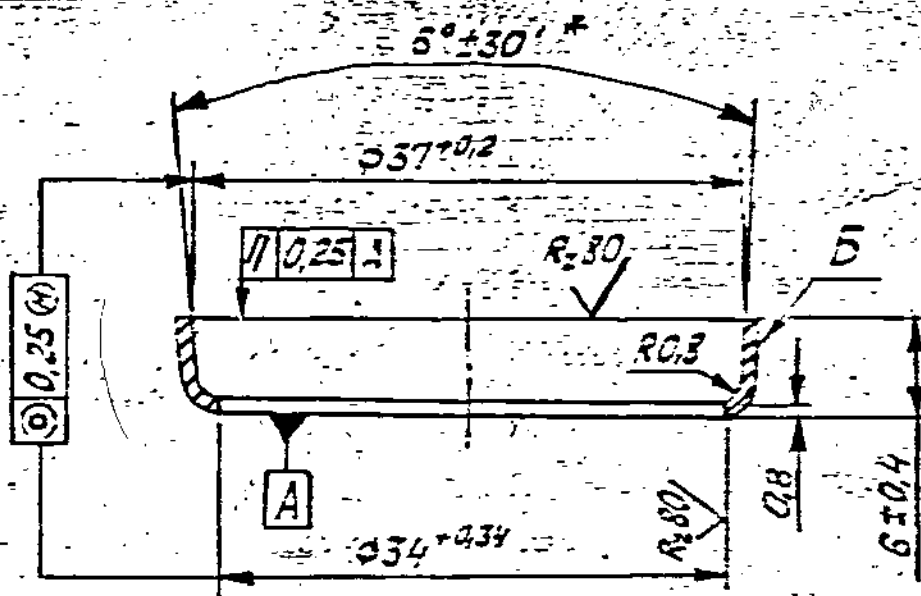


DRAWING NUMBER
20-12-91-1



- 1 * DIMENSION IS GIVEN FOR REFERENCE
- 2 A DIE TRACE TO A DEPTH OF 0,25mm AND WIDTH 3mm IS ALLOWED ON SURFACE B.
- 3 SHOT BLAST OR SAND BLAST.
- 4 OTHER REQUIREMENTS ARE AS PER TECHNICAL SPECIFICATIONS TY 005 216-75, APPENDIX, 1.

EXPLANATORY NOTE :-

5. MATERIAL QUOTED : 08K GOST 1050-74.

08 K_n = GRADE OF STEEL.

(a) CHEMICAL COMPOSITION :

C = 0,05 - 0,11	Cr = 0,10
Si = 0,037 (max)	P = 0,035
Mn = 0,25 - 0,50	S = 0,040
	Ni = 0,25
	Cu = 0,25

(b) MECHANICAL PROPERTIES :

YIELD POINT Kgf/mm² = 28 (min)
 ULTIMATE TENSILE STRENGTH Kgf/mm² = 33 (min)
 % ELONGATION = 33 (min)
 % REDUCTION IN AREA = 60 (min)

