021		
-29	66		72		0.003			
-30	68		78		0.0027			
-31	76		85		0.0027			
-32	95		125		0.012			

- (A) EQ. MATERIAL:- VULCANIZED FIBRE SHEET AS PER IS:4820-68
- (B) FOR SHEET THICKNESS ABOVE 1.5 mm.
- (C) IS:4819-68 FOR THICKNESS UP TO 1.4 mm

DESIGNATION	d		D		S		MASS kg	D S CAT PART No.
	NOMINAL	DEVIATION	NOMINAL	DEVIATION	NOMINAL	DEVIATION		
700-40-260	3	+0.5	15	0.6	1.5	±0.15	0.0003	
-01	5		10	0.5			0.0002	
-02	5		12				0.0002	
-03	5		15				0.0002	
-04	6		12				0.0002	
-05	8		14				0.0002	LVZ/RCV-5330-014023
-06	10		16				0.0002	" -5330-014024
-07	12		18				0.0002	" -5330-014025
-08	13		22	-0.6			0.0004	" -5330-014026
(B) -09	14		24				0.0005	" -5330-014027
(B) -10	16	+0.6	22		0.0003	" -5330-014028		
-11	16		27		0.0007	" -5330-014029		
(B) -12	18		26		0.0005	" -5330-014030		
(B) -13	20		25		0.0004	" -5330-014031		
(B) -14	20		30		0.0009			
-15	22	0.7	32		0.0010			
-16	24		32		0.0003			
(B) -17	27		35		0.0009			
-18	30		36		0.0007			
-19	30		40		0.0013			
(B) -20	33	+0.7	45	0.7	0.0017			
-21	37		46		0.0014			
-22	40		48		0.0013			

COMPRESSED ASBESTOS FIBRE GDE. 0/1 TO IS:2712.
 NEAREST EQ. MATERIAL FIBRE BOARD GDE. KF Ø (A) GOST 14613-69.

00867
 00829
 00770-1CV
 00605-1CV
 21-4-97

(C) IS:4819-68 WAS IS:419-68
 (B) SHEET THICKNESS ABOVE 1.5 mm FOR IS:4820-68 & IS:419-68 FOR THICKNESS UP TO 1.4 mm
 (A) EQ. MATERIAL ADDED
 DRAWING REVISED AND RETRACED. (2/97 N OF A)

ORGL MATERIAL:-
 ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF
 DRG. NOT TO BE SCALED
 SCALE: SEE TABLE
 DATE: 17-4-97

WT :- (Kg)
 SEE TABLE

DC(I)No. & DATE
 ISSUE AMENDMENTS

ALL THREADS TO CONFORM TO SPECIFICATION
 TOLERANCE ON DIMENSIONS UNLESS OTHERWISE SPECIFIED

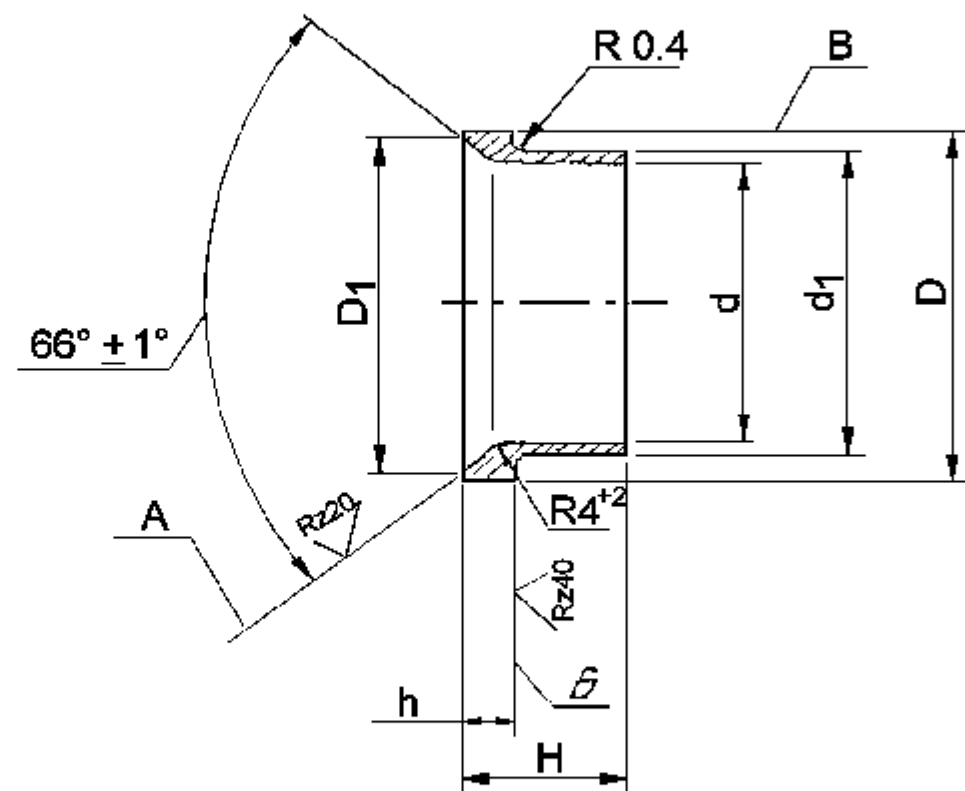
STAMP OR ETCH, PART No. MANUFACTURER'S NAME & YEAR OF MFR.
 USED ON:

700-40-260
 GASKET
 DS CAT No.

CONTROLLERATE OF QUALITY ASSURANCE (INFANTRY COMBAT VEHICLES)

TECHNICAL CONDITIONS

- 1) Alternate material is CT5, GOST 380-71, Steel 35, 40, 50, GOST 1050-74, 45 Г - GOST 4543-71.
- 2) End-play of surface 'A' with respect to surface 'B' should not exceed 0.06 mm
- 3) * Dimensions are given for reference.
- 4) Coating : Chemically Parkerised, Chromatised, Oiled with preservation oil K-17 Gost 10877-75 as per instructions 053.25289 00002 or with varnish KO-815, GOST 11066-76 or Zinc plated, 9 microns thick Chromatised. Remove hydrogen embrittlement.
- 5) Equivalent material : 1 Class 4, 45C₀ to IS : 2004-78 for Drawing No 700-57-417
2 Class 4, to IS : 2004-78 for Drawing No 700-57-416



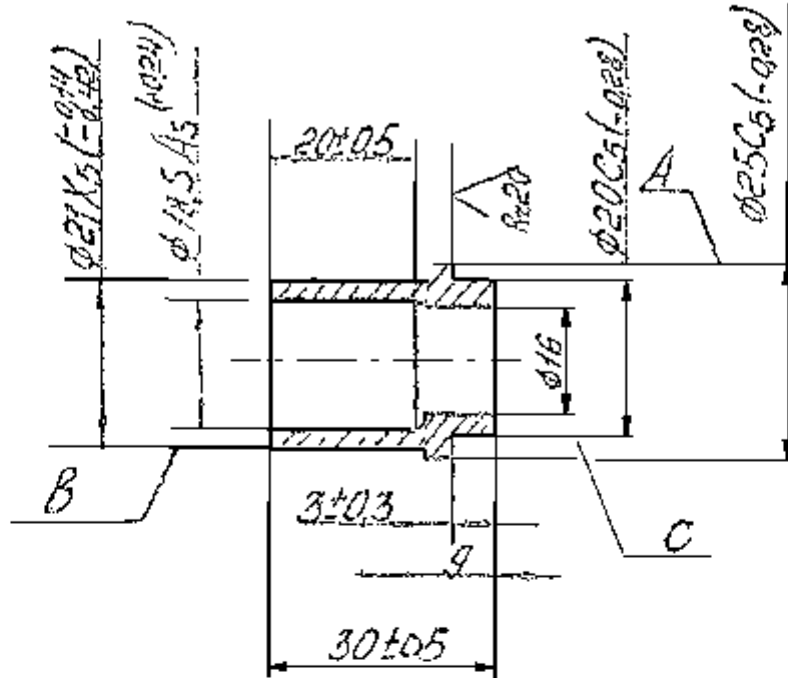
DESIGNATION	d	d ₁	D	D ₁	H	h	Material	FINISH of Surface B	Max
700-57-415	12 W ₄ (+0.36 / +0.24)	14 C ₅ (-0.24)	18 *	16 A ₇ (+0.43)	14 B ₇ (-0.43)	5 B ₇ (-0.3)	ROUND BAR 18-B GOST 7417-75 / 45-B GOST 1051-73	✓	0.008
700-57-416	18 W ₄ (+0.36 / +0.24)	20 C ₅ (-0.28)	25 *	23 A ₇ (+0.52)	17 B ₇ (-0.43)	6 B ₇ (-0.3)	ROUND BAR 25-S GOST 7417-75 / 45-B GOST 1051-73	✓	0.015
700-57-417	25 W ₄ (+0.42 / +0.28)	27 C ₅ (-0.28)	31 C ₅ (-0.34)	29 A ₇ (+0.62)	22 B ₇ (-0.52)	7 B ₇ (-0.36)	STEEL 45 GOST 1050-74	Rz 80 ✓	0.02
700-57-418	28.5 A ₅ (+0.28)	30 C ₅ (-0.28)	34 *	32 A ₇ (+0.62)	22 B ₇ (-0.52)	7 B ₇ (-0.36)	ROUND BAR 31-S GOST 7417-75 / 45-B GOST 1051-73	✓	0.028
700-57-419	38.5 A ₅ (+0.34)	40 C ₅ (-0.34)	46 *	44 A ₇ (+0.62)	22 B ₇ (-0.52)	7 B ₇ (-0.36)	ROUND BAR 46-S GOST 7417-75 / 45-B GOST 1051-73	✓	0.035

DRAWING No: 700-57-415/419 WAS 700-57-415/420	
NEAREST EQVT MATERIAL	SEE TABLE
ORGL MATERIAL	AMENDMENTS
ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF. DRG. NOT TO BE SCALED	ALL THREADS TO CONFORM TO SPECIFICATION.
SCALE:- 1:1	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE SPECIFIED
DATE :- 15-11-2000	USED ON:- 765-08-Sb385
DRN. [Signature]	WT: (Kg)
TCD. [Signature]	SEE TABLE
CHD. [Signature]	DRAWING NO 700-57-415/420 (B) 700-57-415/419
APD. [Signature]	
NIPPLE	
PART NO	
CONTROLLERATE OF QUALITY ASSURANCE (INFANTRY COMBAT VEHICLES)	

NOTE:
1. ALL DIMENSIONS ARE IN MM.

701-13-27

Rz 80 / (✓)



1. Alternate material is steel cm2cn, cm5cn, GOST 380-71 and 15,25,30 GOST 1050-74.
2. Unspecified limit deviations of dimensions are for holes-as per A7, for shafts-as per B7.
3. Run-out of surfaces A and B with respect to the axis of surface C should not exceed 0,2mm.
4. Variation in wall thickness along surface B should not exceed 0.5mm.

Ⓐ EQ. MATERIAL: - CARBON STEEL BLACK
 BAR C40, C15 Mn75, C20 OR
 C25 Mn75, C30 OR
 C40 TO IS: 2073.

00820-ICV
 12 OCT 2000
 DC(I)No. & DATE

EQ. MATERIAL ADDED.
 AMENDMENTS

APPROVED
 CHECKED

701-13-27

CONTROLLERATE
 OF
 QUALITY ASSURANCE
 (ICV)

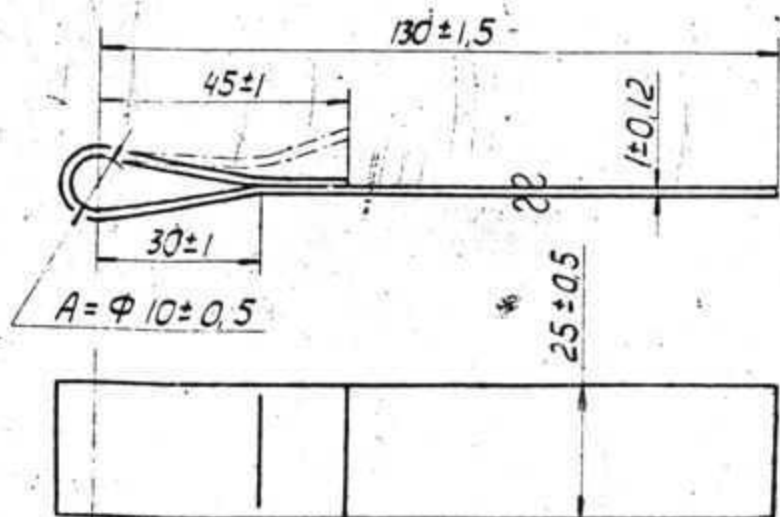
END PIECE

WEIGHT SCALE
 0.024 1:1

STEEL 20 GOST 1050-74

SHT SHTS

765-71-1192



1. Alternate material is Steel cm3, GOST 380-71 and Steel cm10, 15, 20, 25, GOST 1050-74.
2. Check dimension A on mandrel.

