

1. Carryout Heat treatment.
2. Casting-2nd group as per instruction Gost 977-88.
3. Casting accuracy 11-0-0-10 as per Gost 26645-88.
4. Unspecified wall thicknesses are (6±1) mm.
5. Unspecified casting radii are 3...5mm.
6. Casting draft are max 2°.
7. Ensure smooth change over between the given sections.
8. Other casting requirements are as per instructions TTM-121-99.
9. On surface Я, burr due to fettling with a max height of 0.5mm is allowed.
10. Roughness  $\sqrt{R}$  is allowed on surface Э, А1, Б1, А11.
11. H14, h14,  $\pm IT/2$ .
12. Check the flatness deviation of surface Ю by bluing. Imprint should cover min 70% of surface and should be uniform along the circle with a minimum width of 2mm.
13. Check the internal cavity of the part for airtightness with air at pressure of (0.2±0.02) MPa [(2.0±0.2) Kg/cm<sup>2</sup>] in water tank for min 3 minutes. Air leakage is not allowed.
14. Mark the material grade as per instruction Gost 2171-90 with font 5-Пp3 Gost 26 008-85. Allowed to mark by punching method on surface Ж1.
15. Allowed to mark by punching method with font 5-Пp3 Gost 26 008-85.
16. \* Dimensions are ensured by tool.
17. \*1 Dimension are given for reference.

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

EST. WT. (kg)	9.1	TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS )
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.		
7	20.11.08	NOTN. No: 70-07 (F-158)
6	20.11.08	NOTN. No: 2002-330 (F-158)

DRN	2/12	MATERIAL	STEEL 16X23H18N	USED ON	C6 337-110
CHD	2/11		GOST 977-88		
APPD	2/11				
DATE	20.11.08			CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	AVADI
SCALE	1:1				
DIMENSIONS IN mm					
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS :					
7	±0.1				
6	±0.05				

TITLE: **TURBINE BODY**

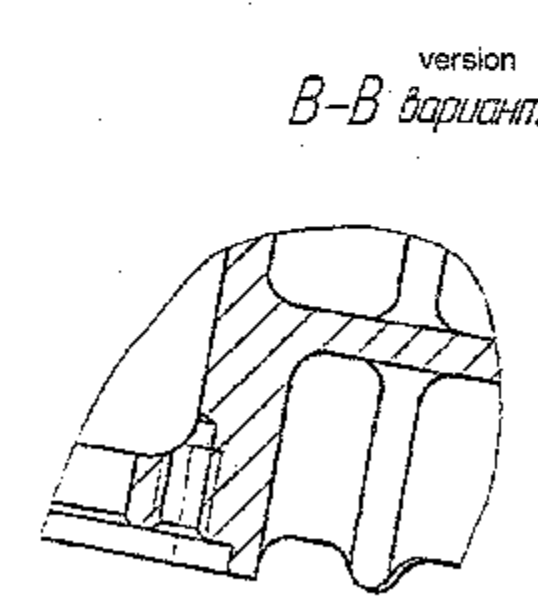
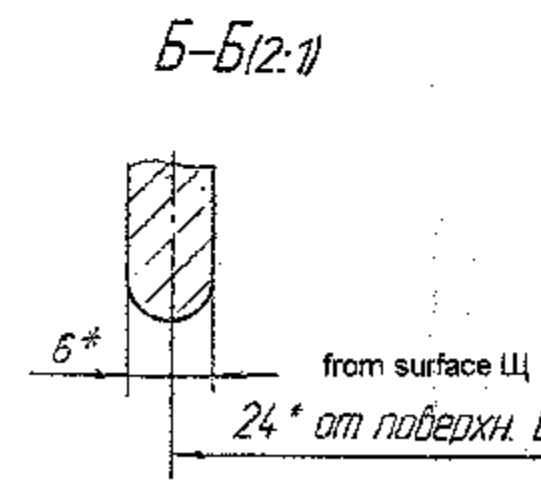
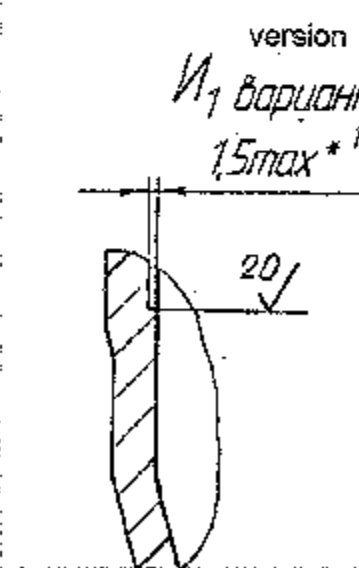
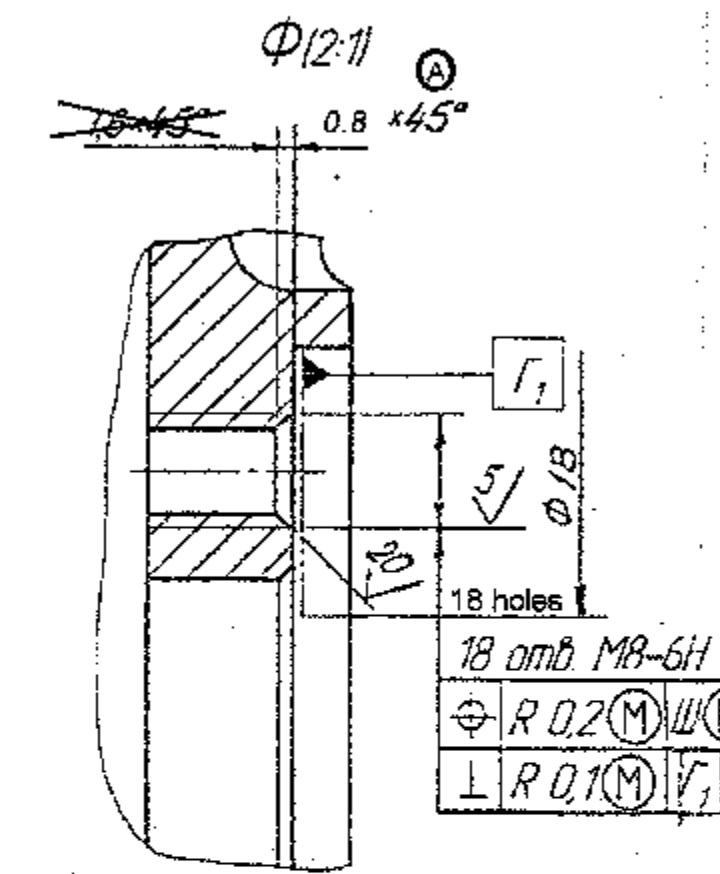
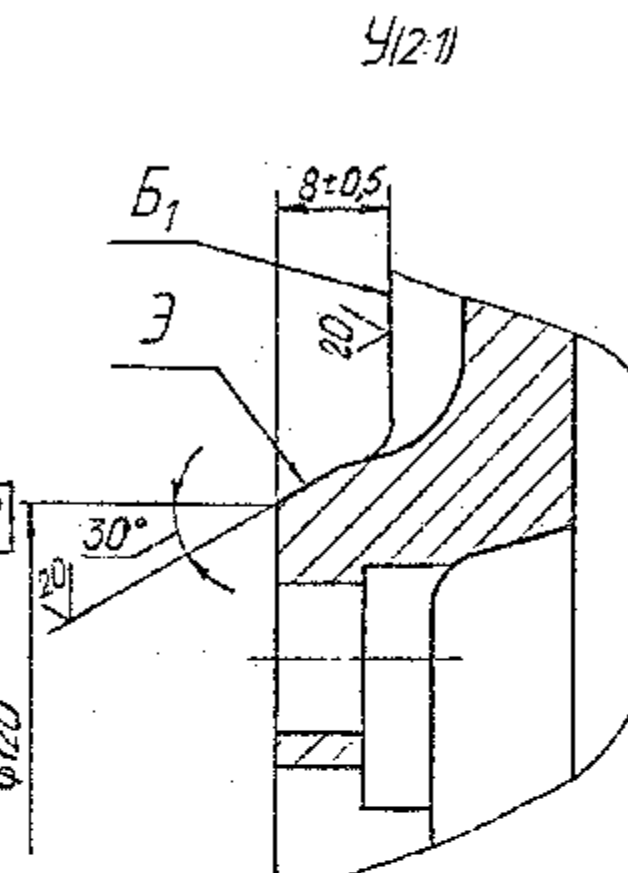
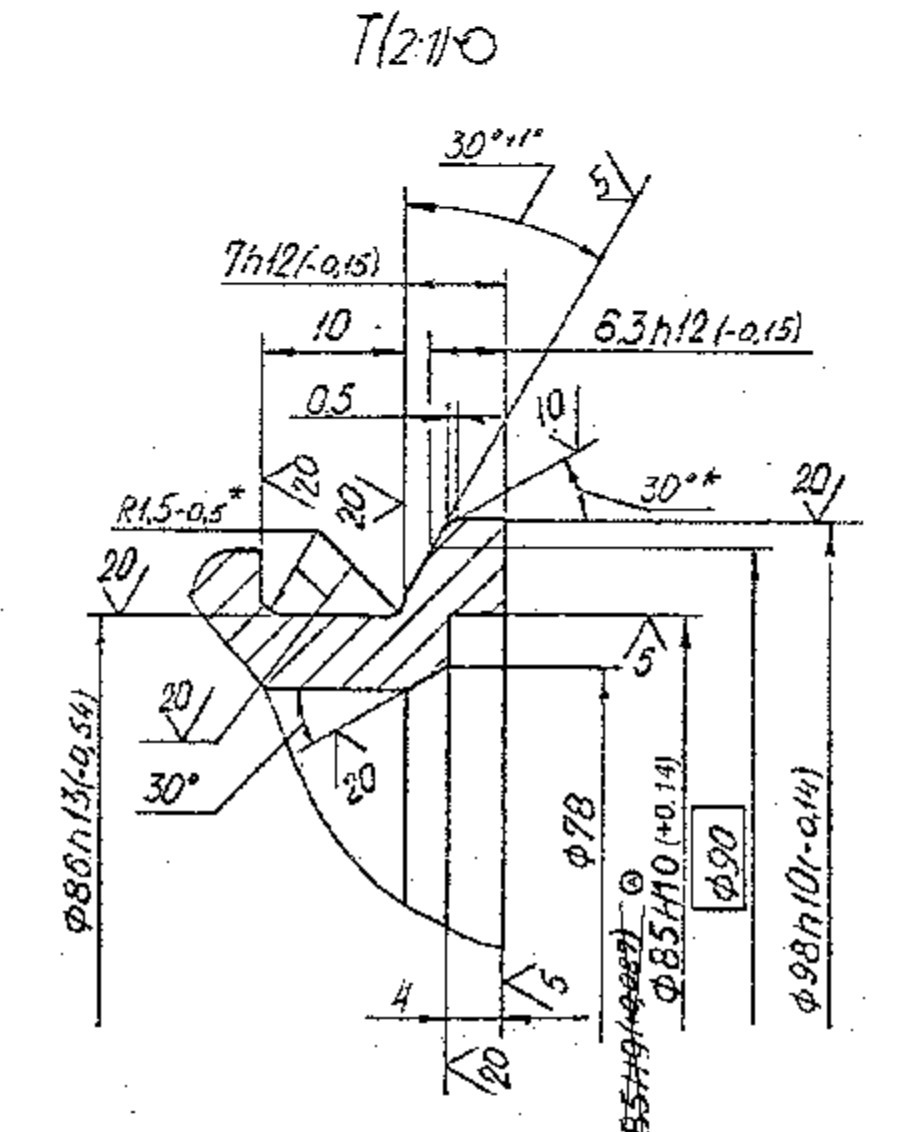
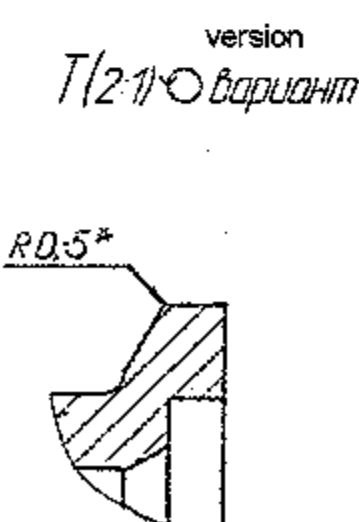
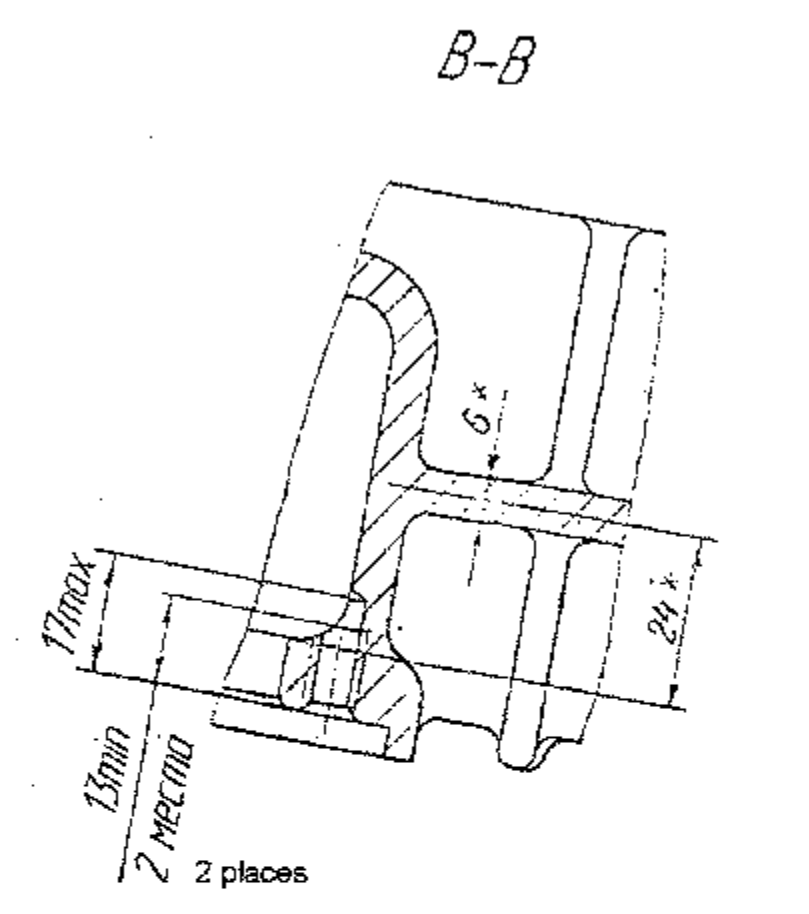
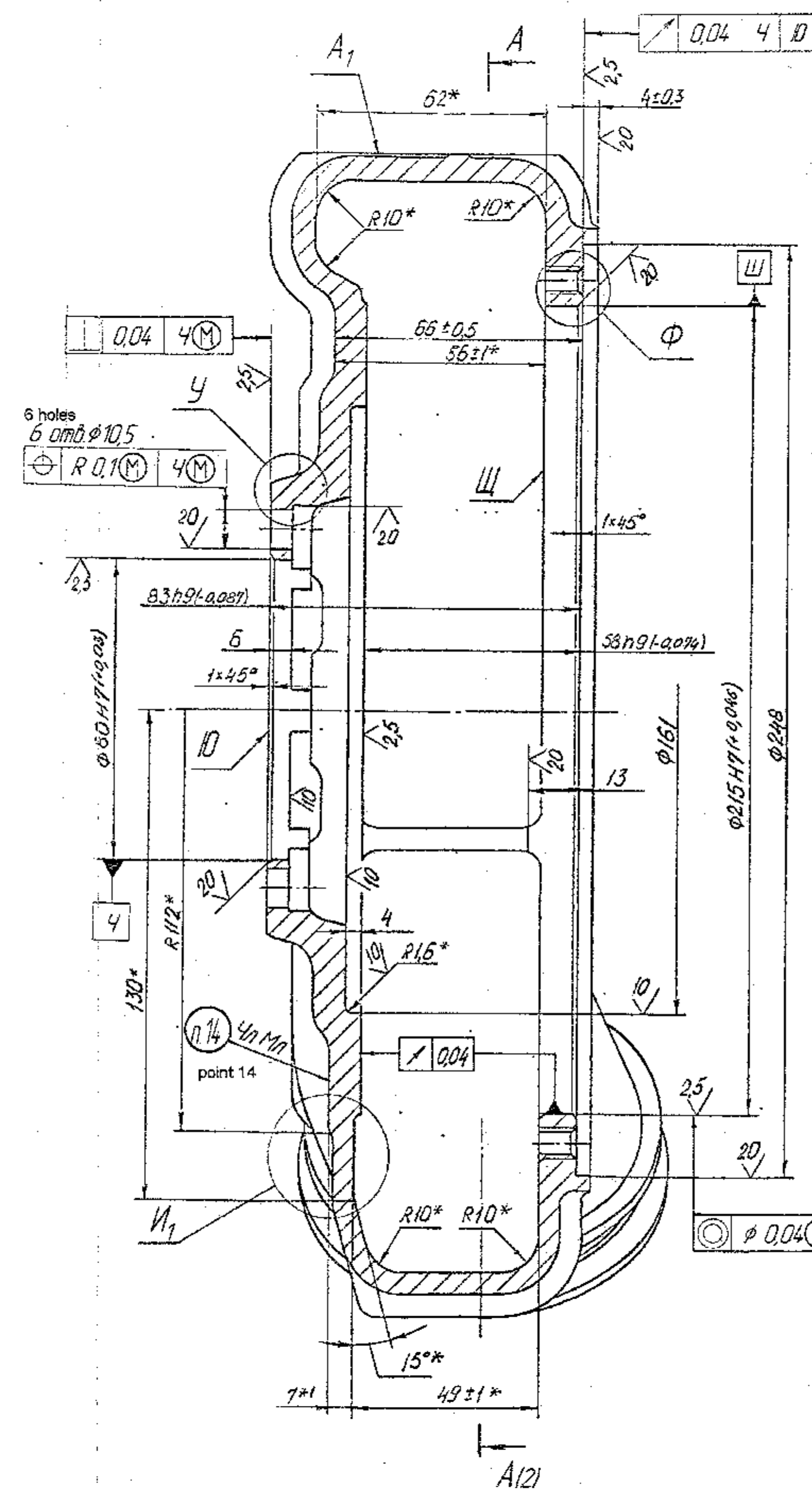
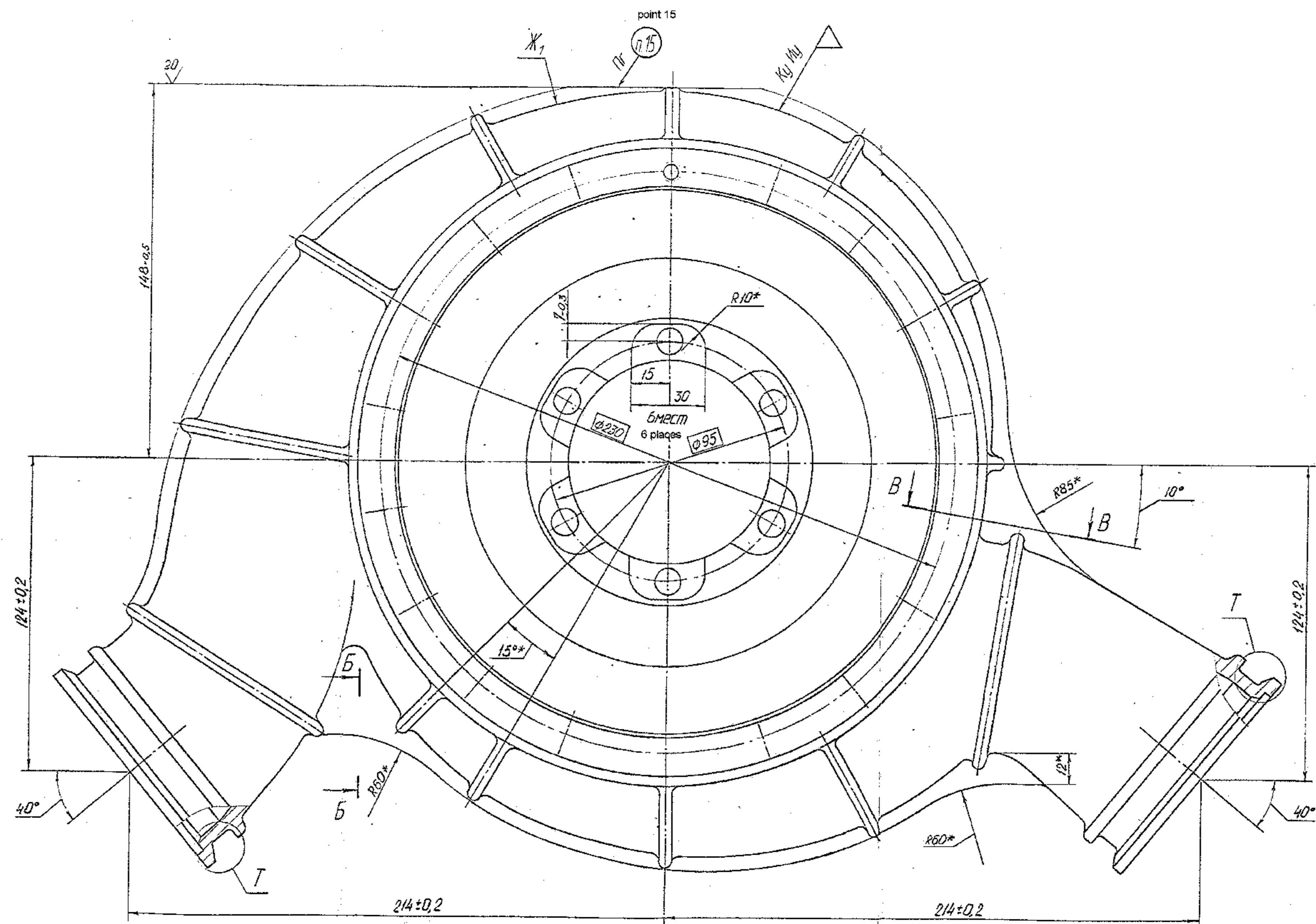
D S CAT NUMBER: \_\_\_\_\_ DRAWING NUMBER: **337-111 (SHT 1 OF 2)**