(A) EQUIVALENT MATERIAL
Gr. D IS: 513-1994

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

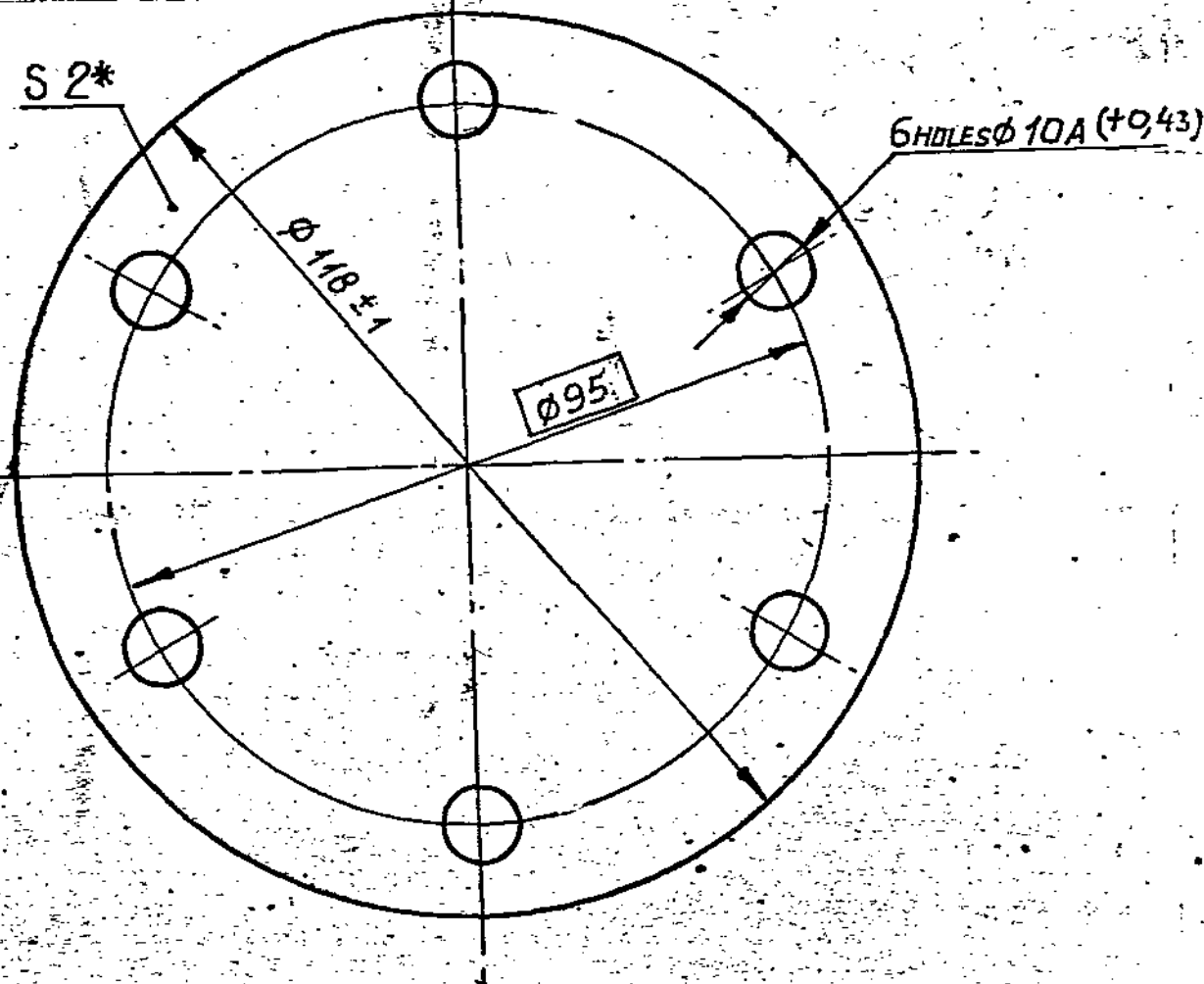
EST. WT. TO BE STAMPED OR MARKED WHERE INDICATED THIS \equiv 1 LETTERS!
0.006 Kg.

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIZE INSEE EQUIVALENT CHAMFERS ARE PERMISSIBLE

ERN	DES	TE	APPR	DATE	SCALE	MATERIAL	USED ON
				6-2-90	2:1	08K _n GOST 1050-74	CE 20-12-10-1
DIMENSIONS IN mm						TITLE	
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS: 2112-55						FRAME	
ALL TREADS TO CONFORM TO						D S CAT NUMBER	
ISSUE DATE						DRAWING NUMBER	
NATURE OF AMENDMENTS						20-12-91-1	

SIZE A3

DRAWING NUMBER
20-40-02



EXPLANATORY NOTE:-

MATERIAL QUOTED : SHEET B-2 GOST 19904-74
3ПC GOST 16523-70

B = STANDARD ACCURACY
2 = THICKNESS OF SHEET
3ПC = GRADE OF MATERIAL

CHEMICAL COMPOSITION ϕ (AS PER GOST 380-71)

CARBON = 0.14-0.22 ; MANGANESE = 0.40-0.65 ;
SILICON = 0.05-0.17 ;
PHOSPHORUS = 0.04 (MIN) ; SULPHUR = 0.05 (MIN) ;
CHROMIUM = 0.30 (MIN) ; NICKEL = 0.30 (MIN) ;
COPPER = 0.30 (MIN) ; ARSENIC = 0.08 (MIN) ;