SN/SH/DOC NO	SIGN	DATE	SHEET WEIGHT/SCALE
DRAWN CHV.RAD.	W	30.7.84	
EDT/CHKD DK.JAIN		31.7.84	TOTAL SHEETS
F/M,DC S-R.NAIR	82	31.7.84	
DIV/OFFR T.K.BANERJEE		31.7.84	
NAME SIGN DATE			

BAND

08kn GOCT 1050-74

765-71-1192

EXPLANATORY NOTES TO TECHNICAL CONDITION

① BAND SHOULD BE MANUFACTURED FROM STEEL GRADE 08KN AND GRADE 10,15,20, AND 25 OF GOST 1050-74 AND GRADE CM3 (CT3) OF GOST 380-71. THE CHEMICAL COMPOSITIONS ARE AS GIVEN BELOW.

CHEMICAL COMPOSITION	STEEL GRADES [AS PER GOST 1050-74]				
	08KP	10	15	20	25
CARBON % (MIN)	0.05-0.11	0.07-0.14	0.12-0.19	0.17-0.24	0.22-0.30
SILICON % (MIN)	0.03(MAX)	0.17-0.37	0.17-0.37	0.17-0.37	0.17-0.37
MANGANESE % (MIN)	0.25-0.50	0.35-0.65	0.35-0.65	0.35-0.65	0.50-0.80
CHROMIUM % (MAX)	0.10	0.15	0.25	0.25	0.25

STEEL GRADE	BHN (MAX) WITHOUT HEAT TREATMENT
10	143
15	149
20	163
25	170
08	151

② MECHANICAL PROPERTIES OF GRADE 08KN ALSO GRADE 10,15,20 AND 25 OF GOST 1050-74 IS AS GIVEN BELOW

MECHANICAL PROPERTIES	STEEL GRADE				
	10	15	20	25	08
HEAT TREATMENT OF BLANKS	NORMALISING	NORMALISING	NORMALISING	NORMALISING	—
YIELD POINT kg/mm ² (MIN)	21	23	25	28	20
ULTIMATE TENSILE STRENGTH kg/mm ² (MIN)	34	38	42	46	33
PERCENTAGE ELONGATION % (MIN)	31	21	25	23	33
REDUCTION OF AREA % (MIN)	55	55	55	50	60
IMPACT STRENGTH kg/cm ² (MIN)	—	—	—	9	—

HEATING TEMPERATURE °C

STEEL GRADES	NORMALISING
10	920
15	900
20	900
25	890

RECOMMENDED MINIMUM HOLDING PERIOD IN CASE OF NORMALISING OR HARDENING - 30 MINUTES. COOLING MEDIUM IN CASE OF HARDENING - WATER

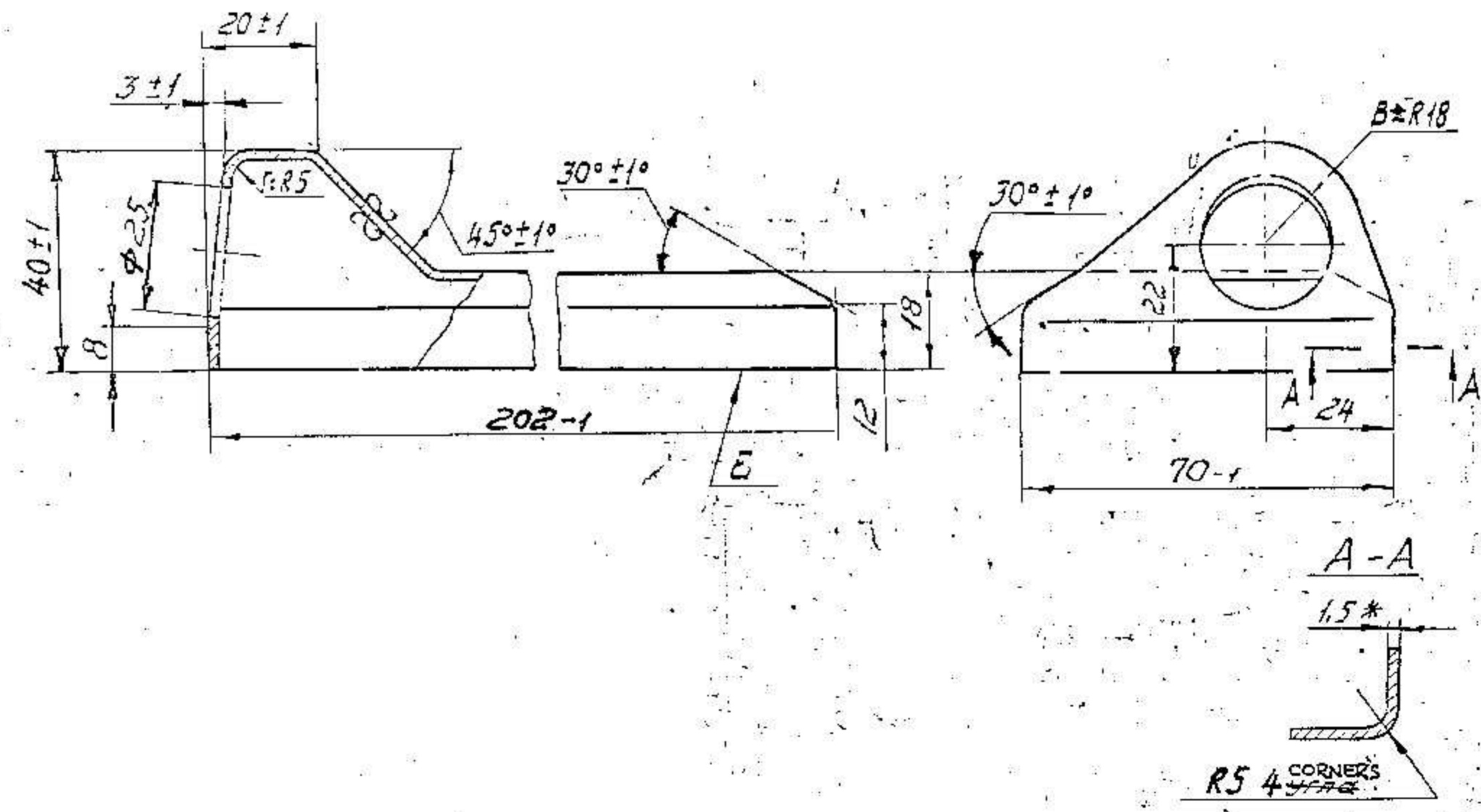
SURFACE FINISH

- ✓ (▽) :- INDICATES SPECIFIED ROUGHNESS TO BE OBTAINED WITHOUT REMOVAL OF MATERIAL ON THOSE SURFACE WHERE SURFACE FINISH IS NOT SPECIFIED
- ∞ :- INDICATES SURFACE FINISH OF 50 MICRONS ON THOSE SURFACE ON BOTH SIDES OF THE JOB

INScribed	CHKED	APPROVED	DATE	TOLERANCE UNLESS OTHERWISE SPECIFIED	DRG NOT TO BE SCALED	PERTAINS TO	
					ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF		
					ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED	BAND	765-71-1192
					SCALE	CONTROLLERATE OF INSPECTION FIRE FIGHTING EQPT PUNE	

D-CH D-T ZONE BRIEF RECORD SIGN

765-71-433



TECHNICAL CONDITIONS

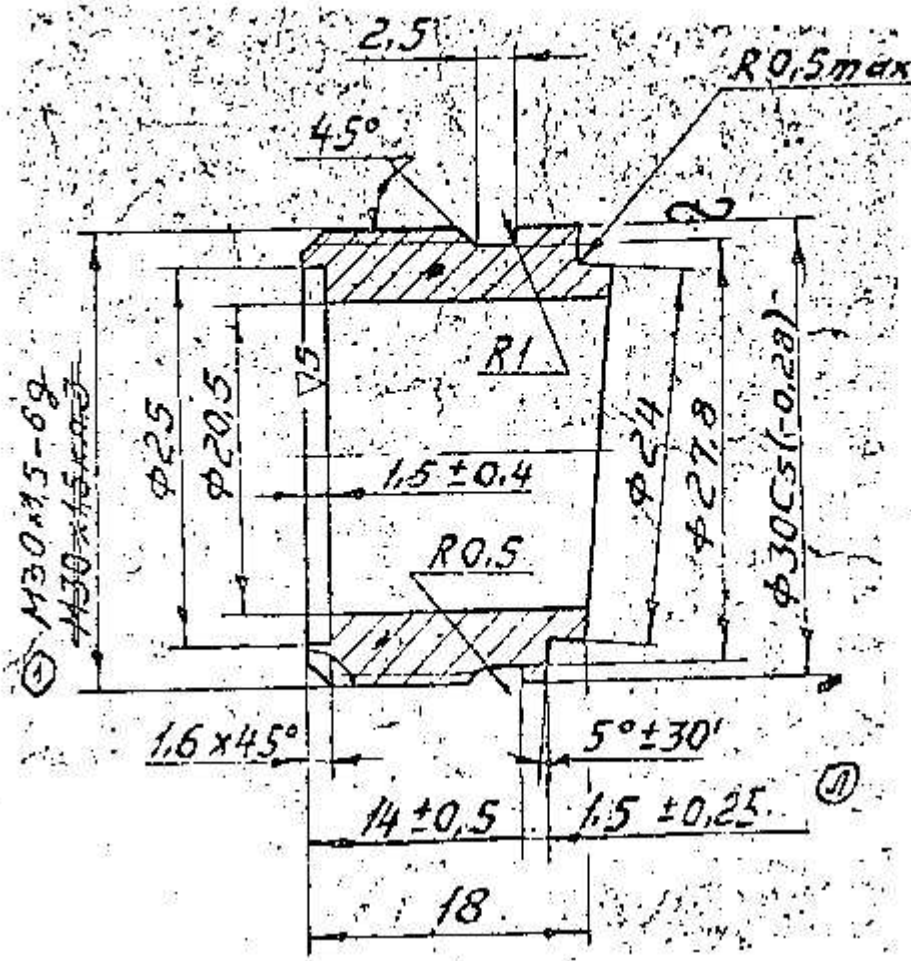
1. Alternate material grades M2 and M3 to GOST: 859-79. Sheet Δ П P X M 1.2 H A J 63 to GOST: 931-78.
2. * Dimension is for reference.
3. Unspecified radii should be 10mm.
4. Unspecified limit deviations of dimensions are + 0.5mm.
5. Unevenness of the surface 'b' should not be more than 1.5mm.
6. Maintain dimension 'Г' over the dimension 'B'.
7. Item may be made from parts (different sheets) and subsequent soldering using Δ 63 GOST: 15527-70 and grinding.