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE . 5

F-5  
247  
288  
SIZE A2 x 3

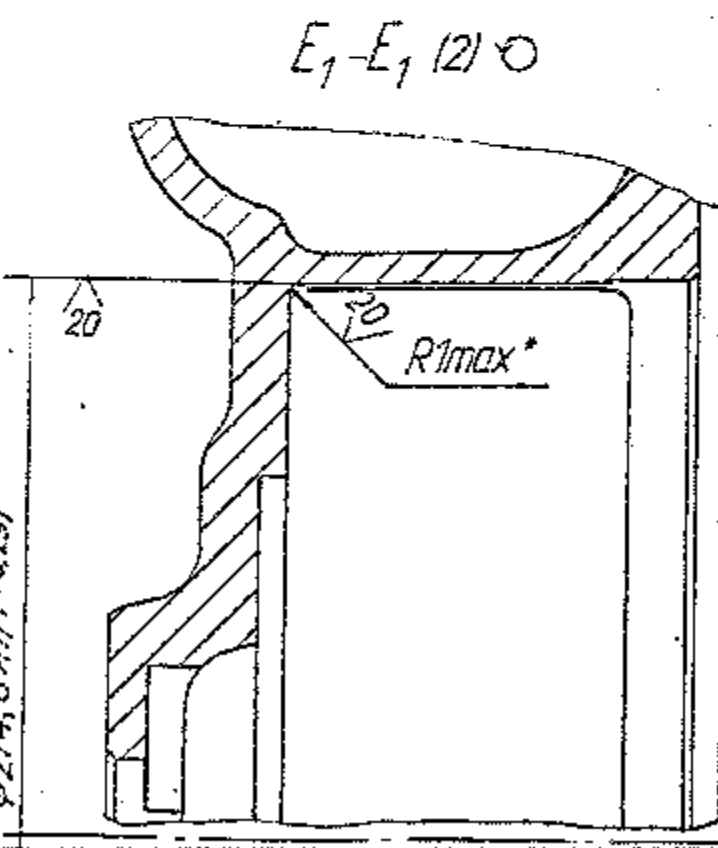






- 1 Термообработать
- 2 Отливка 2-й группы ГОСТ 977-88
- 3 Точность отливки 11-0-0-10 по ГОСТ 26645-88
- 4 Неуказанные толщины стенок (6 ± 1) мм
- 5 Неуказанные литейные радиусы 3.5 мм
- 6 Литейные уклоны 2°, не более
- 7 Обеспечить плавный переход между заданными сечениями
- 8 Остальные требования, предъявляемые к отливке, по ТТМ-121-99
- 9 На поверхн. Я допускается зачищенный облой высотой не более 0.5 мм
- 10 На поверхностях З, А, Б, Д: допускается шероховатость √
- 11 H14, h14, IT14
- 12 Отклонение от плоскостности поверхн. Ю проверить по краске, отпечаток должен быть не менее 70% поверхн., непрерывным по окружности и шириной не менее 2 мм
- 13 Внутренняя полость детали проверить на герметичность воздухом давлением (0.2 ± 0.02) МПа ((2.0 ± 0.2) кгс/см<sup>2</sup>) в водяной ванне в течение 3 минут, не менее. Пропуск воздуха не допускается
- 14 Маркировать марку материала по ГОСТ 2171-90
- 15 Маркировать Допускается маркировать ударным способом на поверхн. Ж1
- 16 \* Размеры обеспеч. инстру.
- 17 \* Размеры для справок

1. Heat treatment.
2. Casting 2nd group as per instruction GOST 977-88.
3. Casting accuracy 11-0-0-10 as per GOST 26645-88.
4. Unspecified wall thicknesses are (6 ± 1) mm.
5. Unspecified draft radii are 3.5 mm.
6. Draft angles are 2° max.
7. Ensure smooth change over between the given sections.
8. Other casting requirements are as per instructions TTM-121-99.
9. On surface Я, dressed burrs having maximum height of 0.5 mm are permitted.
10. Surface finish is permitted on surfaces З, А1, Б1, Д1.
11. H14, h14, IT14/2.
12. Check the flatness deviation of surface Ю by bluing. Imprint should cover minimum 70% of surface and should be uniform along the circle with minimum width of 2 mm.
13. Check the internal cavity of the part for airtightness with air at pressure of (0.2 ± 0.02) MPa ((2.0 ± 0.2) Kg/cm<sup>2</sup>) in water tank for min 3 minutes. Air leakage is not permitted.
14. Mark the grade of material as per GOST 2171-90 with font size 5-1p 3 GOST 26 008-85. It is permitted to mark by impacting method on surface Ж1.
15. Allowed to mark by impacting method with font size 5-1p 3 GOST 26 008-85.
16. \* Dimensions are ensured by tool.
17. \* Dimensions for reference.