MECHANICAL PROPERTIES : (AS PER GOST 16523-70 & GOST-380-71)
ULTIMATE TENSILE STRENGTH $\text{kgf/mm}^2 = 38-49$
YIELD POINT kgf/mm^2 (MIN) = 25
RELATIVE ELONGATION $\%$ (MIN) = 26

- 1 ALTERNATE MATERIAL IS STEEL OF ANY GRADE AS PER GOST 380-71, 3mm THICK SHEET А 16УМ, GOST 21631-76 PLYWOOD AS PER GOST 3916-69 AND FIBRE BOARD, AS PER GOST 4598-74.
- 2 COATING :- CHEMICALLY OXIDIZED, OILED.
- 3 TOLERANCE FOR ALIGNMENT SHOULD NOT EXCEED, 0,22mm.
- 4 * DIMENSION IS GIVEN FOR REFERENCE

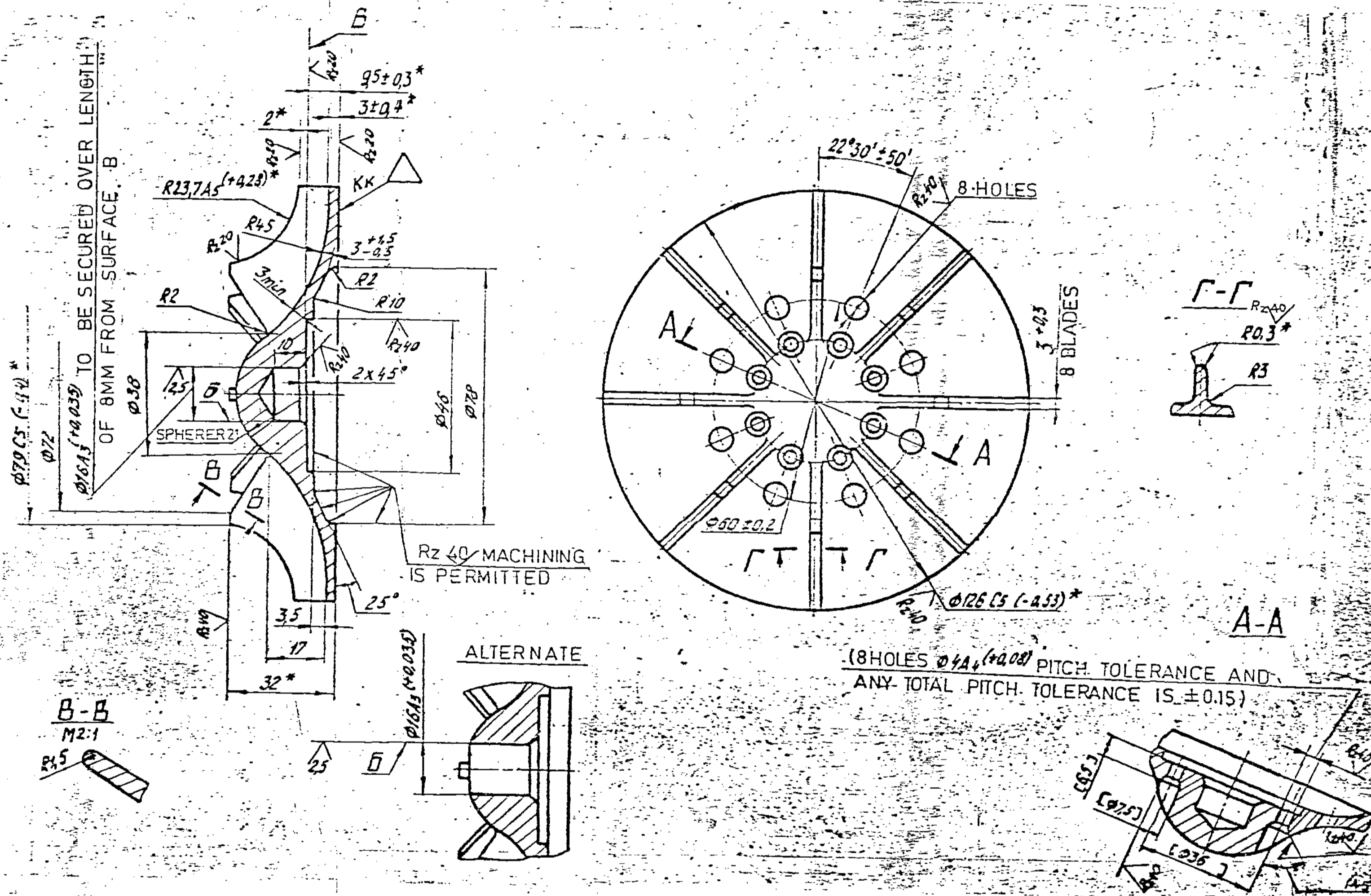
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