THE ABBREVIATIONS AND SYMBOLS ARE BASED ON RUSSIAN SPECIFICATIONS
ALL DIMENSIONS ARE IN MM

SHEET Δ П P X M 1.2 H A J 63		GOST 931-78	
MATERIAL	ISSUE	AMENDMENTS	
ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF.	ALL THREADS TO CONFORM TO SPECIFICATION.	STAMP OR ETCH, PART NO. MANUFACTURER'S NAME & YEAR OF MFR.	
DRG. NOT TO BE SCALED	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE SPECIFIED	USED ON:- 765-71-433	
SCALE:- 1:1	DATE :- 27-5-99	765-71-433	
DRN. Δ 63	WT. :- (Kg) 0.265	COLLECTOR	
TCD. Δ 63			
CHD. Δ 63			
APD. Δ 63			
CONTROLLERATE OF QUALITY ASSURANCE (INFANTRY COMBAT VEHICLES)			

765-71-434

▽3(▽)



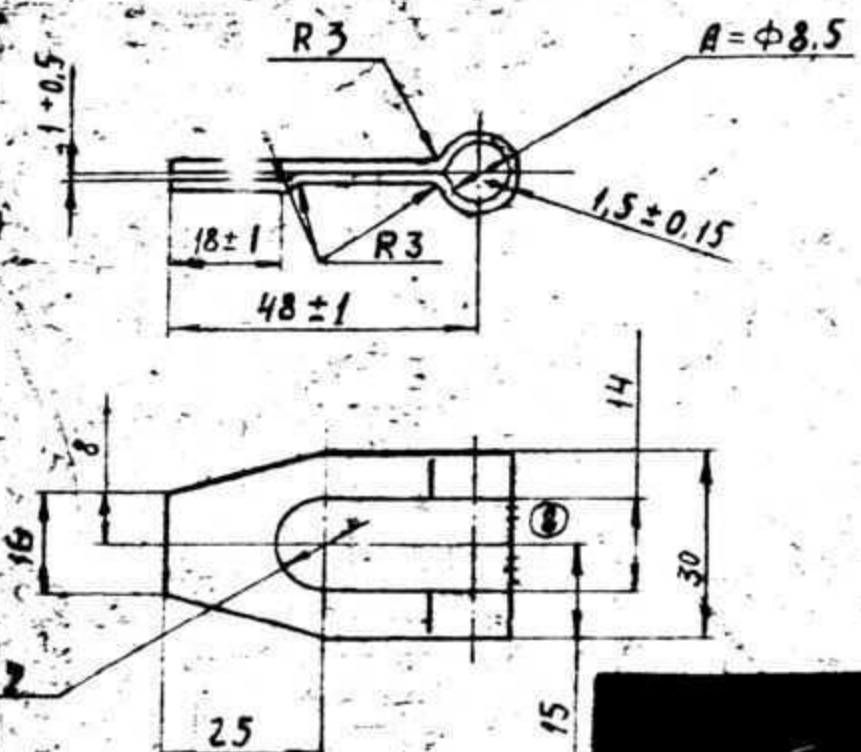
1. ALTERNATE MATERIAL IS GRADE 25 AND 30 TO GOST 1050-74
2. UNSPECIFIED LIMIT DEVIATION OF DIMENSIONS PER SHAFTS ASPER A7, FOR HOLES ASPER B7.
3. COAT THE THREADS M9, COATING MAY BE CARRIED OUT ON THE REMAINING SURFACES.

MATERIAL :- 20 GOST 1050 - 60 74

ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF	ALL THREADS TO CONFORM TO SPECIFICATION	STAMP OR ETCH, PART NO. MANUFACTURERS NAME & YEAR OF MFR.
ORG. NOT TO BE SCALED	TOLERANCE ON DIMENSIONS UNLE -SS OTHERWISE SPECIFIED	USED ON:- 765-71-C5233
SCALE 1:- 2:1	765-71-434	
DATE 1:- 26-5-99		
DRN. [Signature]	WT :- 1kg	PIPE UNION
TCD. [Signature]	0.045	
CHD. [Signature]	[Symbol]	
APP. [Signature]	[Symbol]	

CONTROLLERATE OF QUALITY ASSURANCE
(INFANTRY COMBAT VEHICLES)

765-71-594



- 1) Alternate material is 10,15,20, and 25, GOST 1050-74.
- 2) Unspecified limit deviations of dimensions are ±0.5mm
- 3) Check the dimension A on mandrel.

CLAMP

10kn GOST 1050-74.

SNOSH	DOC NO	SIGN	DATE
DRAWN	Y.R.Ganesh		30.7.84
EDT,CHKD	D.K.JAIN		30.7.84
F/M,DC	S.R.NAIR		31.7.84
DIV,OFFR	T.K.BANERJEE		31.7.84
N.A.ME	SIGN	DATE	

SHEET	WEIGHT	SCALE
1	0.024	1:1
TOTAL SHEET		

765-71-594

EXPLANATORY NOTES TO TECH. CONDITIONS.

CLAMP SHOULD BE MANUFACTURED FROM STEEL GRADE 10 Kn OR STEEL GRADE 10, 15, 20 AND 25 CONFORMING TO GOST 1050 - 74 .

I CHEMICAL COMPOSITIONS.

STEEL GRADE	CONTENT OF ELEMENTS %			
	CARBON	SILICON	MANGANESE	CHROMIUM (MAX.)
10 KP	0.07 - 0.14	0.07 (MAX.)	0.25 - 0.50	0.15
10	0.07 - 0.14	0.17 - 0.37	0.35 - 0.65	0.15
15	0.12 - 0.19	0.17 - 0.37	0.35 - 0.65	0.25
20	0.17 - 0.24	0.17 - 0.37	0.35 - 0.65	0.25
25	0.22 - 0.30	0.17 - 0.37	0.50 - 0.80	0.25

II MECHANICAL PROPERTIES.

STEEL GRADE	HEAT TREATMENT OF BLANK	YIELD POINT kgf/mm ² (min)	ULTIMATE TENSILE STRENGTH kgf/mm ² (min)	PERCENTAGE ELONGATION % (min)	REDUCTION OF AREA % (min)	IMPACT STRENGTH kg-m/cm ² (min)
10	NORMALISING	21	34	31	55	-
15	"	23	38	27	55	-
20	"	25	42	25	55	-
25	"	28	46	23	50	9

III HARDNESS . (WITHOUT HEAT TREATMENT)

STEEL GRADE	BHN (MAX.)
1) 10	143
2) 15	149
3) 20	163
4) 25	170

IV THE RECOMMENDED HEATING TEMPERATURE DURING HEATTREATMENT OF BLANKS FOR CARRYING THE TESTS OF MACHANICAL PROPERTIES OF STEEL ARE GIVEN BELOW.

STEEL GRADE	HEATING TEMPERATURE °C FOR NORMALISING.
10	920
15	900
20	900
25	890

RECOMMENDED MINIMUM HOLDING PERIOD IS 30 MINUTES.

V SURFACE FINISH. ~ INDICATES.

SURFACE ROUGHNESS IN Ra VALUE NOT TO EXCEED 80 MICRONS ON THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED.

DC(I)	DATE	ZONE	BRIEF RECORD	SIGN.

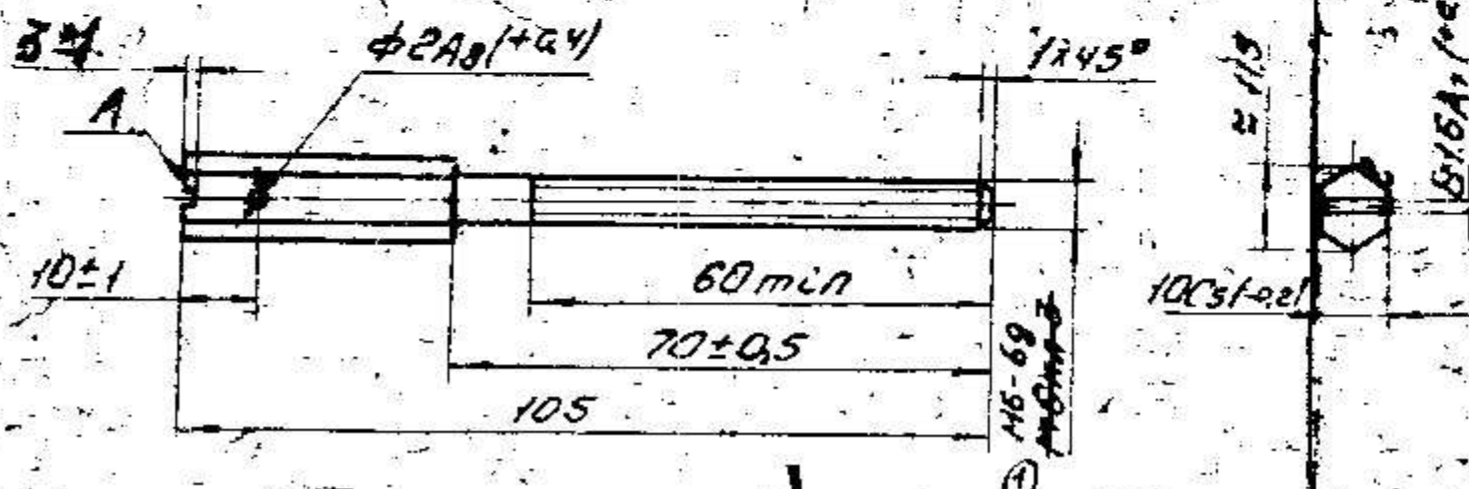
INSCRIBED		DRG NOT TO BE SCALED.	PERTAINS TO :-
CHECKED	<i>[Signature]</i>	ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF.	
APPROVED	<i>[Signature]</i>	ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.	765-71-594
DATE :-	<i>[Signature]</i>		
TOLERANCE UNLESS OTHERWISE SPECIFIED.			
GEN. DEC. ANG.		SCALE :-	
CONTROLLERATE OF INSPECTION FIRE FIGHTING EQPT PUNE.			

USED ON
765-71-28508

1 1

▽3 (▽)

119
71



- 1). Alternate material is steel CT3, steel QT3,Kn, GOST 380-71, and 35, 40, GOST 1050-74.
- 2). Unspecified limit deviations of dimensions for shafts are as per B7.
- 3). Coating-Zinc-plated, 9 microns thick, chromated. Remove hydrogen embrittlement.
- 4). Unspecified radii should not exceed 1 mm.
- 5). Position of hole with respect to hexahedron section and slot is arbitrary.
- 6). Traces from centre hole not exceeding φ3 mm are allowed on surface A.
- 7). Thread is allowed to be rolled, in this case, diameter of unthreaded section of rod should be equal to angle diameter of thread.
- 8). Provide dimension b equal to $1.6^{+0.25}_{-0.08}$.

TITLES, MIDDLES, LAST NAMES, INITIALS, AND SURNAMES OF THE DESIGNER, CHECKER, AND APPROVER.
 765-71-599

765-71-599

SNKSHY/DOC NO	SIGN	DATE
DRAWN	BMUSHAN	27.7.84
EDT,CHKD	S.R. NAIR	30.7.84
F/M, DC	S.R. NAIR	30.7.84
DIV.OFFR.	T.K. BANERJEE	1.8.84
NAME	SIGN	DATE

COUPLING BOLT

20 GOST 1050-74

SHEET WEIGHT	SCALE
100	1:1
TOTAL SHEETS	
ORDNANCE FACTORY PROJECT HYDERABAD	

D 96

6811-1A-59A

EXPLANATORY NOTES TO TECHNICAL CONDITIONS

GASKET SHOULD BE MANUFACTURED FROM RUBBER GRADE 632 OR 638 CODENO THICKNESS 4 mm CONFORMING TO TY-005216-75

TECHNOLOGICAL PROPERTIES OF GRADE 632 (TY-005216-75)