70-07 A 2002-330 Dt.23-09-08		337-111	
TURBINE BODY		Лист	Максимум
Корпус турбины		97	17
Steel Сталь 15X23H18/1		Лист	Максимум
GOST ГОСТ 977-88		Sheet	Sheets

A-A111

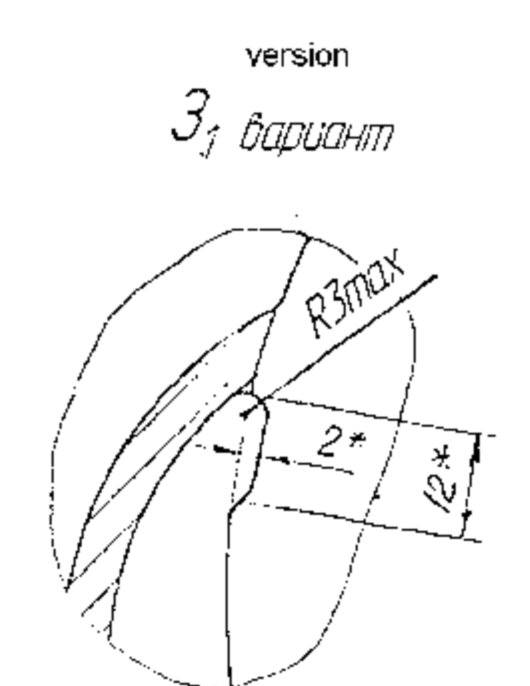
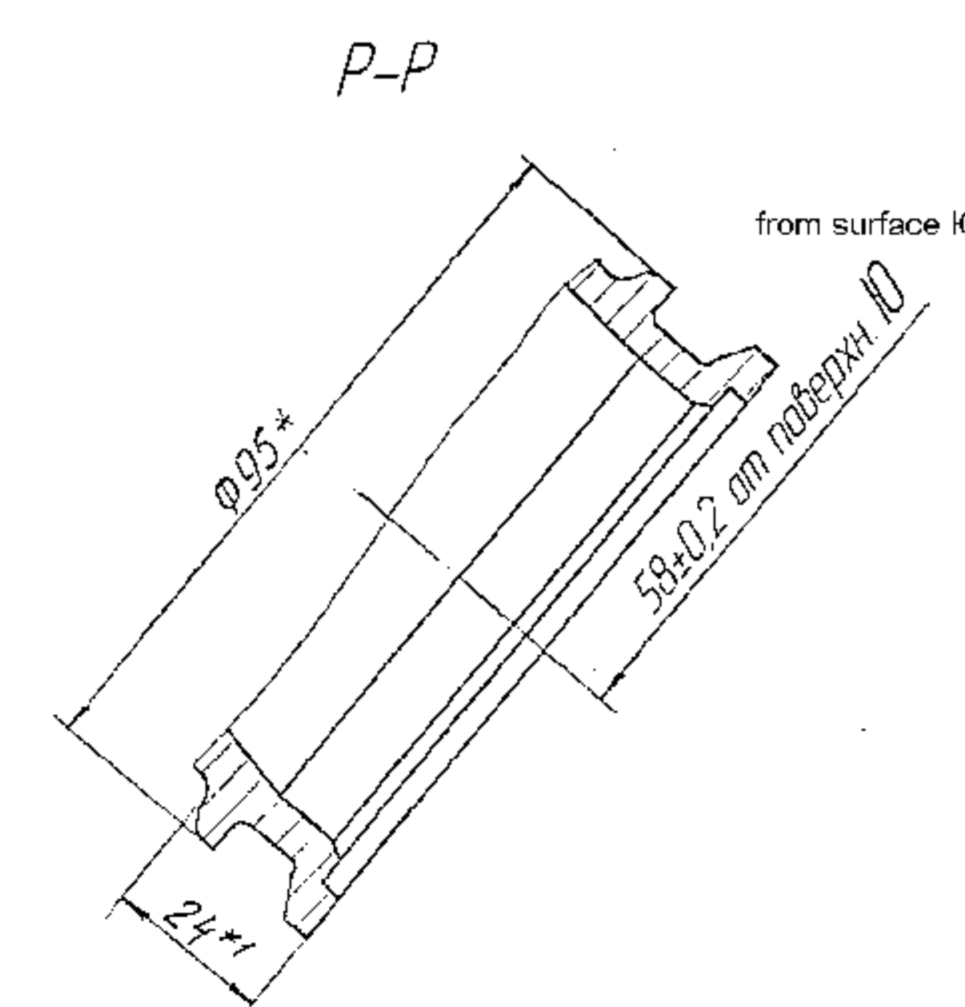