EST. WT. 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>Ramana</i>	MATERIAL:- SHEET	USED ON
CHD	<i>Ramana</i>	B-2 GOST 19904-74	CB 20-II-00-6
TCO	<i>Ramana</i>	3ПC GOST 16523-70	
APPD	<i>V. Ramana</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.	
DATE	27-12-91		
SCALE:-	1:1		
DIMENSIONS IN mm		TITLE	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102-69.		COVER	
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
			20-40-02
ISSUE	DATE	NATURE OF AMENDMENTS	

SIZE A3



1. HB ≥ 80.
2. REQUIREMENTS, PLACED UPON CASTING ARE AS PER TECHNICAL REQUIREMENTS IT A.1 310-5/65 AND STANDARD 82050-15.
3. LOCAL THICKNING OR THINNING OF WALLS OF ± 1.5 ON THE AREA OF UP TO 3CM² IS ALLOWED.
4. CAST THE BLADE SURFACE AND THE SURFACE OF IMPELLER INLET PART CLEANLY.
5. COATING OF UNMACHINED SURFACES; BAKELITE VARNISH Л5С-1 GOST 901.78.V. 4/1-C1.
6. UNSPECIFIED LIMIT DEVIATIONS OF MACHINED SURFACE DIMENSIONS ARE AS FOLLOWS: FOR HOLES AS PER A7, SHAFTS AS PER B7, OTHERS AS PER CM7.
7. END PLAY TOLERANCE FOR SURFACE B WITH RESPECT TO AXIS OF SURFACE 5° IS 0.02MM.
8. CARRY OUT MACHING AS PER DIMENSION GIVEN IN SQUARE BRACKETS TOGETHER WITH PART 20-11-03.
9. * GIVEN ARE DIMENSIONS AFTER ASSEMBLY DIMENSION 9.5 ± 0.3 IS PROVIDED WITH TOOLS.

EXPLANATORY NOTE :

MATERIAL QUOTED : ALUMINIUM ALLOY A.19 - GOST 2685-75.
A.19 = GRADE OF ALUMINIUM CASTING (SILICON BASE).

CHEMICAL COMPOSITION :

BASIC ELEMENT	=	BASE
ALUMINIUM	=	0.2 - 0.4
MAGNESIUM	=	
SILICON	=	6.0 - 8.0

A. D. MIXTURE (MAXIMUM)

IRON	=	150
MANGANESE	=	0.5
COPPER	=	0.2
ZINC	=	0.3
TIN	=	0.01
LEAD	=	0.05
BERILIUM	=	0.10
ZERCONIUM	=	0.15
TOTAL	=	2.00

MECHANICAL PROPERTIES :