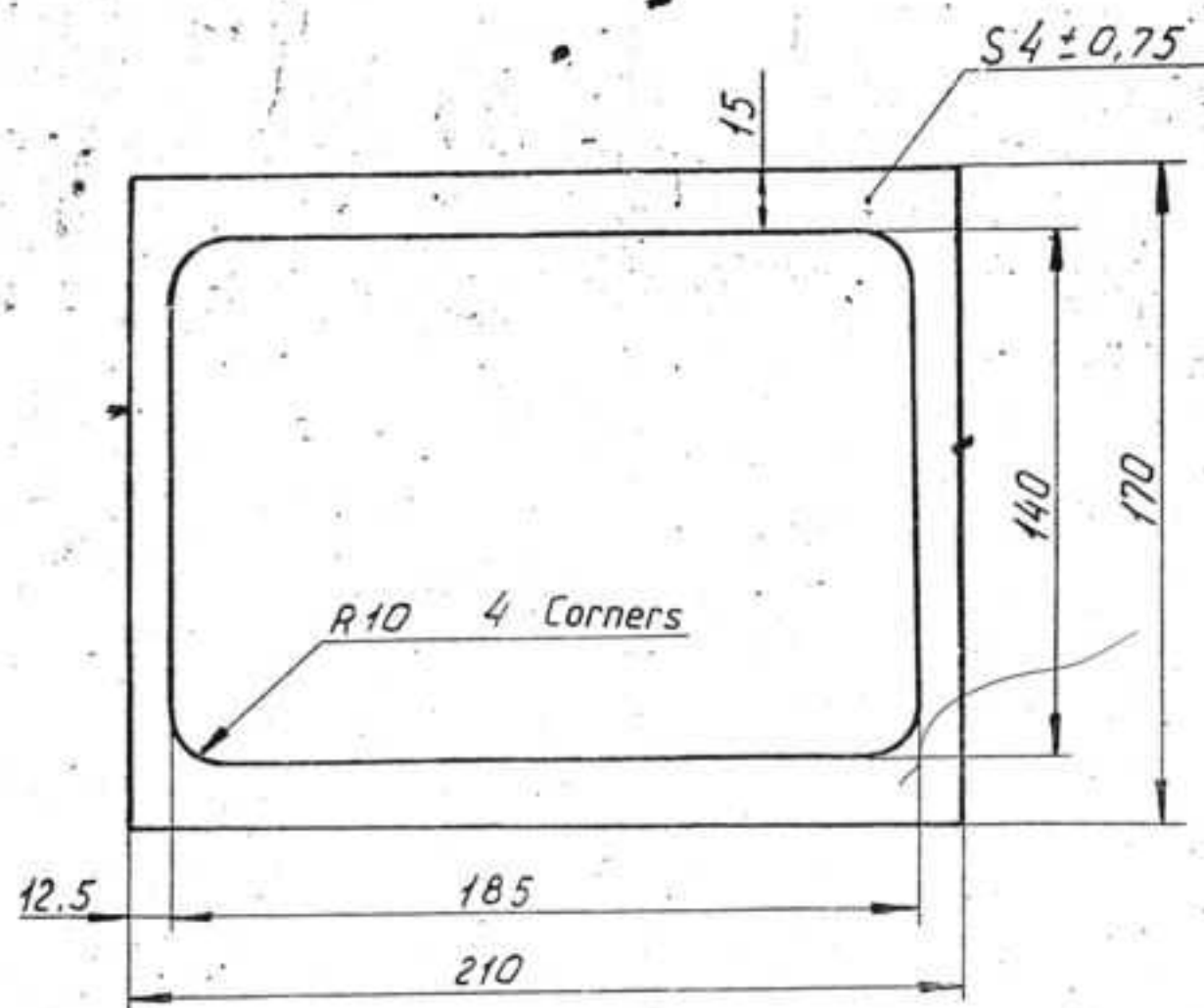
- 1) MEDIUM — WATER, OIL WEAK SOLUTION OF ACIDS AND ALKALIES (20%) PETROL, OIL
- 2) OPERATING TEMPERATURE — -30°C TO +50°C
- 3) HARDNESS — MEDIUM
- 4) TECHNOLOGICAL PROPERTIES OF RUBBER MIXTURES } TO BE CALENDERED

RUBBER GRADE 638

- ① WORKING CONDITION.
 - a) MEDIUM — OIL
 - b) MAX. TEMP°C — 100°C
 - ② ULTIMATE TENSILE STRENGTH kgf/cm² — 45
 - ③ ELONGATION AT BREAK % — 500
 - ④ HARDNESS (SHORE A) — 30-50
 - ⑤ TYPE — NITRILE CHLOROPENE
- EQUIVALENT TO AS PER BS 2751-82 BA-40 OR BS 2752-82 C-40

PHYSICAL - MECHANICAL PROPERTIES OF RUBBER GRADE 632

- 1) TYPE OF RUBBER — NIRT CKME-30APKM-15
- 2) RUPTURE STRENGTH MIN kgf/cm² — 50
- 3) ELONGATION AT RUPTURE MIN % — 300
- 4) PERMANENT ELONGATION AFTER RUPTURE MAX % — 40
- 5) HARDNESS (SHORE-A) RANGE LABORATORY METHOD — 45-65
- 6) COEFFICIENT OF THERMAL AGEING IN AIR
 - a) TEMPERATURE — 70
 - b) PERIOD, HOUR — 96
 - c) AS PER THE ELONGATION AT LEAST — 0.60
- 7) VARIATION IN MASS UNDER THE INFLUENCE OF MEDIUM 7. MAX.
 - a) RUBBER SOLVENT
 - KALOSHA - 95 p/wt.
 - BENZENE - 5 p/wt.
 - AT TEMP 15 TO 25°C FOR 24 HOURS — 30.0
 - b) OIL MT - 11T
 - AT TEMPERATURE 70°C FOR 24 HOURS — ACTUAL
- 8) DENSITY g/cm³ — 1.35



- 1). Alternate material is rubber 638, TY005216-75, or rubber of grade 10676, TY 005216-75.
- 2). Other requirements are as per technical specifications TY005216-75 for article of code 254311.

765-71-1187

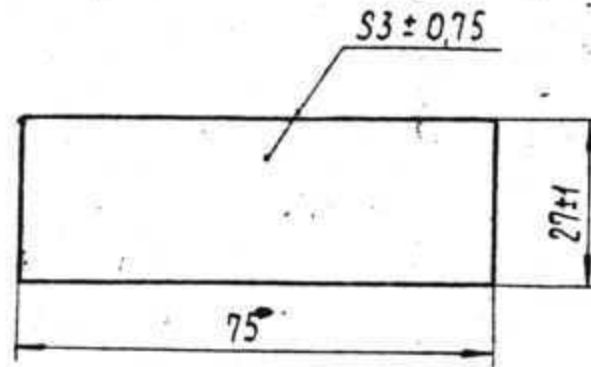
SHEET NO		DOC NO		SIGN DATE	
DRAWN		BHUSHAN		25.7.84	
EDT,CHKD		D.K. SHIN		27.8	
F/M,DC		S.R. NAIR		24.8.84	
DIV.OFFR		T.K. BANERJEE		21.8.84	
NAME		SIGN		DATE	

GASKET

SHEET	WEIGHT	SCALE
0	0.038	1:2
TOTAL SHEETS		

Plate 254311-4
Rubber 632 TY005216-75

INSCRIBED	CHECKED <i>su</i>	APPROVED <i>grom</i>	DATE <i>6.11.84</i>	DRG NOT TO BE SCALED	PERTAINS TO
				ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF	
				ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED	
				GASKET	
TOLERANCE UNLESS OTHERWISE SPECIFIED	SCALE		765-71-1187		
GEN. DEC. ANG	CONTROLLERATE OF INSPECTION		FIREFIGHTING EQPT. PUNE		



1. Alternate material is Rubber of grade 10676, TY005216-75
2. Other requirements are as per Technical specifications TY005216-75 for article of code 254311.

EXPLANATORY NOTES TO TO TECHNICAL CONDITION

- GASKET SHOULD BE MANUFACTURED FROM RUBBER GRADE OF 632 TO TY005216-75
- ① TECHNOLOGICAL PROPERTIES
- 1) MEDIUM ——— WATER, OIL WEAK SOLUTION OF ACIDS AND ALKALIES (20%) PETROL OIL
 - 2) OPERATING TEMPERATURE ——— -30°C TO +50°C
 - 3) HARDNESS ——— MEDIUM
 - 4) TECHNOLOGICAL PROPERTIES OF RUBBER MIXTURE } ——— TO BE CALENDERED

RUBBER GRADE 10676 IS NOT GIVEN IN THE SPECIFICATION

② PHYSICAL — MECHANICAL — PROPERTIES OF GRADE 632

- 1) TYPE OF RUBBER ——— NIPIT CRME - 30 APKM - 15
- 2) RUPTURE STRENGTH ——— 50
MIN KGF / CM², MIN.
- 3) ELONGATION AT RUPTURE ——— 300
MIN %
- 4) PERMANENT ELONGATION AFTER RUPTURE MAX % ——— 40

5) SHORE HARDNESS ——— 45 - 65

6) COEFFICIENT OF THERMAL AGEING IN AIR

- a) TEMPERATURE °C 70
- b) PERIOD HOUR 96
- c) AS PER THE ELONGATION AT LEAST 0.60

7) VARIATION IN MASS UNDER THE INFLUENCE OF MEDIUM, % MORE

- a) RUBBER SOLVENT
KALOSHA - 95 P/W+
BENZENE - 5 P/W
AT TEMPERATURE 5 TO 25°C FOR 24 HOURS } 30.0
- b) OIL MT - 10 P
AT TEMP - 70°C FOR 24 HOURS } ACTUAL

8) DENSITY g/cm³ ——— 1.35

765-71-1193

SHEET WEIGHT SCALE

GASKET Easy Convert

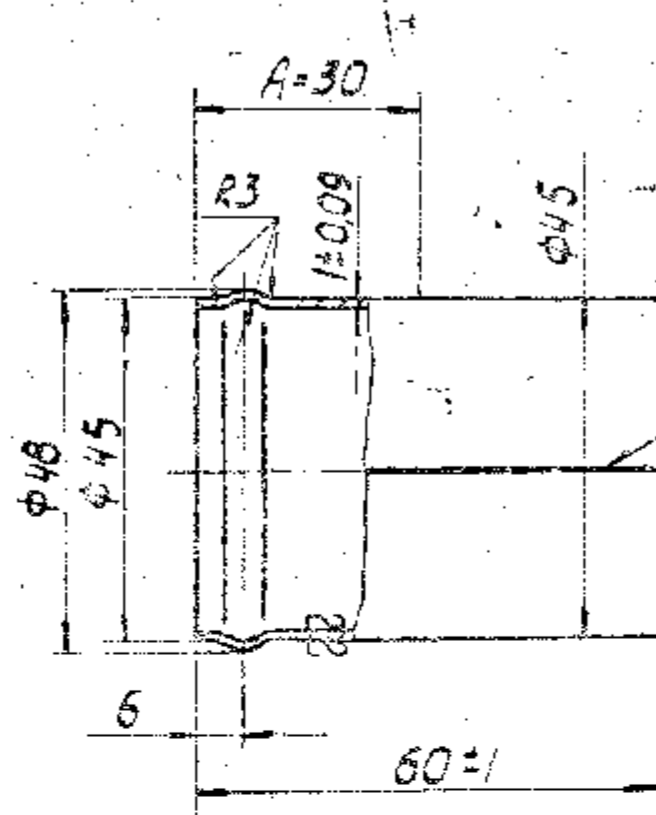
TOTAL SHEETS

PLATE 254311-3
RUBBER 632 TY005216-75

SN	SHD	ID	CD	SIGN	DATE
DRAWN	CH.V.RAO				30.7.84
EDT & CHKD	ADURAY				31.7.84
FM, DC.	S.R.NAIR				31.7.84
DIV. OFFR.	T.K.BANERJEE				31.7.84
NAME	SIGN			DATE	

D. CD	D. T	ZONE	BRIEF RECORD	SIGN	INSCRIBED	DRG NOT TO BE SCALED	PERTAINS TO
					CHECKED	ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF	
					APPROVED	ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED	
					DATE		
					TOLERANCE UNLESS OTHERWISE SPECIFIED		
					GEN DEC ANG	GASKET	765-71-1193
						SCALE: -	
						CONTROLLERATE OF INSPECTION FIRE FIGHTING EOPT PUNE	

9671-12-99



1. Alternate material is 08KП, 08ПC and 10KП, GOST 1050-74
2. Unspecified limit deviations of dimensions are ± 0.5 mm.
3. Dress weld on section A
4. Gas welding is allowed.

BRANCH PIPE

10 GOCT 1050-74.

765-71-1296

SHEET WEIGHT/SCALE	0060	1:1
TOTAL SHEETS	5	

35-33308
 25.7.80
 30.7.80
 31.8.80

9671-12-99

EXPLANATORY NOTES TO TECHNICAL CONDITIONS.

BRANCH PIPE SHOULD BE MANUFACTURED FROM KILLED STEEL GRADE 10 OR RIMMED STEEL GRADE 08, 10 (08 KП, 10 KП) OR SEMI KILLED STEEL GRADE 08 (08 ПC) CONFORMING TO GOST 1050-74.