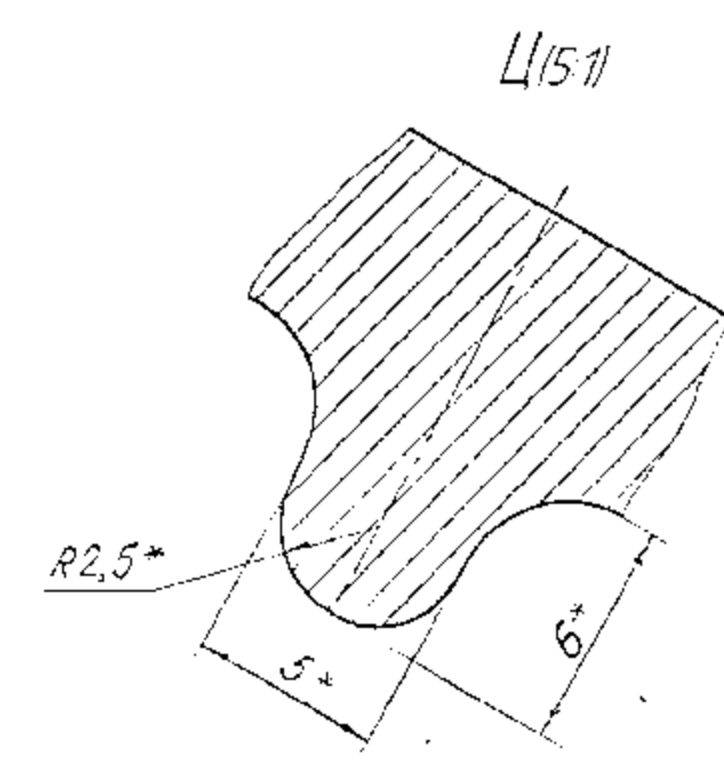
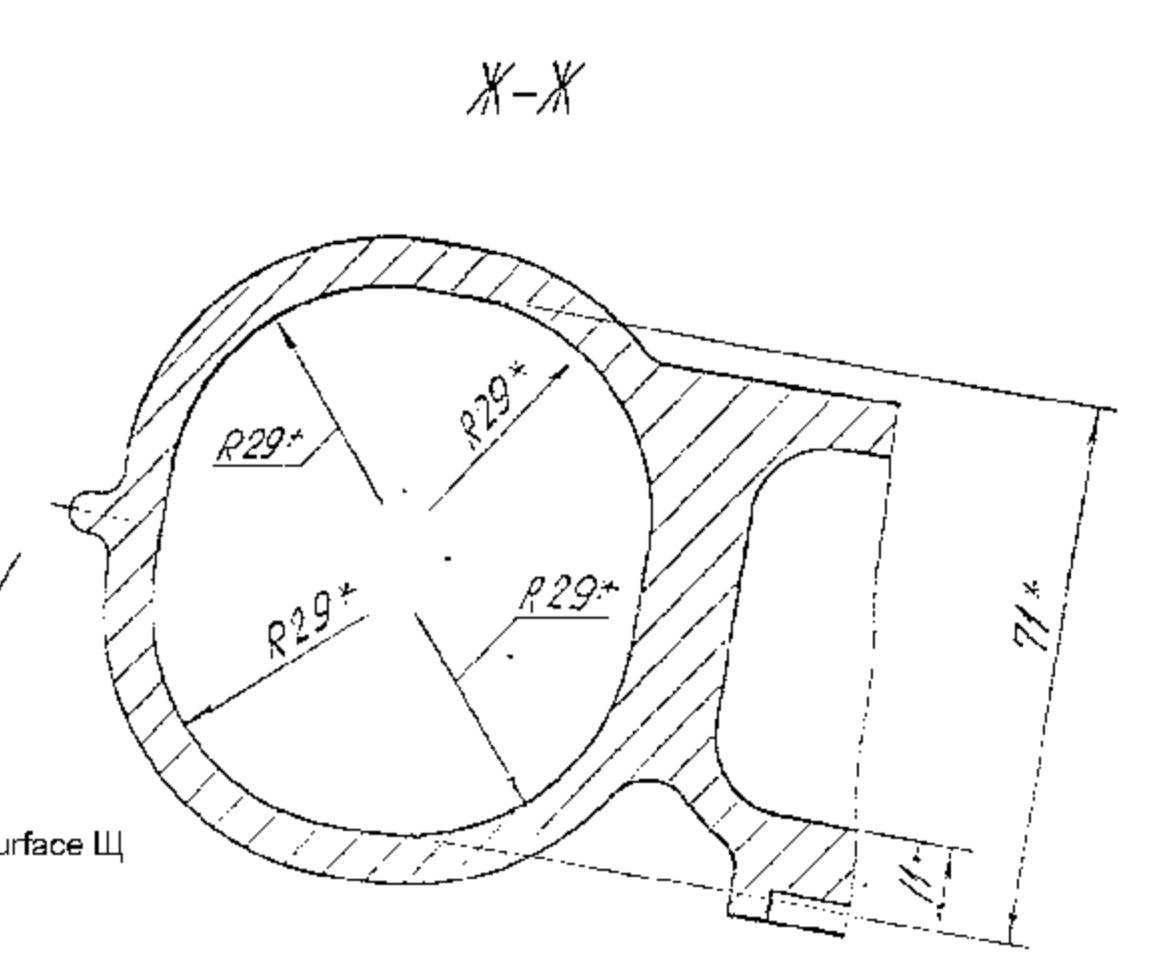
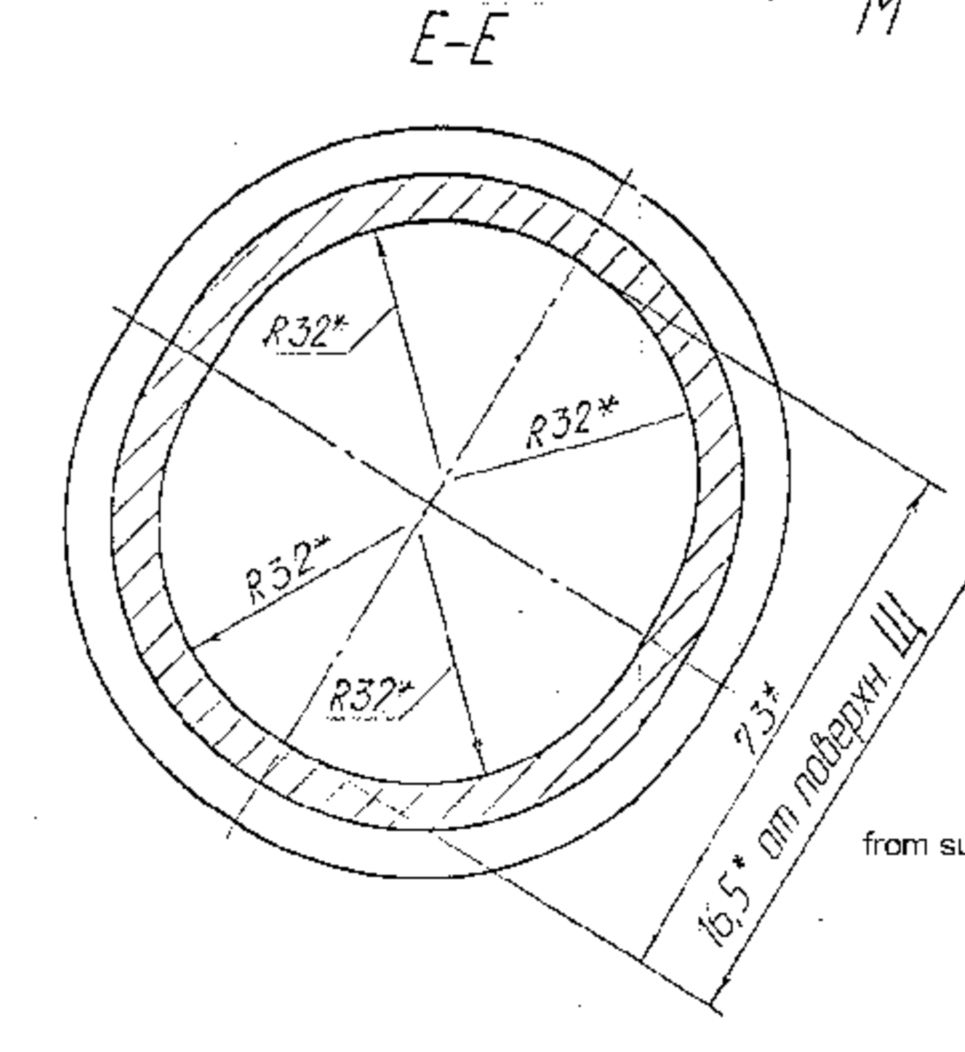
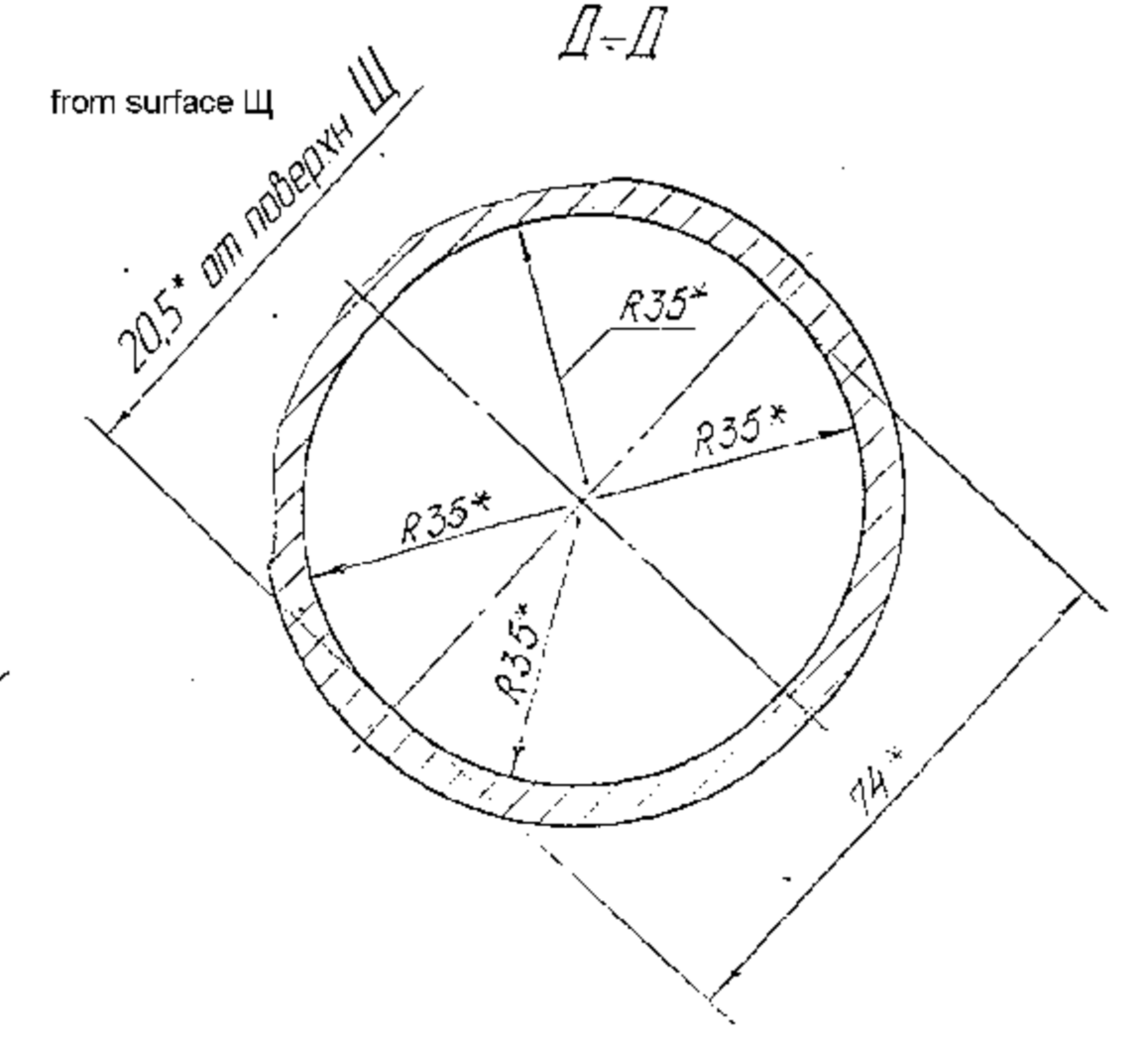
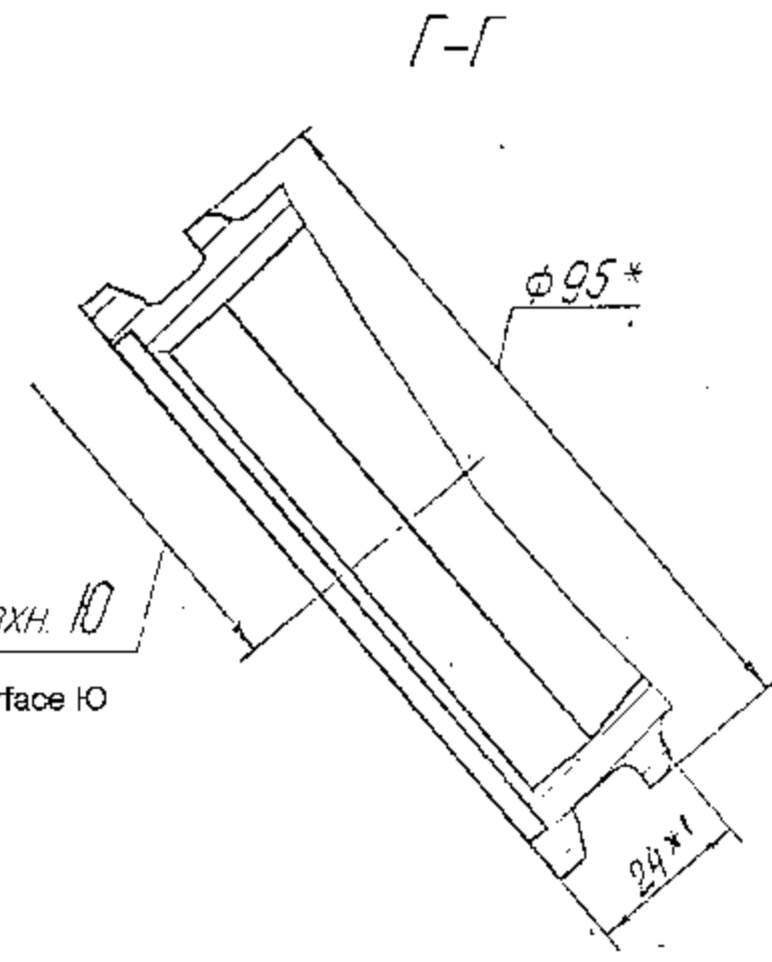
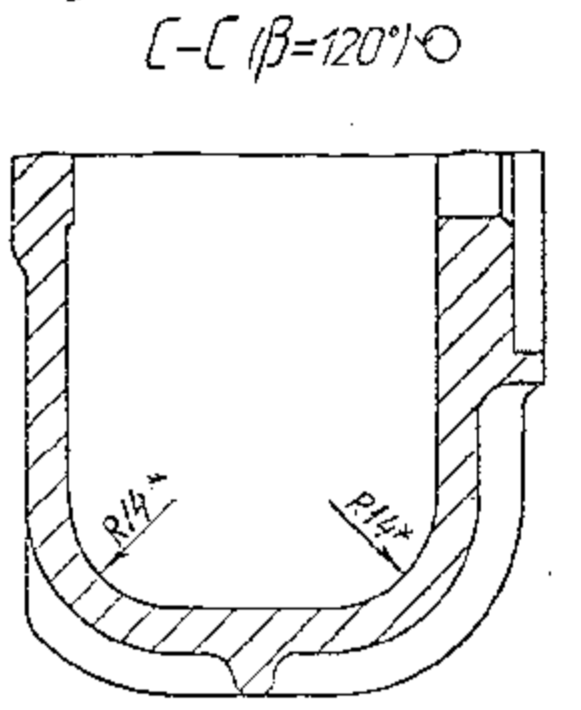