PARTIAL RESISTANCE	=	17
Kgf/mm ² (max)		
SPECIFIC ELONGATION %	=	1

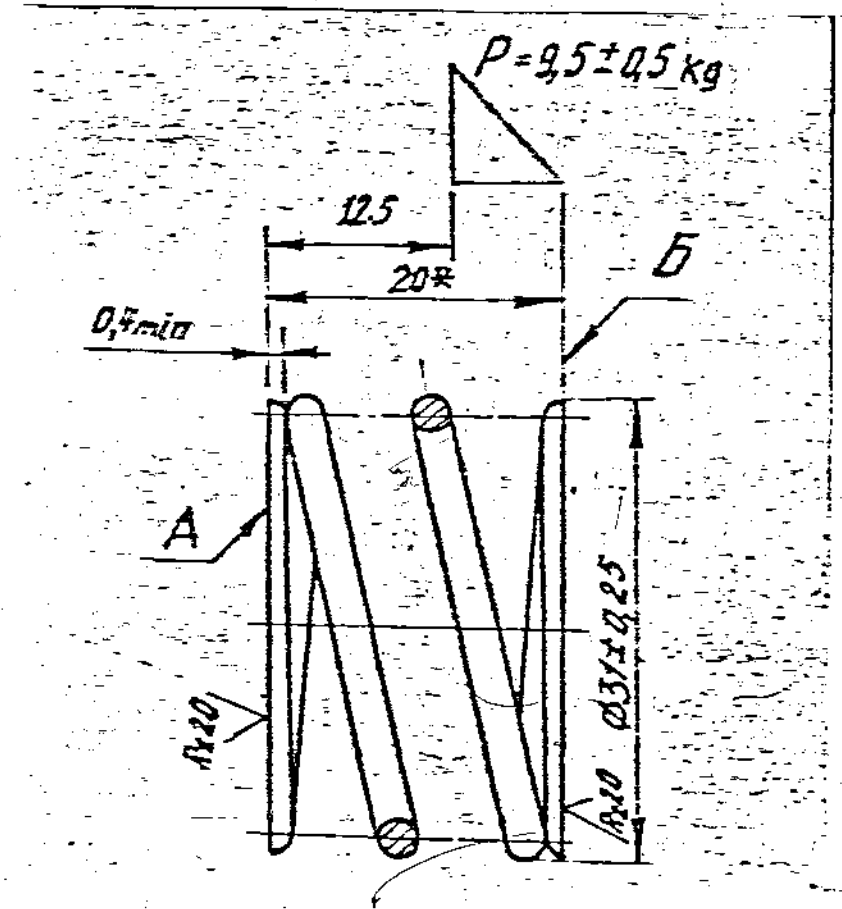
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. MASS	TO BE STAMPED OR MARKED WHERE
0.219 Kg	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	TCO	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69	ALL THREADS TO CONFORM TO	MATERIAL	USCD ON
			18-8-86	1:1				A.19 - GOST 2685-75	CB 20-11-22-4
								CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
								A V A O I	
								TITLE	
								IMPELLER	
								D S CAT NUMBER	
								DRAWING NUMBER	
								20-11-07-3	
ISSUE	DATE	NATURE OF AMENDMENTS							

DRAWING NUMBER
20-11-17-3

(V)



1. ALTERNATE MATERIAL IS WIRE II - 2.8, GOST 9389-75.
2. $G = 8.10^3 \text{ kgf/mm}^2$.
3. $C = 525 \text{ kgf/mm}^2$.
4. DIRECTION OF SPRING WINDING IS RIGHT HAND.
5. $n = 1.8 \pm 0.25$.
6. $n_1 = 4 \pm 0.25$.
7. LENGTH OF UNWOUND SPRING $\approx 340 \text{ mm}$.
8. * DIMENSIONS ARE GIVEN FOR REFERENCE.
9. LENGTH OF ARC OF MACHINED BUTT END SURFACE IS AT LEAST 75% OF CIRCLE.
10. TOLERANCE FOR SQUARENESS OF SURFACE A AND B WITH RESPECT TO GENERATRIX IS 0.4 mm OVER LENGTH OF SPRING.
11. CLEARANCE BETWEEN PLANES A AND B OF TIGHTENED BEARING COILS AND SURFACE PLATE IS NOT MORE THAN 0.1 mm.
12. CHECK FOR ELASTICITY IS PERFORMED ON AT LEAST 30% OF SPRINGS.
13. AFTER COMPRESSING THE SPRING TILL COMPLETE CONTACT OF COILS IS OBTAINED, NO RESIDUAL DEFORMATION SHOULD BE OBSERVED.
14. CHECK THE PART WITH MAGNETIC FLAW DETECTOR AS PER INSTRUCTIONS JB 28-72.
15. COATING BAKELITE VARNISH KB / 12X5C-1 GOST 901-78, TY 4/1-C, ABSENCE OF BAKELITE AT FOUR PLACES WITH TOTAL AREA OF UPTO 5.0 cm² IS PERMITTED ONLY ALONG THE SPRING BUTT END AND AT CONTACT POINTS OF NON WORKING COILS.
16. PRIOR TO APPLYING BAKELITE VARNISHING IT IS ALLOWED TO PERFORM CADMIUM PLATING FOLLOWED BY PHOSPHATING.
17. MARK THE PART NO AND STAMP FINAL ACCEPTANCE ON TAG (PART 540-550) FOR BATCH OF PARTS AND SEAL.