I CHEMICAL COMPOSITION.

CHEMICAL COMPOSITION OF STEEL GRADE 10, 08 KП, 08 ПC AND 10 KП CONFORMING TO GOST 1050-74 IS AS FOLLOWS.

GRADE OF STEEL	CONTENT OF ELEMENTS %			
	CARBON	SILICON	MANGANESE	CHROMIUM (MAX.)
10.	0.07 - 0.14	0.17 - 0.37	0.35 - 0.65	0.15
08 KП	0.05 - 0.11	0.03 (MAX.)	0.25 - 0.50	0.10
08 ПC	0.05 - 0.11	0.05 - 0.17	0.35 - 0.65	0.10
10 KП	0.07 - 0.14	0.07 (MAX.)	0.25 - 0.50	0.15

II MECHANICAL PROPERTIES.

MECHANICAL PROPERTIES OF STEEL GRADE 08 AND 10 CONFORMING TO GOST 1050-74 ARE AS FOLLOWS.

MECHANICAL PROPERTIES	STEEL GRADE	
	08 NORMALISING	10 NORMLISING
i) HEAT TREATMENT OF BLANKS		
ii) YIELD POINT Kg/mm^2 (MIN)	20	21
iii) ULTIMATE TENSILE STRENGTH Kg/mm^2 (MIN)	33	34
iv) PERCENTAGE ELONGATION % (MIN)	33	31
v) REDUCTION OF AREA %	60	55

III HARDNESS (WITHOUT HEAT TREATMENT)

STEEL GRADE	BHN (MAX.)
08	131
10	143

IV THE RECOMMENDED HEATING TEMPERATURE DURING HEAT TREATMENT OF BLANKS FOR CARRYING OUT THE TESTS OF MECHANICAL PROPERTIES IS AS GIVEN BELOW.

STEEL GRADE	HEATING TEMPERATURE $^{\circ}C$ FOR NORMALISING
10	920 $^{\circ}C$

RECOMMENDED MINIMUM HOLDING PERIOD FOR NORMALISING - 30 MINUTES

V SYMBOLS GOST 14771-76 CI-Yn

- CI - INDICATES BUTT JOINT SINGLE WELD.
- Yn - INDICATES GAS-SHIELDED ARC WELDING IN CARBON DIOXIDE AND ITS MIXTURE WITH OXYGEN, USING A CONSUMABLE ELECTRODE.

VI SURFACE FINISH.

∇(∇) INDICATES SURFACE FINISH TO BE OBTAINED WITHOUT REMOVAL OF MATERIAL ON THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED.

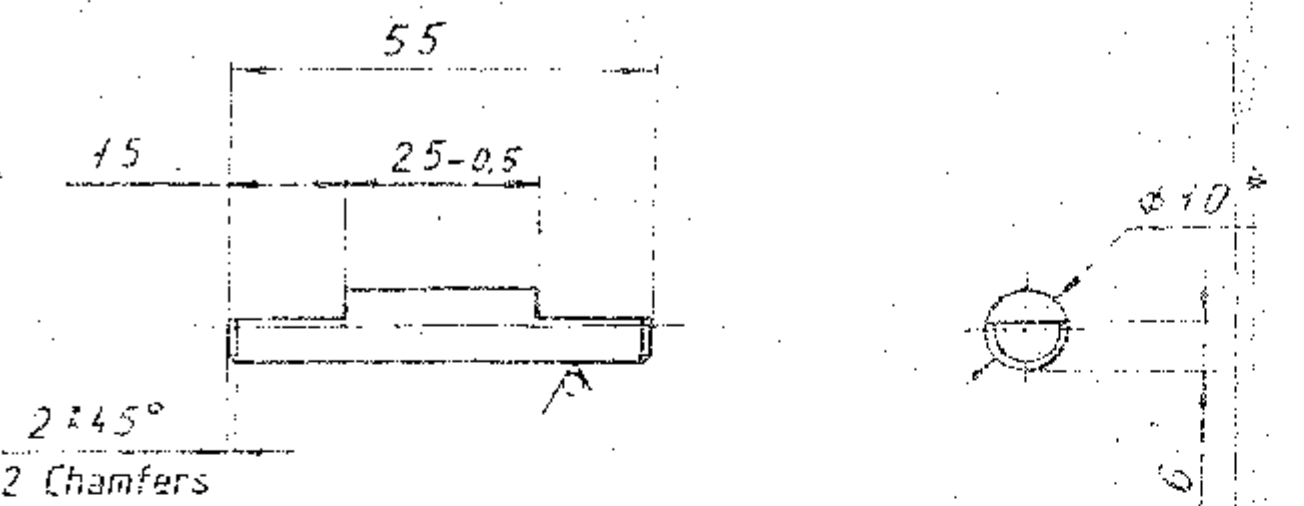
⊞ INDICATES SURFACE ROUGHNESS ON BOTH SIDES IN Rq VALUE NOT TO EXCEED 80 μ

DC(I)	DATE	ZONE	BRIEF RECORD	SIGN
-------	------	------	--------------	------

INSCRIBED	DRG. NOT TO BE SCALED.	PERTAINS TO:
CHECKED	ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF.	765-71-1296
APPROVED	ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.	
DATE	BRANCH PIPE	
TOLERANCE UNLESS OTHERWISE SPECIFIED		
GEN DEC ANG	SCALE: -	
CONTROLLER OF INSPECTION, FIRE FIGHTING EQPT. PUNE		

894-71-992 V

R-87



1. Alternate material is Steel 35, 40, 50, GOST 1050-74, 40Г, GOST 4543-71.
2. Unspecified limit deviations of dimensions are ±0.5 mm.
3. Coating: Zinc-plated, 9 microns thick, chromating.
4. * Dimension is given for reference.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

| | | | | |
|-----------------------------|----------------|--------------|---------|-------|
| 765-71-1768 | | | | |
| SHAFT | | SHEET | WEIGHT | SCALE |
| | | | 0.026 | 1:1 |
| | | TOTAL SHEETS | | |
| DESIGN | DOC NO | SIGN | DATE | |
| DRAWN | CH. V. RAO | | 25.7.84 | |
| EDT, CHKD | D. K. JAIN | | 27.7.84 | |
| F/M, D.C. | S. K. NAIR | | 30.7.84 | |
| DIV. OFFR | T. K. BANERJEE | | 31.7.84 | |
| NAME | SIGN | DATE | | |
| ROUND BAR 10-4 OCT 74 17-75 | | | | |
| BAR 45-B. OCT 1051-73 | | | | |

894-71-992

EXPLANATORY NOTES TO TECHNICAL CONDITIONS

1. SHAFT SHOULD BE MANUFACTURED FROM ROUND BAR SIZED STEEL GRADE 45, DIA: 10 mm. CLASS OF ACCURACY 4, SURFACE QUALITY OF GROUP B AS PER GOST-1051-73
2. CHEMICAL COMPOSITION:-

| STEEL GRADE | CARBON % | SILICON % | MANGANESE % | CHROMIUM (MAX) % |
|---------------------|-----------|-----------|-------------|------------------|
| 35 | 0.32-0.40 | 0.17-0.37 | 0.50-0.80 | 0.25 |
| 40 | 0.37-0.45 | 0.17-0.37 | 0.30-0.80 | 0.25 |
| 45 | 0.42-0.50 | 0.17-0.37 | 0.50-0.80 | 0.25 |
| 50 | 0.47-0.55 | 0.17-0.37 | 0.50-0.80 | 0.25 |
| 40Г
GOST 4543-71 | 0.37-0.45 | 0.17-0.37 | 0.70-1.00 | - |

3. MECHANICAL PROPERTIES:-

| STEEL GRADE | HEAT TREATMENT OF BLANKS | YIELD POINT Kgf/mm ² | ULTIMATE TENSILE STRENGTH Kgf/mm ² | PERCENTAGE ELONGATION % | REDUCTION OF AREA % | IMPACT STRENGTH Kgf.m/cm ² |
|---------------------|--|---------------------------------|---|-------------------------|---------------------|---------------------------------------|
| M I N I M U M | | | | | | |
| 35 | NORMALISING | 32 | 54 | 20 | 45 | 7 |
| 40 | NORMALISING | 34 | 58 | 19 | 45 | 6 |
| 45 | NORMALISING | 36 | 61 | 16 | 40 | 5 |
| 50 | NORMALISING | 38 | 64 | 14 | 40 | 4 |
| 40Г
GOST 4543-71 | HARDENING TEMP-860°C, TEMPERING TEMP-600°C | 36 | 60 | 17 | 45 | 6 |

4. HEAT TREATMENT PROCESS AS PER GOST 1050-74 OF GOST 4543-71

| STEEL GRADE | HEATING TEMPERATURE °C |
|-------------|------------------------|
| NORMALISING | |
| 35 | 880 |
| 40 | 870 |
| 45 | 860 |
| 50 | 850 |

II NOTE:-

- RECOMMENDED MINIMUM HOLDING PERIOD
- 1) IN CASE OF NORMALISING OR HARDENING - 30 MINUTES
- 2) IN CASE OF TEMPERING AT 250°C - 2 HRS
- 3) IN CASE OF TEMPERING AT 600°C - 1 HR

III HARDNESS OF STEEL GRADE 35, 40, 45, 50 & 40Г

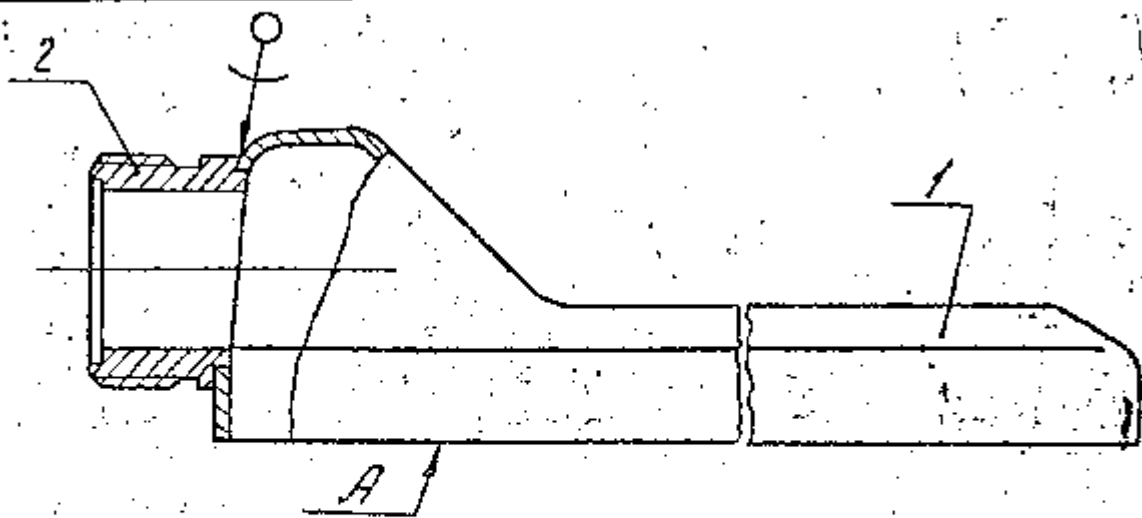
| STEEL GRADE | BHN (MAX) |
|-------------|-----------|
| 35 | 207 |
| 40 | 217 |
| 45 | 229 |
| 50 | 241 |
| 40Г | 207 |

IV SURFACE FINISH:-

- ✓ R_z REPRESENTS SPECIFIED SURFACE FINISH TO BE OBTAINED BY WITHOUT REMOVAL OF MATERIAL
- R_z 80 (✓): REPRESENTS R_z VALUE OF SURFACE FINISH OF 80.4 ON THOSE SURFACE WHEREVER SURFACE FINISH IS NOT SPECIFIED

| | | |
|--|---|-------------|
| INSCRIBED | DRG. NOT TO BE SCALED | PERTAINS TO |
| CHECKED | ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF | |
| APPROVED | ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED | |
| DATE | | |
| TOLERANCE UNLESS OTHERWISE SPECIFIED | | |
| SEN | DEC | ANG |
| DCO | DT | ZONE |
| BRIEF RECORD | SIGN | |
| SHAFT | | 765-71-1768 |
| SCALE | | |
| CONTROLLER OF INSPECTION FIRE FIGHTING EQUIPMENT | | |