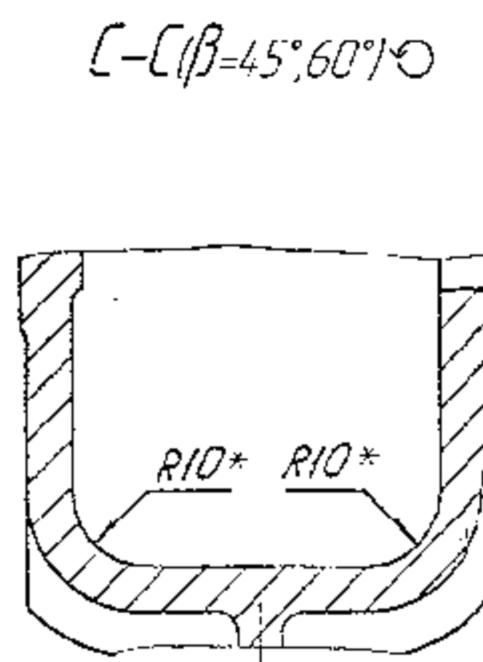
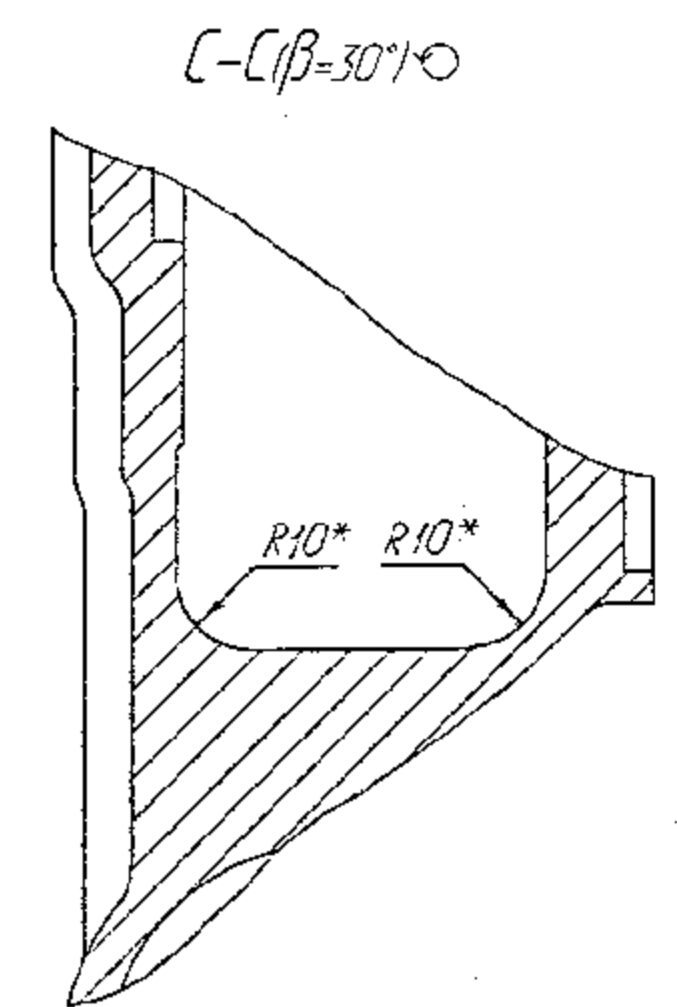
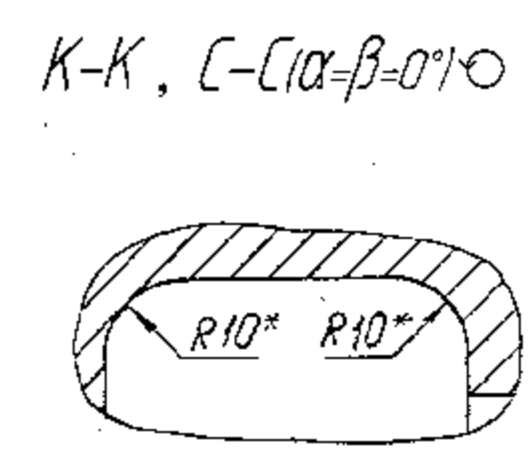
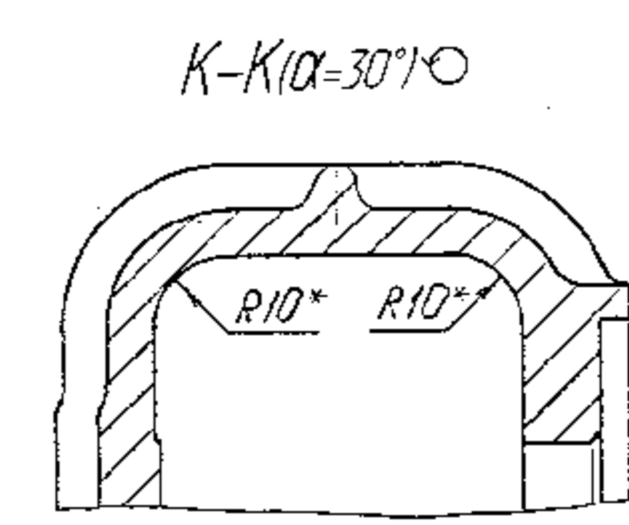
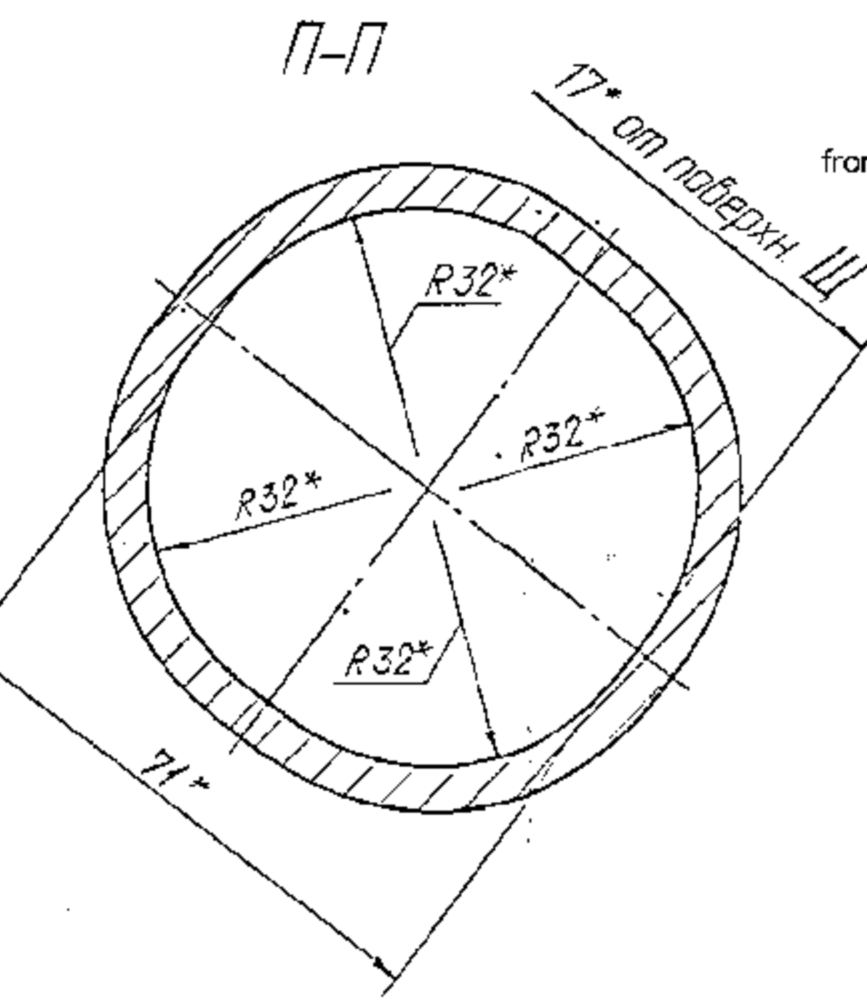
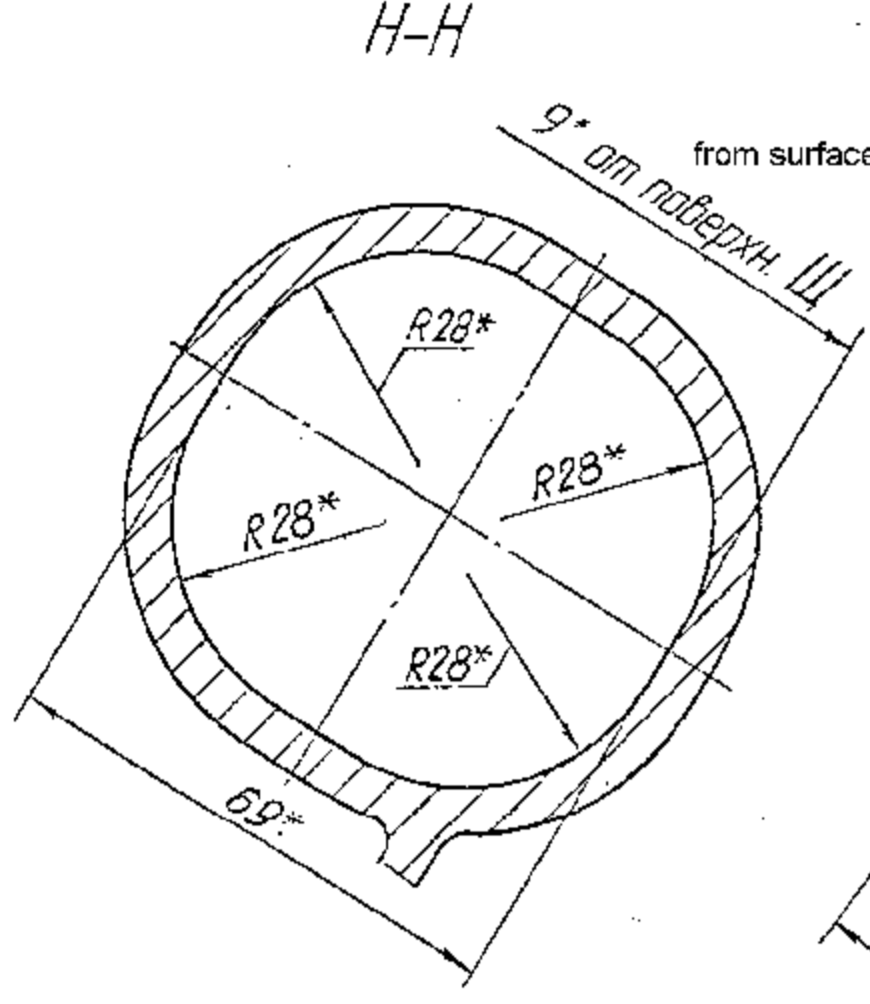