765-71-СВ233СВ



1. COATING IS DONE BY USING TOP 4 ПOCЧY 18-2 ГОСТ 21930-76, COATING WITH TOP 4 ПOCЧY 30-2 ГОСТ 21930-76 IS PERMITTED.
2. NON PARALLELISM OF THE AXIS OF THE UNION OF THE BRANCH PIPE WITH THE SURFACE 'A' SHOULD NOT BE MORE THAN 1MM OVER THE LENGTH OF 30MM.
3. WARPING OF THE WALL SHOULD NOT BE MORE THAN 2MM.
4. CHECK THE THREAD. IT IS ALLOWED TO CHECK IN 765-71-СВ402
5. TEST THE JOINTS FOR LEAKPROOFNESS BY APPLYING CHALK POWDER ON THE OUTER SIDE AND BY FILLING THE INNER CAVITY WITH KEROSENE TO ГОСТ 4753-68. TRACES OF KEROSENE ALONG THE JOINT IS NOT PERMITTED. LEAK PROOFNESS TEST MAY BE CARRIED OUT FOR 765-71-СВ402СВ

| | | | |
|--|--|---|--|
| MATERIAL : - | | | |
| ALL SHARP EDGES & CORNERS TO BE BLUNDED BY DRG. NOT TO BE SCALED | ALL THREADS TO CONFORM TO SPECIFICATION | STAMP OR ETCH, PART NO. MANUFACTURERS NAME & YEAR OF MFR. | |
| SCALE 1- 1:1 | TOLERANCE ON DIMENSIONS UNLE -35 OTHERWISE SPECIFIED | USED BN:- 765-71-СВ402 | |
| DATE 1- 26-05-99 | | 765-71-СВ233СВ | |
| DRN. <i>[Signature]</i> | WT 1- (Kg) 0.32 | | |
| TCD. <i>[Signature]</i> | COLLECTOR Assy. DRG. | | |
| CHD. <i>[Signature]</i> | | | |
| APD. <i>[Signature]</i> | | | |

**CONTROLLERATE OF QUALITY ASSURANCE
(INFANTRY COMBAT VEHICLES)**

765-71-cd471/cd472

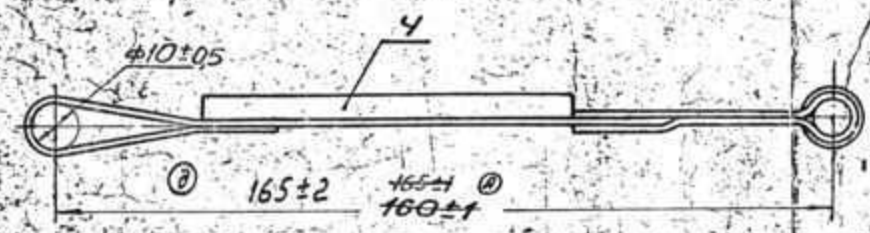


Table-2

| Designation | Shaft | Weight |
|--------------|------------|--------|
| 765-71-cd471 | 765-71-595 | 0.1 |
| 765-71-cd472 | 765-71-602 | 0.1 |

- Free manual rotation of shaft should be ensured.
- External surfaces, except that of spacer, should be primed with $\phi n.03K$ GOST 9109-76 and printed with enamel n ϕ -223, white-1, GOST 14923-78.
- Cement spacer with adhesive 88-Hn, Technical specification TY 38-105540-73.

| Ref No. | Designation | Description | Qty | Remarks |
|---------|--------------|-----------------|-----|---------|
| 5 | | Adhesive 88-Hn. | | |
| 4 | 765-71-1193 | Spacer | 1 | |
| 3 | 765-71-1192 | Band | 1 | |
| 2 | Ref. Table-2 | Shaft | 1 | |
| 1 | 765-71-594 | Clip | 1 | |

| SLNO | SHEET | DOCNO | SIGN | DATE |
|------|-------|-------|------|------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

BAND
(Table drawing)

| SHEETS | WEIGHT | SCALE |
|--------------|--------|-------|
| 1/1 | | |
| TOTAL SHEETS | | |

765-71-cd471/cd472

EXPLANATORY NOTES TO TECHNICAL CONDITIONS

EXTERNAL SURFACES SHALL BE APPLIED WITH PRIMER CONFORMING TO IS: 5660-70. THE BODY SHALL BE PAINTED WITH PAINT CONFORMING TO IS: 2932-74 (GRADE 365 VELLUM OF IS: 5-78) EXCEPT ON SPACER.

NOTE — ADHESIVE 88 HN SEE SEPERATE SHEET ATTACHED.

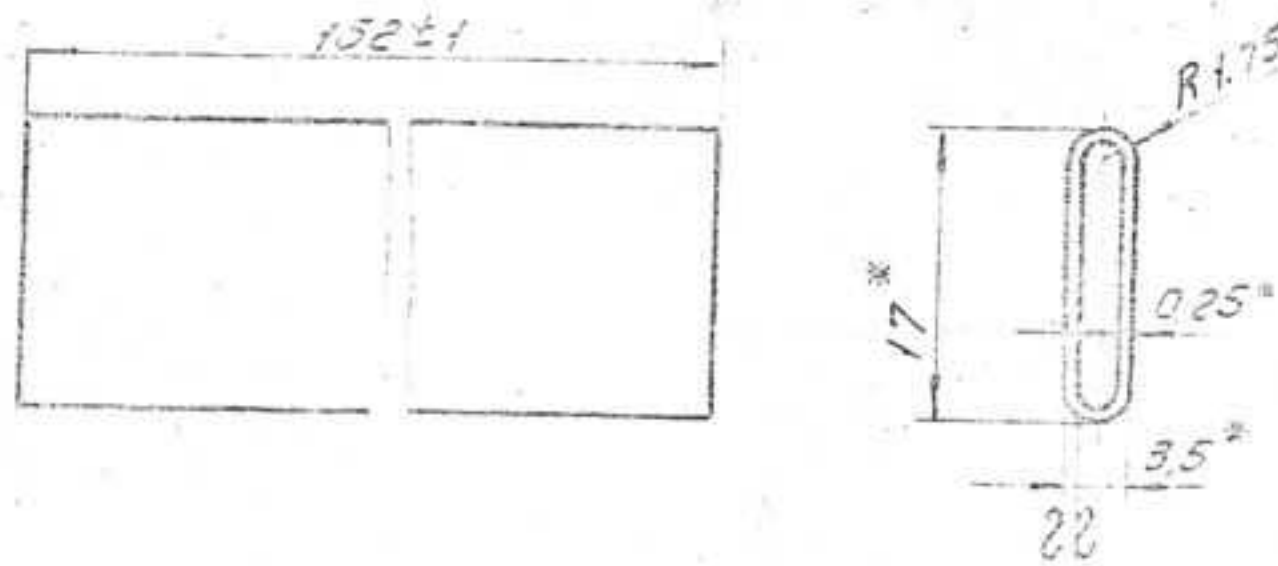
PILOT SAMPLE — THREE SAMPLES SHALL BE SUBMITTED TO CQAFE, PUNE-27 FOR THEIR TEST AND APPROVAL BEFORE THE COMMENCEMENT OF BULK SUPPLY.

| DC(I) | DATE | ZONE | BRIEF RECORD | SIGN | INSCRIBED | sd- | DRG NOT TO BE SCALED | PERTAINS TO |
|-------|------|------|--------------|------|--------------------------------------|----------|---|-------------|
| | | | | | CHECKED | sd- | ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF | |
| | | | | | APPROVED | sd- | ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED | |
| | | | | | DATE | 18-11-86 | | |
| | | | | | TOLERANCE UNLESS OTHERWISE SPECIFIED | | | |
| | | | | | GEN | DEC | ANG | |
| | | | | | SCALE | | | |
| | | | | | C Q A F E, AUNDH CAMP, PUNE - 27 | | | |

BAND

765-71cd471/cd472

TCD CHD PSD DATE W/O No. AUTHENTICATION



- 1). * Dimensions are given for references.
- 2). Tube should be clean without dents, surface tears.

765-75-7

EXPLANATORY NOTES TO TECHNICAL CONDITION

TUBE SHOULD BE MANUFACTURED FROM SEAMLESS PLANE-OVAL BRASS RADIATOR TUBE EXTRUDED (X) HARD (T) RANDOM LENGTH (H.П) WITH MAJOR AXIS 17MM MINOR AXIS 3.5MM WALL THICKNESS 0.25MM OF GRADE L96 AS PER GOST 2936-76

CHEMICAL COMPOSITION AS PER GOST 15527-70

(AS REFERRED IN GOST 2936-76)

| | | |
|----------------|---|-------------|
| 1) COPPER % | — | 95.0 — 97.0 |
| 2) ZINC % | — | REMAINING |
| ADMIXTURE | | |
| a LEAD % | — | 0.3 |
| b IRON % | — | 0.10 |
| c ANTIMONY % | — | 0.005 |
| d BISMUTH % | — | 0.002 |
| e PHOSPHORUS % | — | 0.01 |
| F TOTAL % | — | 0.2 |

MECHANICAL PROPERTIES (AS PER 2936-76)

- 1) TUBES MUST BE SUPPLIED IN THE HARD CONDITION TRIMMED AT
- 2) TUBE ENDS MUST BE EVENLY TRIMMED AT RIGHT ANGLES
- 3) ULTIMATE TENSILE STRENGTH OF TUBES MUST NOT EXCEED 35 TO 60 KGF/MM²
- 4) TUBE MUST BE WITH-STAND A LEAK TEST AT AN AIR PRESSURE 1KGF/CM²

LIMIT DIVIATION

- 1) MAJOR AXIS 17 MM DIVIATION ± 0.15 MM
- 2) MINOR AXIS 3.5 MM DIVIATION ± 0.15 M.M
- 3) WALL THICKNESS 0.25 MM ± 0.02 MM

NOTE

THIS DIMENSION IS GIVEN IN PRODUCTION

FINISHING

V(V) = SPECIFIED ROUGHNESS VALUE SHALL BE OBTAINED BY WITHOUT REMOVAL OF MATERIAL THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED.

~ = INDICATE SURFACE FINISH I.E VALUE Ra 80 MICRON (MAX)

765-75-7

| SNOSH | DOC NO | SIGN | DATE |
|----------|---------------|------|---------|
| DRAWN | BHUSHAN | | 31.7.84 |
| EDT,CHKD | D.K. JAIN | | 1.5.85 |
| F/M,DC | S.K. NATH | | 1.8.85 |
| DIV.OFFR | T.K. BANERJEE | | 3.9.84 |
| | NAME | SIGN | DATE |