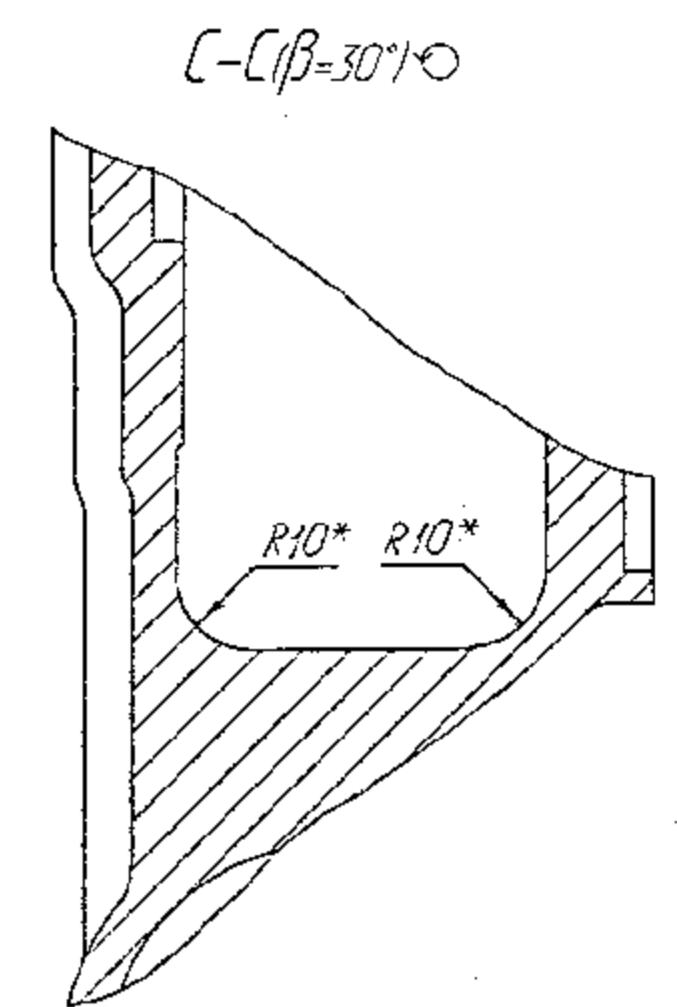
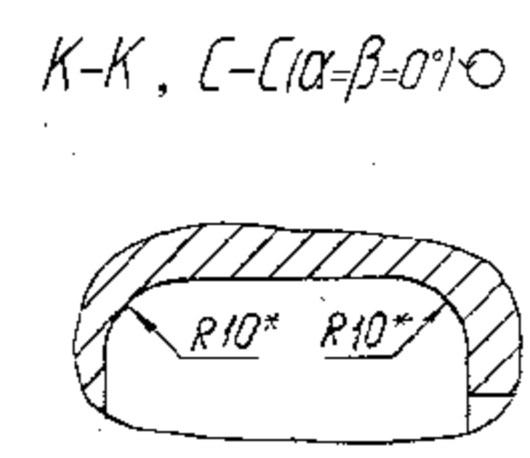
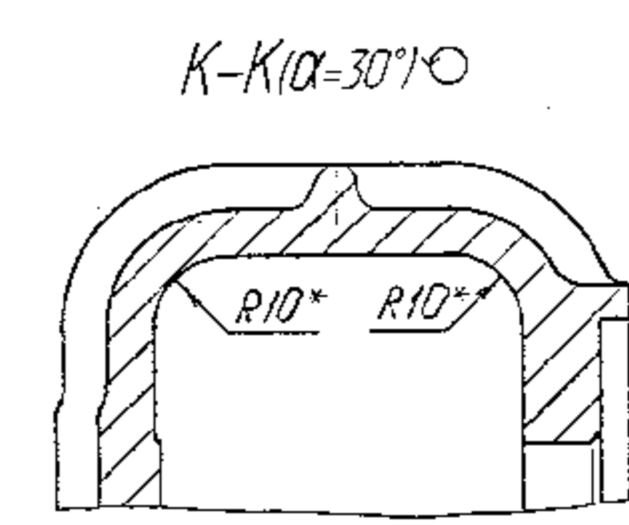
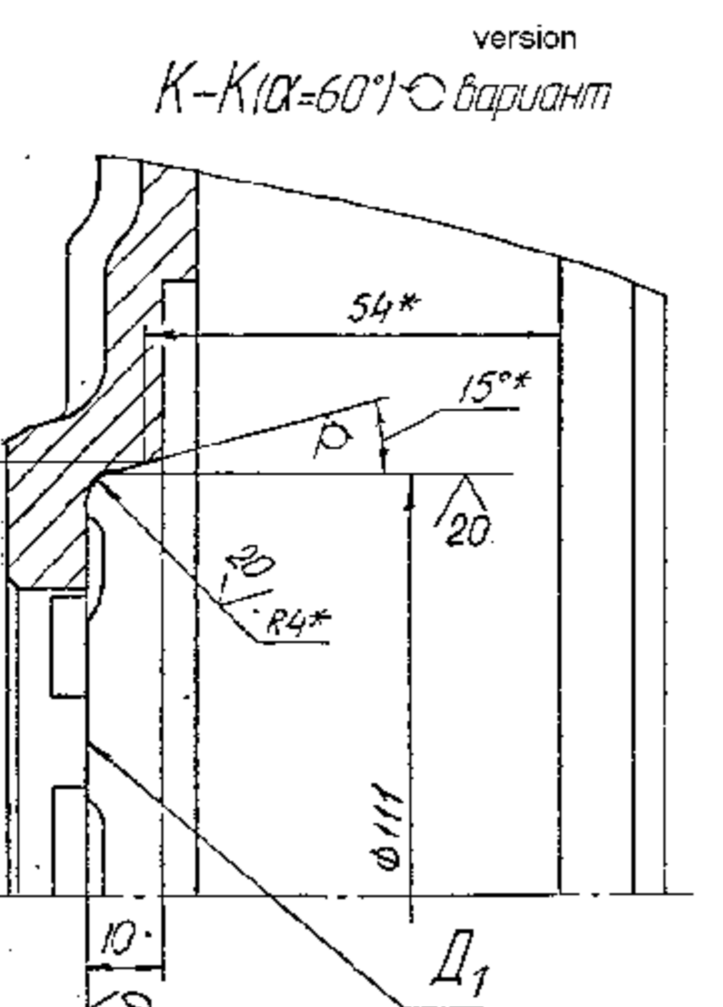
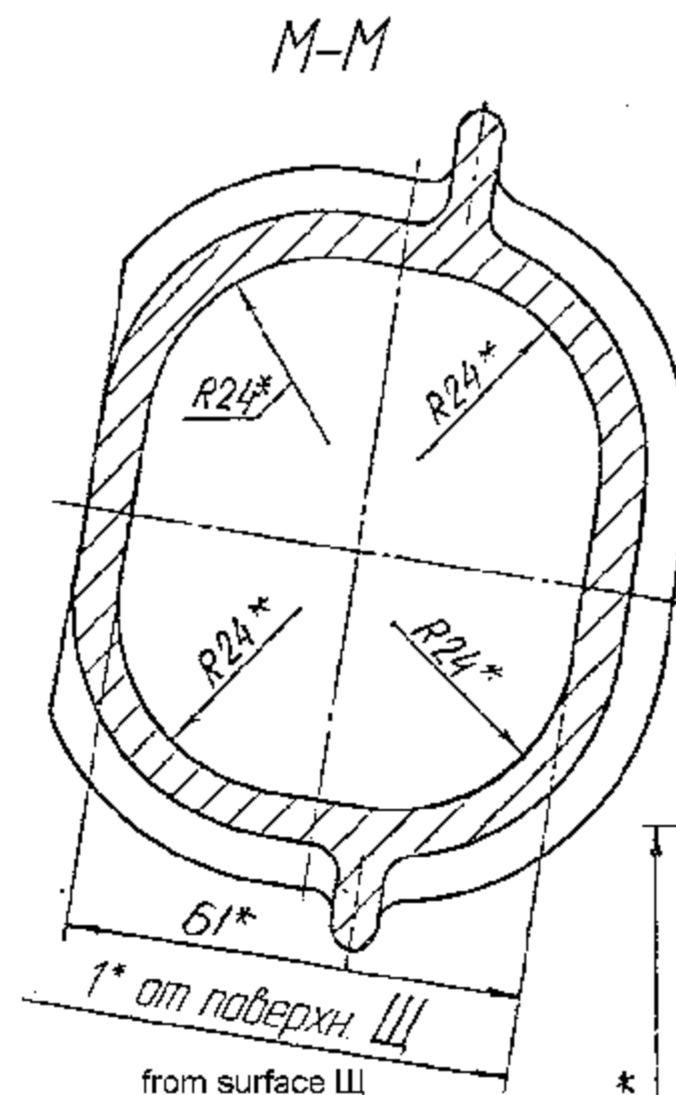
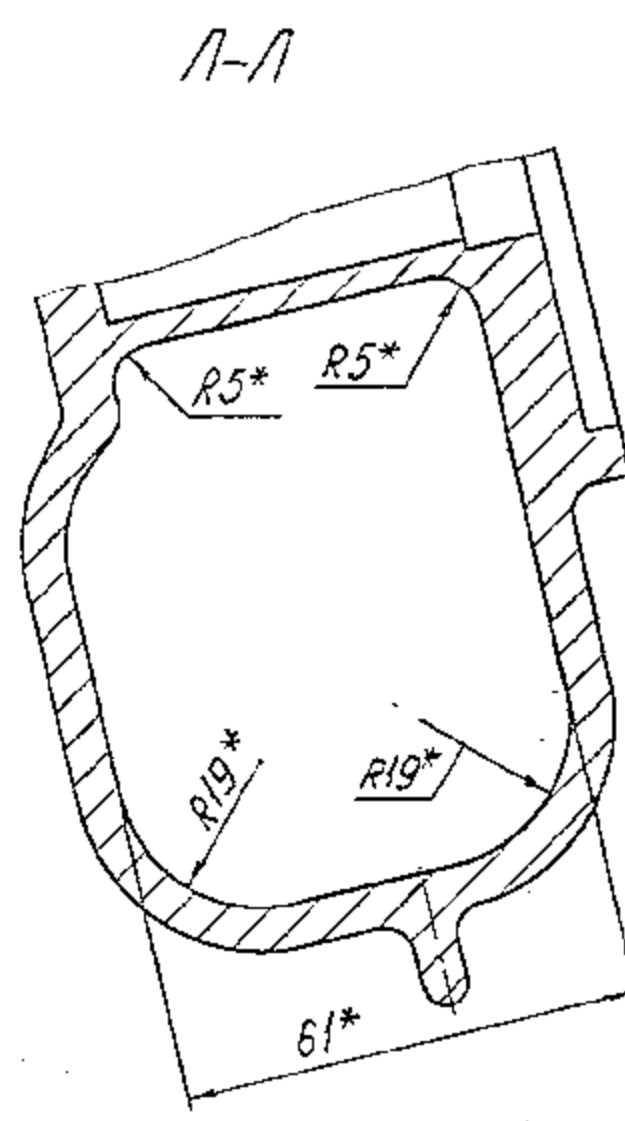