TUBE

SHEET WEIGHT SCALE

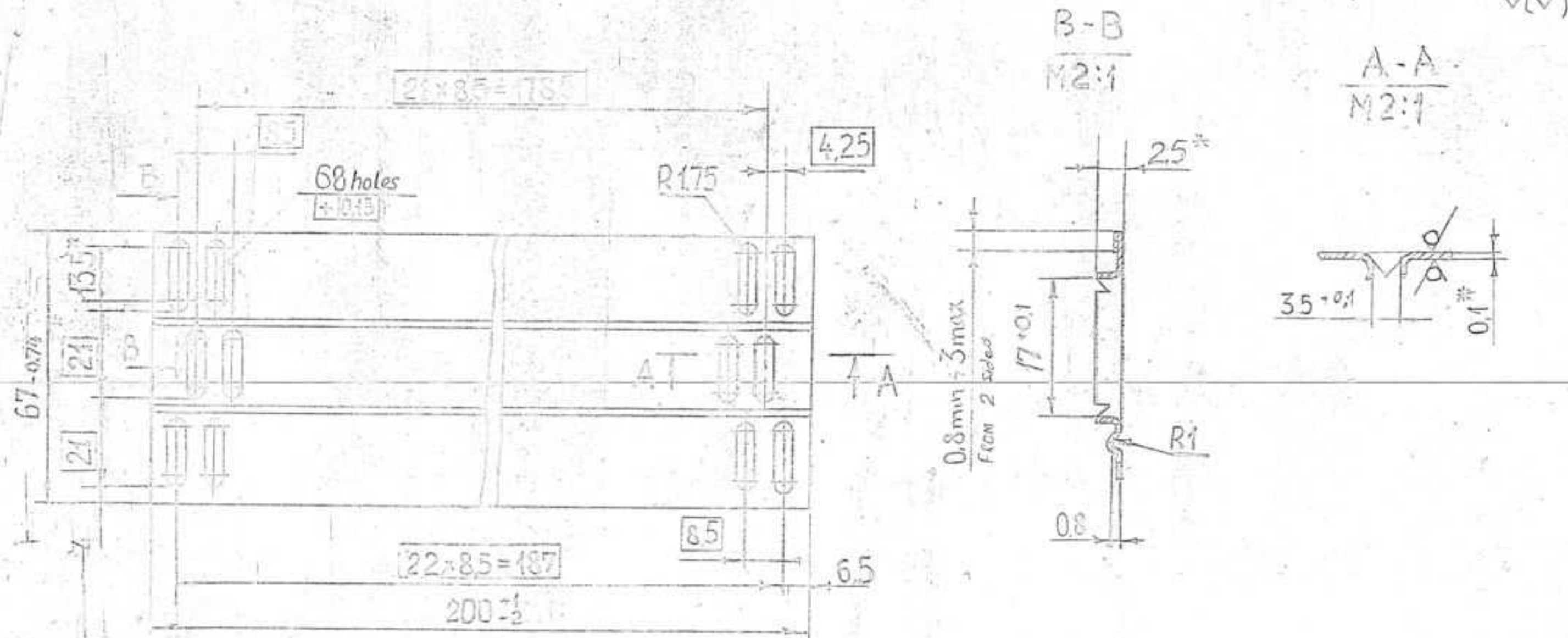
| | |
|---|-------|
| 1 | 0.072 |
|---|-------|

TOTAL SHEETS

Tube ДПОХ17x3.5x0.25

ГОСТ 2936-76

| | | | | | | | |
|--------|-----|------|--------------|------|--------------------------------------|--|---|
| D-C(I) | D-T | ZONE | BRIEF RECORD | SIGN | INSCRIBED | DRG NOT TO BE SCALED | PERTAINS TO |
| | | | | | CHECKED | ALL SHARD EDGES & CORNERS TO BE ROUNDED OFF | |
| | | | | | APPROVED | ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED | |
| | | | | | DATE | | |
| | | | | | TOLERANCE UNLESS OTHERWISE SPECIFIED | TUBE | 765-75-7 |
| | | | | | GEN DEC ANG | SCALE :- | CONTROLLERATE OF INSPECTION FIRE FIGHTING ESPT PUNE |



- 1) Alternate material is band ДПРHT 0.12 H.d. №63 ГОСТ 20707-75.
- 2) Unspecified limit deviations of dimensions and ± 0.5 mm.
- 3) Unspecified internal radii of bends should not exceed 0.5 mm.
- 4) *Dimensions are given for reference.
- 5) Knockout marks of die should not exceed 0.3 mm.
- 6) Cracks are allowed on out ward flanged hole.

| FINISH | DOC NO | SIGN | DATE |
|-----------|-------------|-------------|--------|
| DRAWN | V.A.BABU | [Signature] | 2.8.86 |
| EDT/CHKD | D.K.JAIN | [Signature] | 5.1.87 |
| F/M, DC | S.R.NAIR | [Signature] | 8.8.87 |
| DIV. OFFR | T.C.BANERJI | [Signature] | 3.8.87 |
| | NAME | SIGN | DATE |

765-75-8
Easy2Convert
 PLATE
 www.easy2convert.com
 0013 1:1

Band ДПРHT 0.1 H.d. №63
 ГОСТ 20707-75

8-51-99L
EXPLANATORY NOTES TO TECHNICAL CONDITIONS

PLATE SHOULD BE MANUFACTURED FROM BRASS SHEET OF GRADE (63 COLD ROLLED (D) RECTANGULAR CROSS SECTION (PR) HARD CONDITION (T) THICKNESS 0.1 mm OR 0.12 mm (ALTERNATIVE) AS PER GOST 20707-75 -

CHEMICAL COMPOSITION AS PER GOST 15527-70 REFERRED IN GOST 20707-75)

| | | |
|---------------|-------|--------------|
| 1) COPPER | _____ | 62.0-65.0% |
| 2) ZINC | _____ | REMAINING |
| ADMIXTURE | | |
| 3) LEAD | _____ | 0.07% (MAX) |
| 4) IRON | _____ | 0.2% (MAX) |
| 5) ANTIMONY | _____ | 0.005% (MAX) |
| 6) BISMUTH | _____ | 0.002% (MAX) |
| 7) PHOSPHORUS | _____ | 0.01% (MAX) |
| 8) TOTAL | _____ | 0.5% (MAX) |

| MATERIAL CONDITION | ALLOY GRADE | DEPTH OF DRAWING FOR TAPE THICKNESS |
|--------------------|-------------|-------------------------------------|
| HARD | J63 | 2.0-4.5 |

TOLERANCE - 0.02

SURFACE ROUGHNESS

Rz $\sqrt{30}/\sqrt{1}$ = REPRESENTS THE SURFACE FINISH RZ VALUE 30 MICRON ON THOSE, SURFACE FINISH IS NOT SPECIFIED

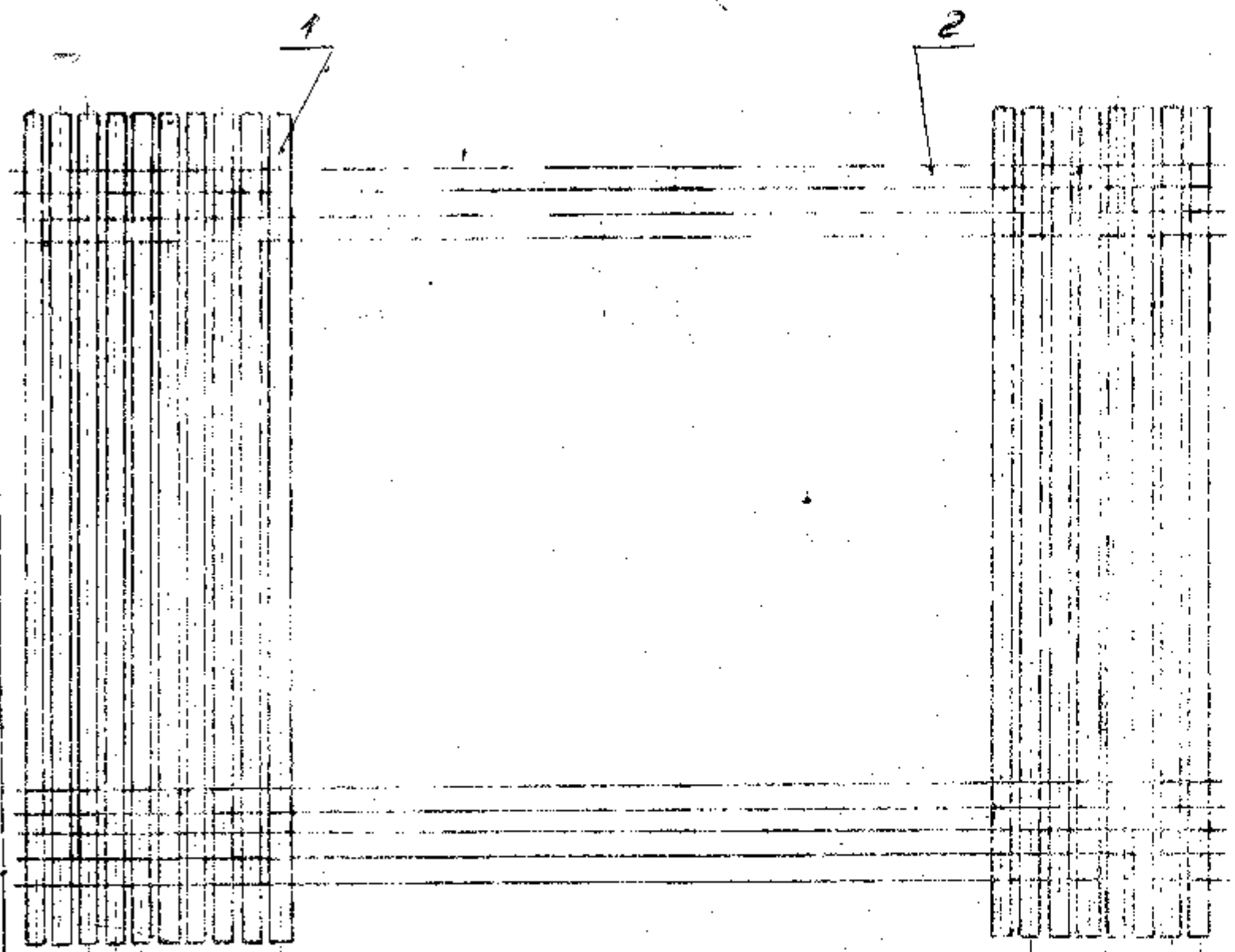
$\sqrt{1}$ = SPECIFIED ROUGHNESS TO BE OBTAINED BY WITHOUT REMOVAL OF MATERIAL.

DIMENSIONS GIVEN IN RECTANGLE, TOLERANCE IS NOT SPECIFIED, BUT THESE ARE NOT A "FREE DIMENSION"

DENSITY OF BRASS = 8.7 kg/cm³

| DCU | D-T | ZONE | BRIEF | RECORD | SIGN | INSCRIBED | DRG NOT TO BE SCALED | PERTAINS TO |
|-----|-----|------|-------|--------|------|--------------------------------------|--|-------------|
| | | | | | | CHECKED [Signature] | ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF | |
| | | | | | | APPROVED [Signature] | ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED | |
| | | | | | | DATE 20.05.86 | | |
| | | | | | | TOLERANCE UNLESS OTHERWISE SPECIFIED | | |
| | | | | | | GEN DEC ANG | | |
| | | | | | | | PLATE | 765-75-8 |
| | | | | | | | SCALE: - | |
| | | | | | | | CONTROLLERATE OF INSPECTION FIRE FIGHTING DEPT | |

- 1) Ends of tubes should be in same plane. Displacement should not exceed 1mm.
- 2) Non-squareness of tubes with respect to plate should not exceed 2 mm.
- 3) Dents are not allowed at ends of tubes and plates.
- 4) Carry-out soldering of plate to tube using solder nocy 18-2 GOST 21930-76, by immersing section in both splashes of solder are not allowed on tube and plates.
- 5) Alternate solder is nocy-30-2 GOST 21930-76.
- 6) In between beading surface of plate holes and pipes lack of soldering is not allowed.
- 7) Before soldering along radius of tubes and plate gap should not exceed 0.5mm.



130±2 mm. Arrange 30 to 36 pitch

765-75-08103CB

| | | | | | |
|----------|---------------|------|---------|---|--------------------|
| DESIGN | DCC NO | SIGN | DATE | TUBE PACK SECTION
(Assembly drawing) | SHEET WEIGHT SCALE |
| DRAWN | BHUSHAN | | 31.7.84 | | TOTAL SHEETS |
| EDT/CHKD | DR. JAY | | 1.8.84 | | |
| P/M, DC | L.R. NAR | | 1.8.84 | | |
| Q/W OFFR | T.K. BANERJEE | | 8.8.84 | | |
| | NAME | SIGN | DATE | | |

90201P0-12-592

EXPLANATORY NOTES TO TECHNICAL CONDITIONS.