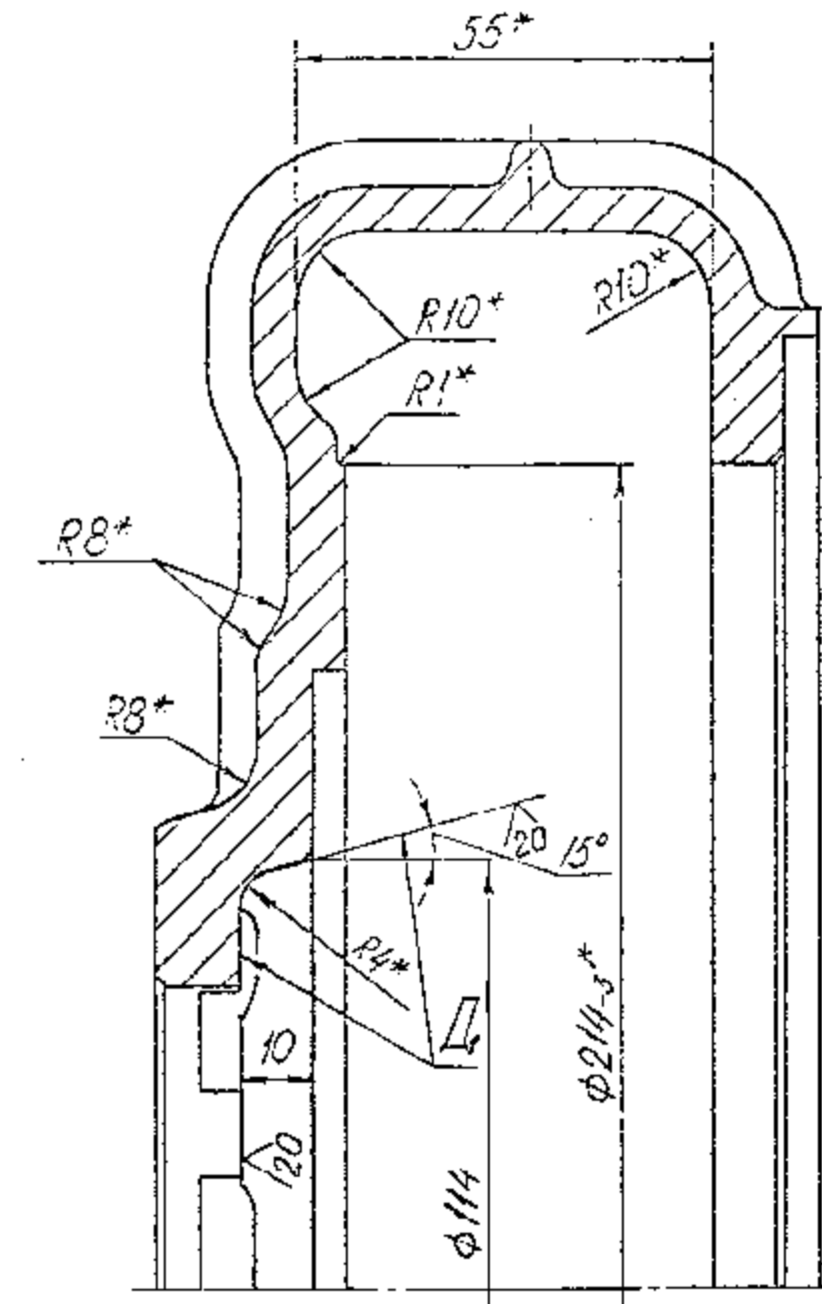
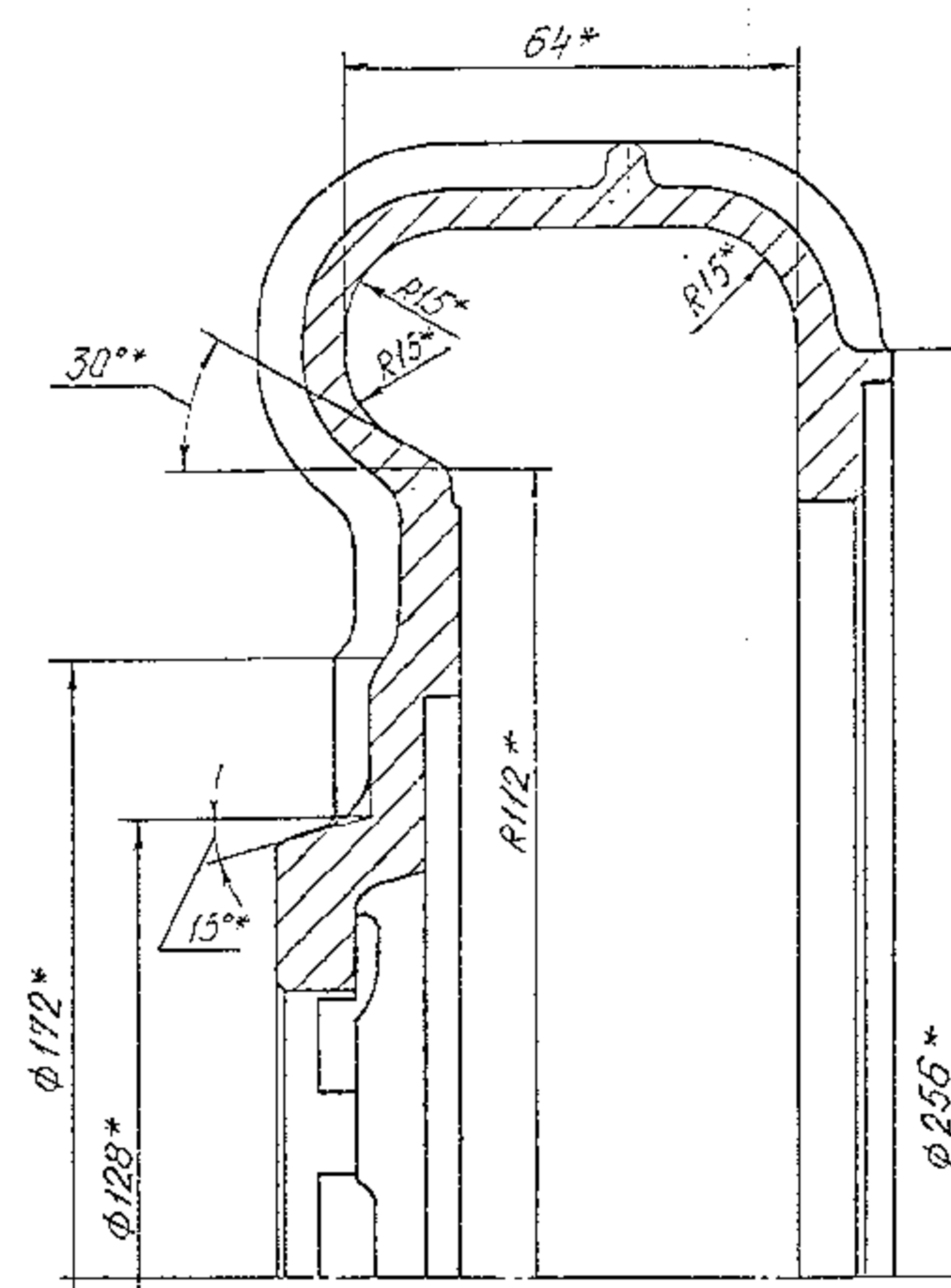
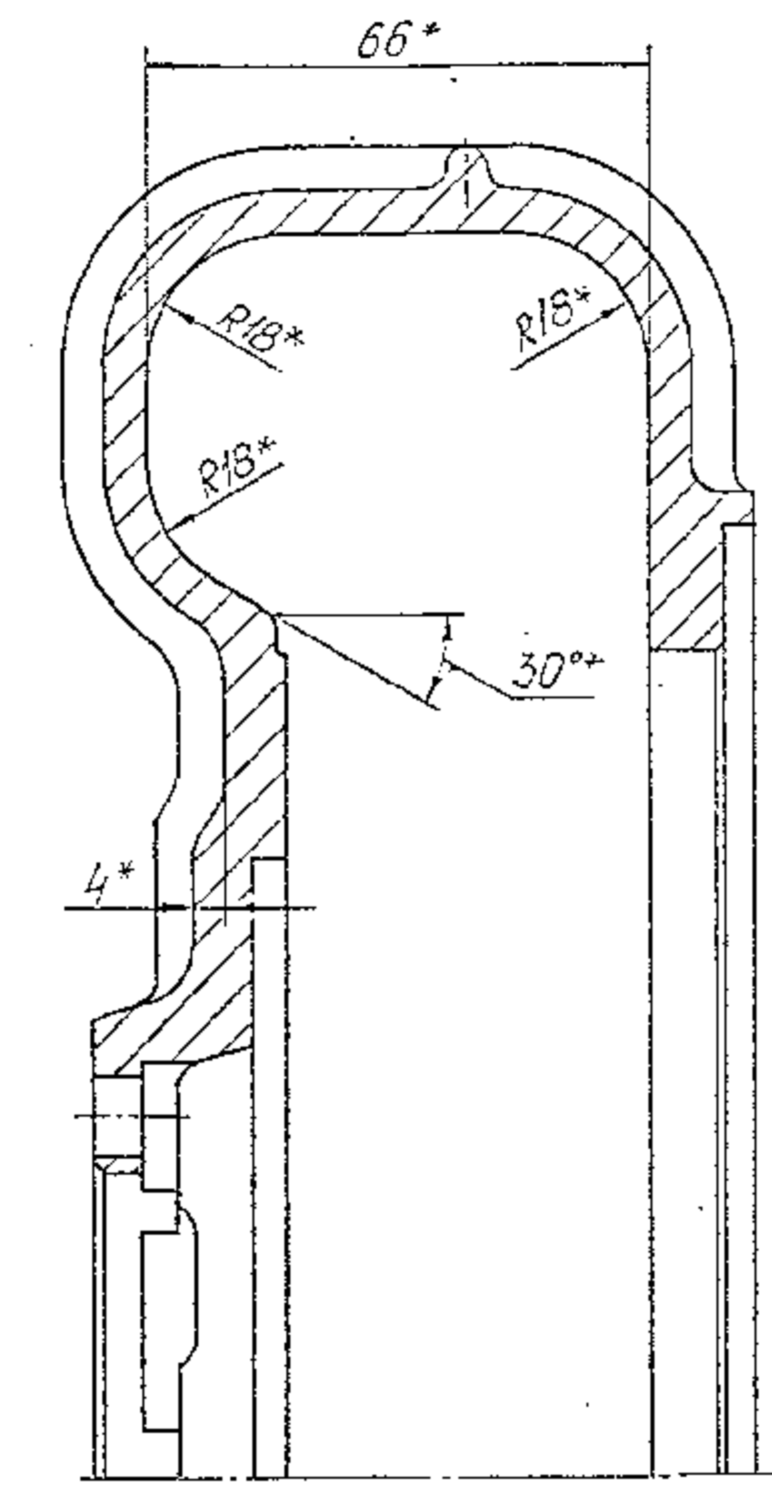
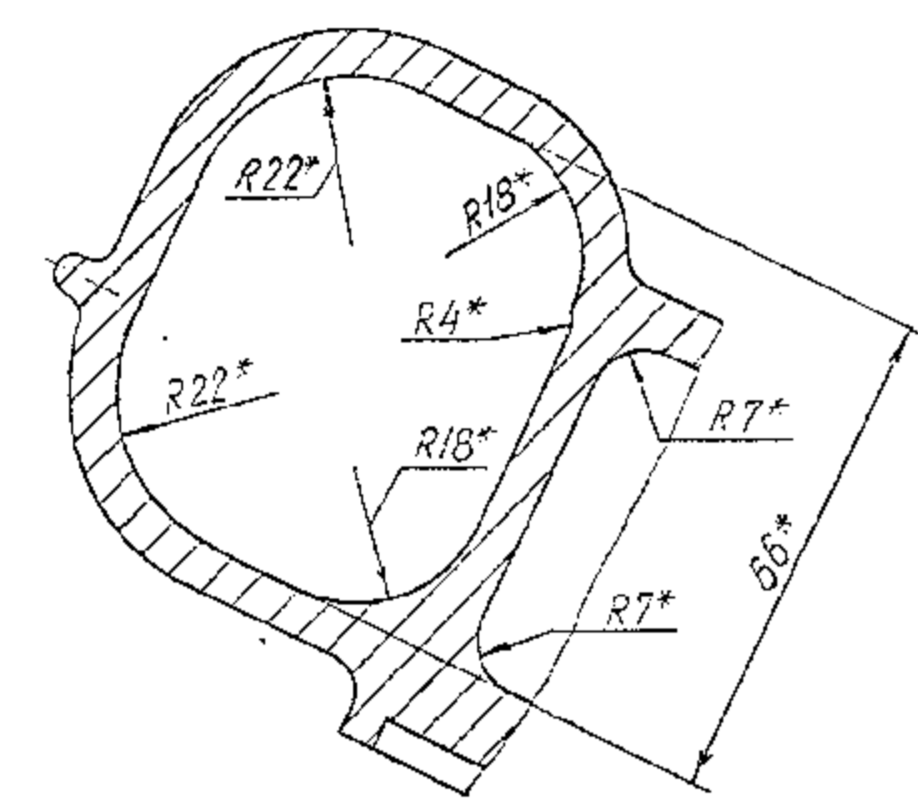
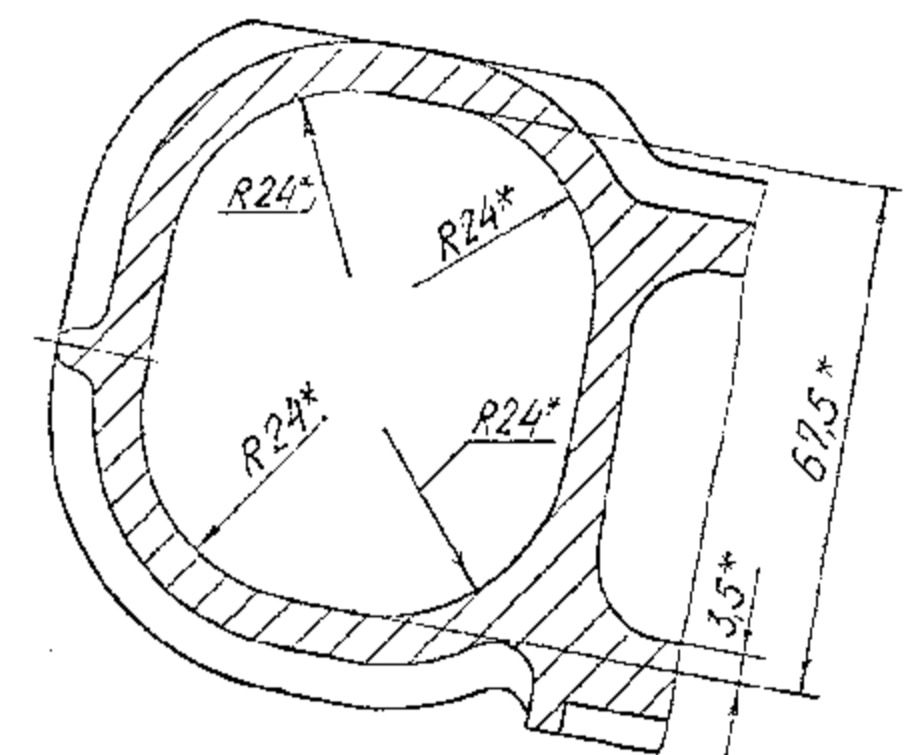
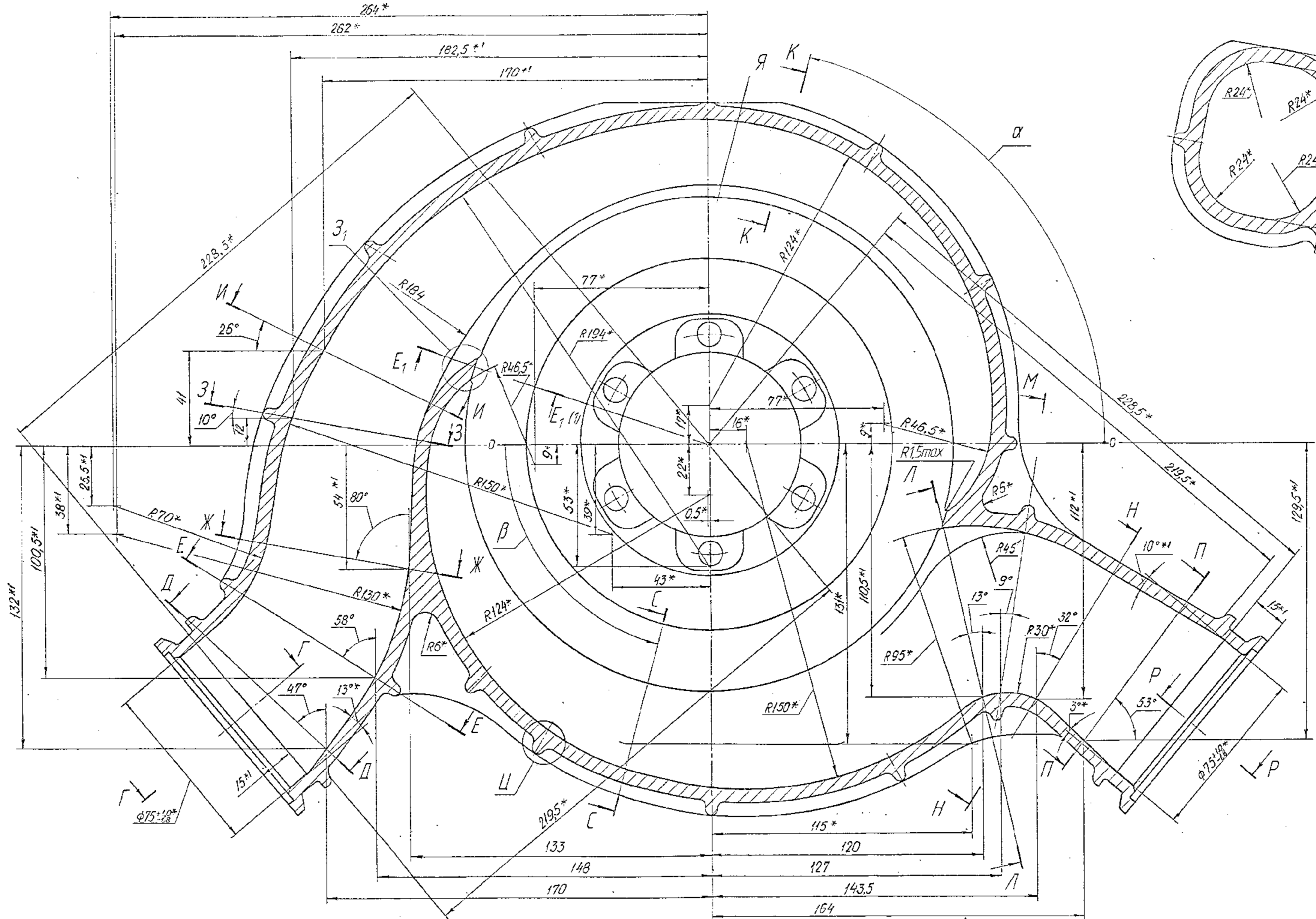
3-3