I) TUBE PACK SECTION IS SOLDERED WITH TIN LEAD SOLDER OF GRADE POSSU 18-2 (NOCCY 18-2) OR POSSU 30-2 (NOCCY 30-2) (ANTIMONY ALLOY SOLDER AS PER GOST 21930-76 HAVING THE FOLLOWING CHEMICAL COMPOSITIONS).

| SOLDER GRADE | MAIN INGREDIENT % | | | IMPURITIES % (max) | | | | | | | |
|--------------|--|----------|------|--------------------|---------|---------|------|--------|---------|-------|-----------|
| | TIN | ANTIMONY | LEAD | COPPER | BISMUTH | ARSENIC | IRON | NICKEL | SULPHUR | ZINC | ALUMINIUM |
| POSSU 18-2 | 17-18 | 1.5-2.0 | REST | 0.10 | 0.1 | 0.05 | 0.02 | 0.08 | 0.02 | 0.002 | 0.002 |
| POSSU 30-2 | AS PER IS: SPECIFICATION 193-82 GRADE Sn 30 Sb | | | | | | | | | | |

II) PHYSICAL AND MECHANICAL PROPERTIES.

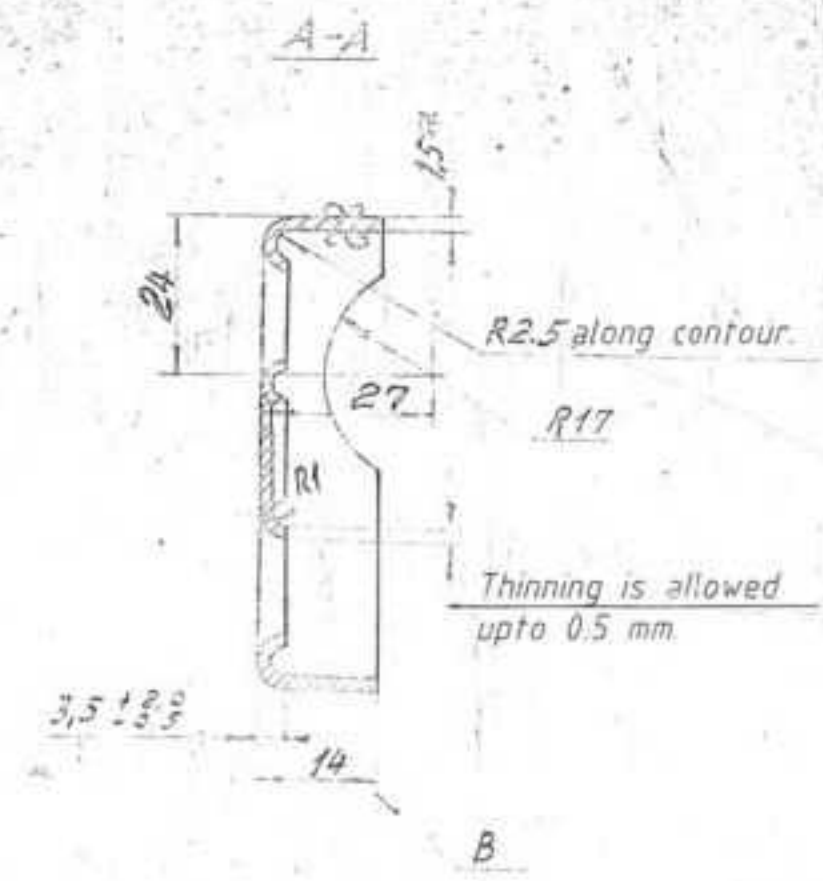
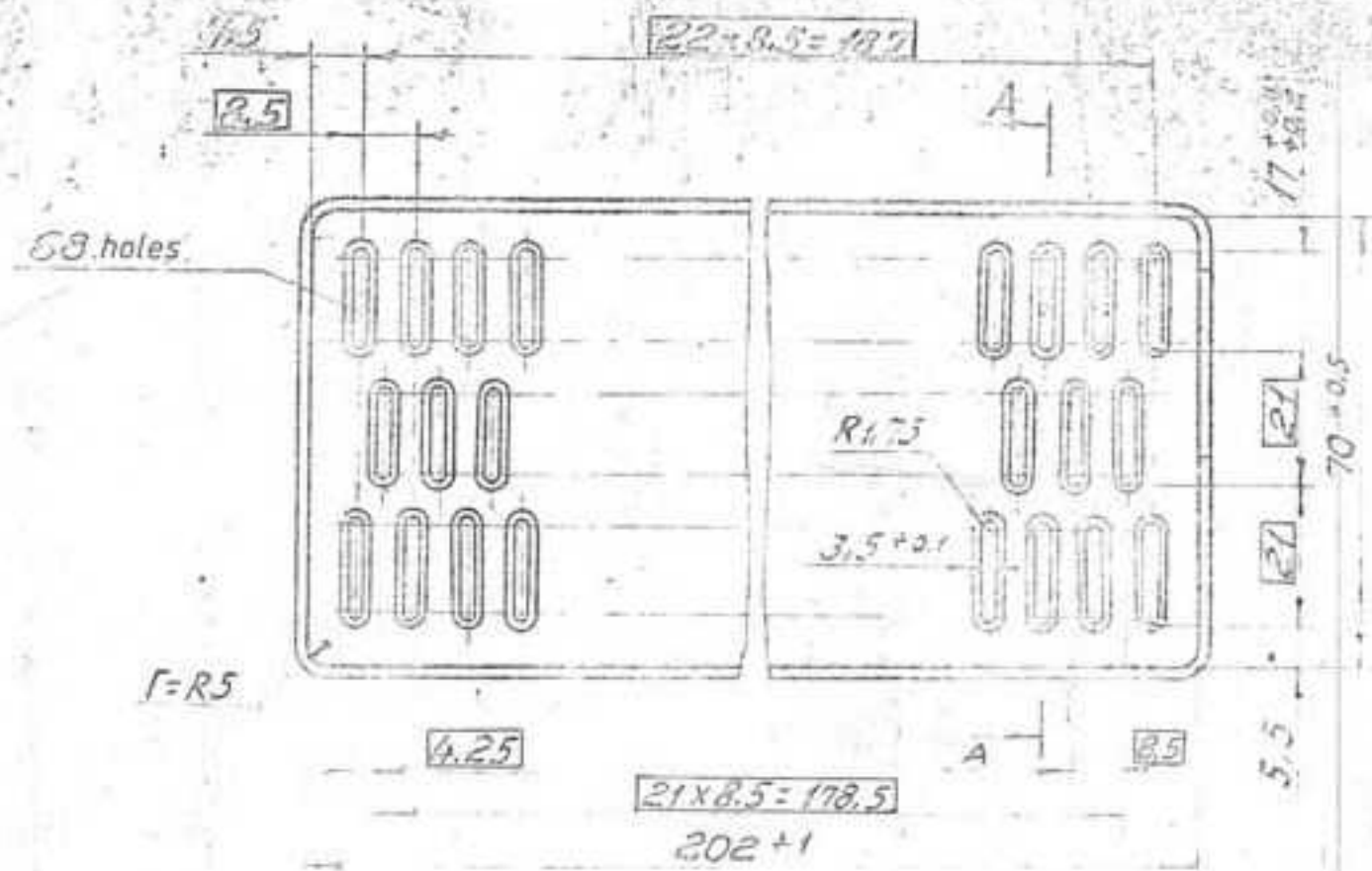
| SOLDER GRADE | MELTING POINT °C | | DENSITY | RESISTIVITY | SPECIFIC HEAT | ULTIMATE TENSILE | RELATIVE | IMPACT | BRINELL |
|--------------|------------------|----------|-------------------|------------------------|---------------|-------------------------------|--------------|------------------------------|-------------|
| | SOLIDUS | LIQUIDUS | g/cm ³ | ohm-mm ² /m | k, cal/kg °C | STRENGTH, kgf/mm ² | ELONGATION % | STRENGTH, kgf/m ² | HARDNESS HB |
| POSSU 18-2 | 186 | 270 | 10.1 | 0.205 | 0.081 | 3.6 | 35 | 1.9 | 11.7 |

PILOT SAMPLE:-

THREE SAMPLES SHALL BE SUBMITTED TO CQA (FE), PUNE, FOR THEIR TEST AND APPROVAL, BEFORE COMMENCEMENT OF BULK SUPPLY.

| | | | |
|---------------------------------------|------------|--|-------------------|
| DRN | —sd— | DRG NOT TO BE SCALED. | PERTAINS TO |
| TCD | — | ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF. | |
| CHD | —sd— | ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. | TUBE PACK SECTION |
| PSD | — | | |
| APPD | —sd— | ASSY. DRG | 765-75-08103CB |
| DATE | 20 OCT '85 | SCALE:- | |
| TOLERANCE UNLESS OTHERWISE SPECIFIED. | | CQA (FE), AUNDH CAMP, PUNE-27. | |
| DC (I) | DATE | ZONE | BRIEF RECORD |
| | | | SIGN |

AUTHENTICATION
 TCD
 CHD
 PSD
 DATE
 DRG BASED ON
 W/O No.
 JOB No.



- 1) Collector may be made from band 1.5 A63M and 1.2 A63M GOST 2208-75.
- 2) *Dimension is given for reference.
- 3) Unspecified limit deviations of dimensions are ±0.5 mm.
- 4) Displacement of axes of holes from true position should not exceed 0.15 mm.
- 5) Nonflatness of surface B should not exceed 3 mm.
- 6) Rupture of outward flange should not exceed 0.25 mm over length on the holes.
- 7) Soldering by subsequent dressing is allowed at the corners.
- 8) Collector may be made from parts by subsequent soldering and dressing.

Easy2Convert

765-75-5

COLLECTOR

| | | | |
|----------|-------|---------------|-------|
| NO | DATE | SIGN | SCALE |
| DRAWN | 28.04 | A.B. BABU | 1:1 |
| EDT, CND | 28.04 | | |
| F/M, D/C | 28.04 | S.R. NAIR | |
| DMO/FR | 28.04 | F.R. BANERJEE | |
| NAME | SIGN | DATE | |

Sheet ДПР хМ1.5 НД Л. 63
ГОСТ 931-78.

5-97-59

EXPLANATORY NOTES TO TECHNICAL CONDITIONS

COLLECTOR SHOULD BE MANUFACTURED FROM BRASS SHEET OF GRADE .663 COLD ROLLED "D" RECTANGULAR SHAPE TP SOFT "M" (UNMEASURING - HD) THICKNESS 1.5 OR 1.2 MM AS PER GOST 931-78 AND 2208-75 RESPECTIVELY
CHEMICAL COMPOSITION AS PER GOST 15524 - 70 (AS REFERRED IN GOST 931-78)

| GRADE | ADMIXTURE (MAX) | | | | | | | TOTAL |
|-------|-----------------|-----------|--------|--------|----------|---------|------------|-------|
| | COPPER | ZINC % | LEAD % | IRON % | ANTIMONY | BISMUTH | PHOSPHORUS | |
| .663 | 62.0-65.0 | REMAINING | 0.07 | 0.2 | 0.005 | 0.002 | 0.01 | 0.5 |

MECHANICAL PROPERTIES

| TENSILE STRENGTH Kgf/mm^2 (MIN) | RELATIVE ELONGATION IN % (MINIMUM) | BHN |
|-----------------------------------|------------------------------------|-----|
| 30-41 | 38 | 70 |

TOLERANCE ON THICKNESS - ±0.09 mm
CUPPING TEST: DEPTH OF CUPPING WITH PUNCH RADIUS EQUAL TO 10 mm SHALL BE MINIMUM - 10.5 mm.

FINISHING

- ✓ (▽) = SPECIFIED ROUGHNESS TO BE OBTAINED BY WITHOUT REMOVAL OF MATERIAL ON THOSE SURFACES WHERE SURFACE FINISH IS SPECIFIED.
- = DIMENSION GIVEN IN RECTANGLE TOLERANCE IS NOT SPECIFIED BUT IT IS NOT FREE DIMENSION
- ∩ = THIS INDICATE SURFACE FINISH IS VALUE Ra - 80 MICRONS

| | | | | | | | |
|------|--|---|-------------|----------|--|--|--|
| D-CW | INSCRIBED | DRG NOT TO BE SCALED | PERTAINS TO | | | | |
| | CHECKED | ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF | | | | | |
| | APPROVED | ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED | | | | | |
| | DATE | COLLECTOR | | 765-75-5 | | | |
| | TOLERANCE UNLESS OTHERWISE SPECIFIED GEN. DECL. ANG. | SCALE: - | | | | | |
| DATE | ZONE | BRIEF | RECORD | SIGN | CONTROLLERATE OF INSPECTION FIRE FIGHTING EQPT DIV | | |