И-И

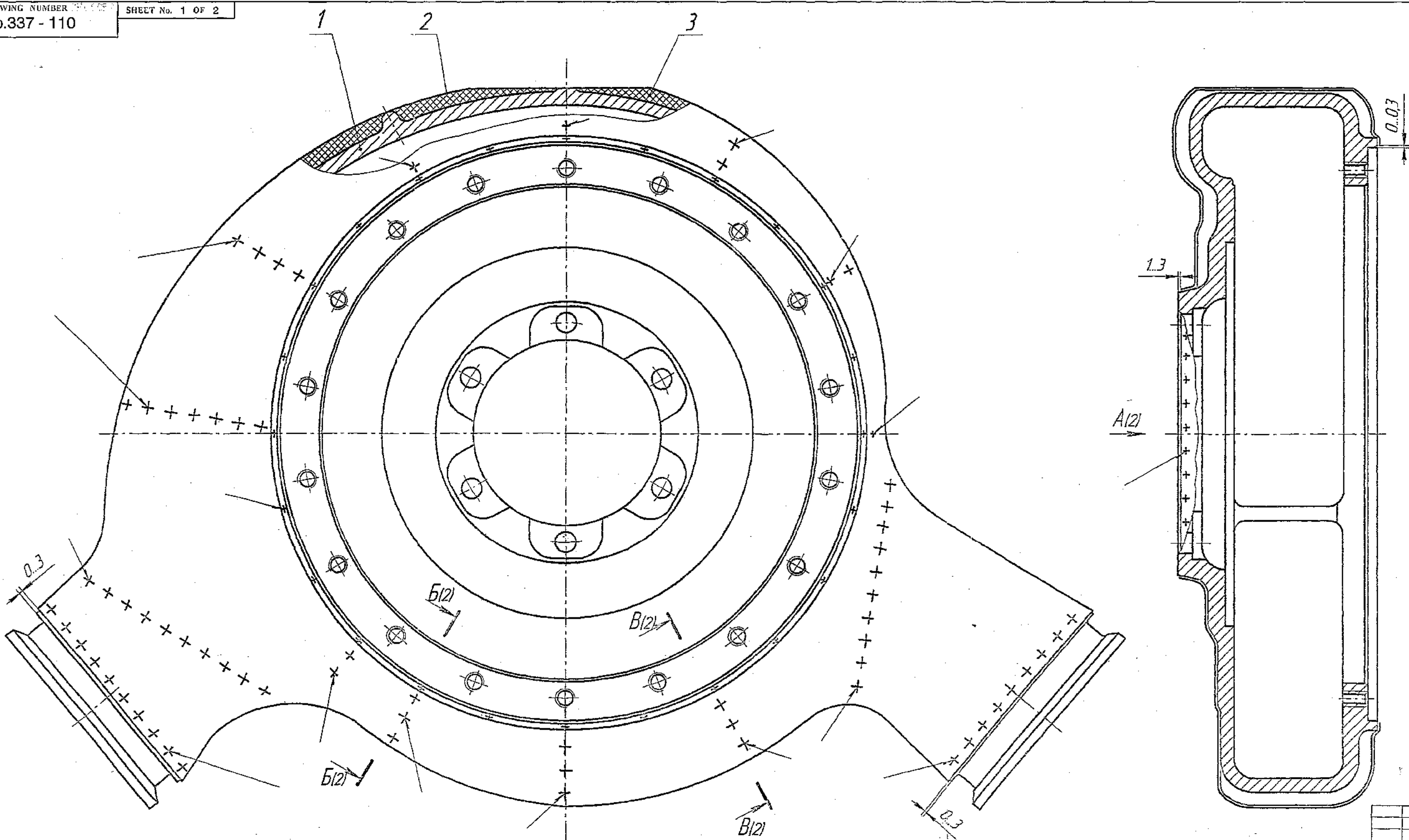
K-K(α=150°)O

K-K(α=120°)O

K-K(α=60°)O



Лист № 111  
 Титульный лист  
 Лист № 111  
 Титульный лист  
 Лист № 111  
 Титульный лист



1. Make weld seams by resistance spot welding, ensuring tight mating of parts. Pitch between the points is arbitrary. Maximum 5 pieces of component with diameter 2 mm are allowed to burn.
2. Manufacture part item 2 from sections with adjustment as per the configuration of turbine body item 1 and subsequent resistance welding of sections with each other.
3. It is permitted to make knurling mesh 3.2-1.2 HY GOST 3826-82 on part item 2. Thickness of strip with knurling is 0.7...1.4 mm.
4. Unspecified radii are 1...3mm
5. The absence of heat insulating material KMPP 130 item 3 in order to assurance for assembly as per drawing Cb 337-100 the gap 2 mm min between each insulation and component Cb 337-130-1 is allowed in the sections E, Ж, З. The gap is checked on dummy.
6. Mark the code and put the final acceptance stamp on the tag.
7. Dimension for reference.

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 2  
DRG. REPLACES Cb 337-110 ISSUE - 1 ВИДЕ НОТН No.362-05

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

EST. WT (kg) 9.5 TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)

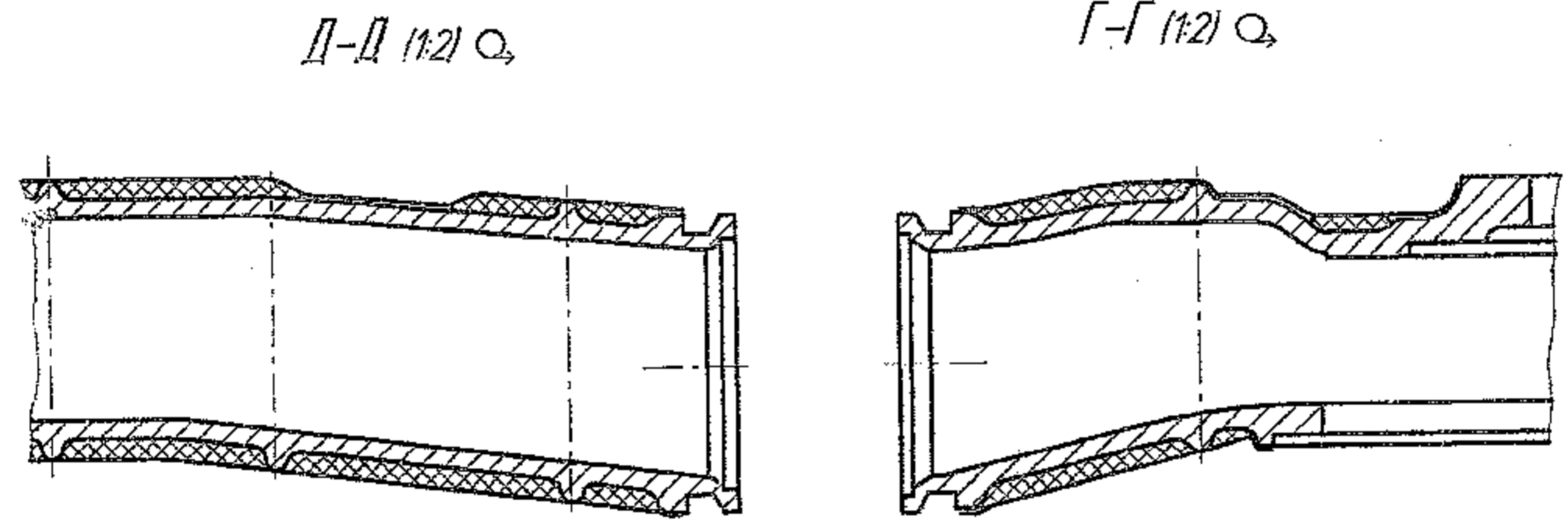
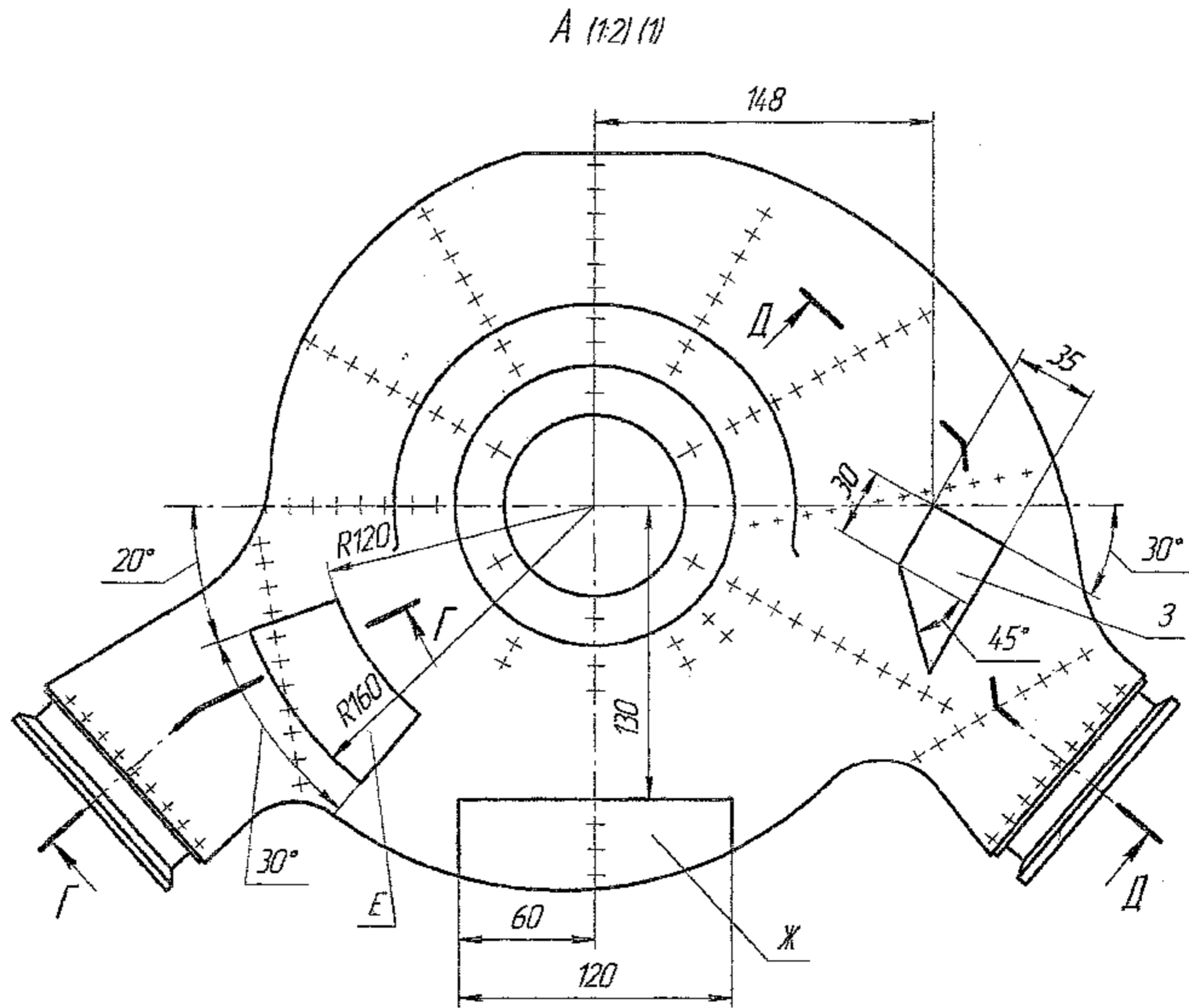
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

DRN	9. 09/09	MATERIAL:	USED ON:
CHD			Cb 337-100
APPD		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DATE	02 Aug '09	TITLE:	
SCALE:	1:1	TURBINE CASING ASSY.	
DIMENSIONS IN mm		D S CAT NUMBER	DRAWING NUMBER SHT.10F 2
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69			Cb.337 - 110
ALL THREADS TO CONFORM TO			
ISSUE	DATE	NATURE OF AMENDMENTS	



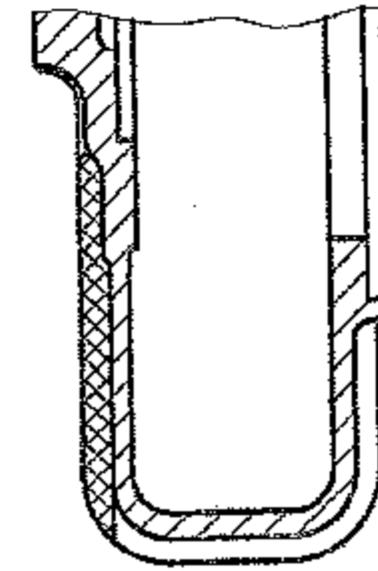
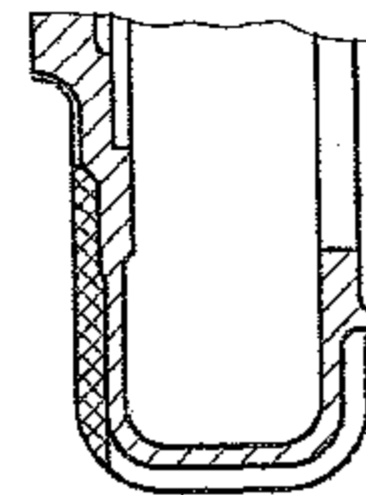
DRAWING NUMBER  
Cb.337-110

SHEET No. 2 OF 2



B-B (1:2) O (1)

B-B (1:2) O (1)



DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 2  
DRAWING REPLACES Cb337-110 ISSUE - 1, NOTN. No. 362-05.

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

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

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

DRN	<i>[Signature]</i>	MATERIAL :-	USED ON :- Cb.337-100
CHD	<i>[Signature]</i>		
APPD	<i>[Signature]</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DATE	10 Aug '09	TITLE :- <b>TURBINE CASING ASSY</b>	
SCALE:-	1 : 2	D S CAT NUMBER	
DIMENSIONS IN mm		DRAWING NUMBER JHT 2 OF 2 Cb.337-110	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69			
ALL THREADS TO CONFORM TO			
ISSUE	DATE	NATURE OF AMENDMENTS	

F-158  
SIZE A2