EXPLANATORY NOTE:

MATERIAL QUOTED: WIRE III-2.8 GOST 9389-75. ALTERNATE MATERIAL WIRE II-2.8 GOST 9389-75
CARBON STEEL COLD DRAWN WIRE II, III CATEGORIES
2.8 mm = DIAMETER.
GRADES KT2 AND SK7.

CHEMICAL COMPOSITION

GRADE OF STEEL	CONTENT OF ELEMENTS %							
	C	Si	Mn	S	P	Cr	Cu	Ni
	MAXIMUM							
KT-2	0.86 - 0.91	0.17 - 0.37	0.20 - 0.40	0.020	0.020	0.05	0.05	0.10
SK-7	0.68 - 0.76	0.17 - 0.37	0.50 - 0.80	0.030	0.020	0.05	0.05	0.04

MECHANICAL PROPERTIES

	CATEGORY-II	CATEGORY-III
TENSILE STRENGTH Kgf/mm ²	165 - 190	130 - 165
No: OF BENDS (min)	9	10
No: OF TWISTS (min)	14	14

(A) EQUIVALENT MATERIAL
Gr. DH/DM IS:4454-2001

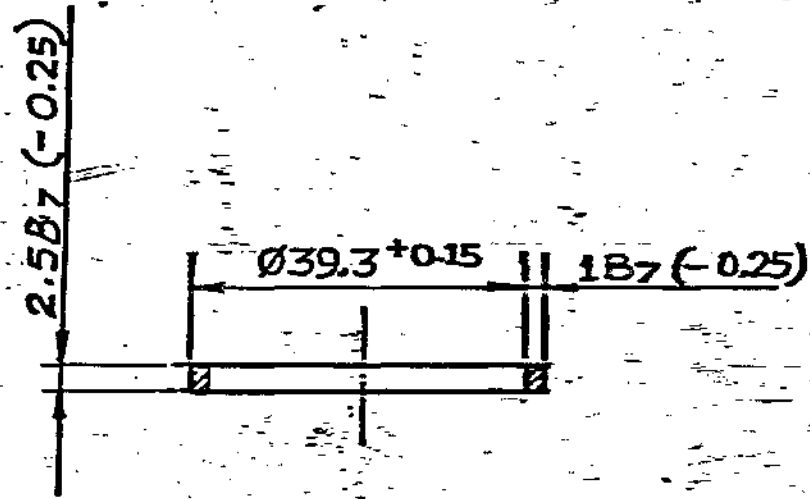
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. 0.014 Kg.	TO BE STAMPED OR MARKED WHERE INDICATED THIS \oplus 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	<i>[Signature]</i>	MATERIAL :- WIRE III-2.8	USED ON :-
DHD	<i>[Signature]</i>	GOST 9389-75	CS 20-11-01-9
TED	<i>[Signature]</i>		CS 20-13-01-8
APPO	<i>[Signature]</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	6-2-90	A V A D I	
SCALE	2:1		
DIMENSIONS IN mm		TITLE	
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 202-69		SPRING	
A	16-8-10	6 th Alt. Comm. Meeting Minutes Point No.13 Dt:26-10-09	D S CAT NUMBER
ISSUE	DATE	NATURE OF AMENDMENTS	DRAWING NUMBER 20-11-17-3

DRAWING NUMBER
20-11-22

2.5 ✓



STAMP FINAL ACCEPTANCE ON TAG (PART 540-551) FOR BATCH OF PARTS AND SEAL.

EXPLANATORY NOTE:

MATERIAL QUOTED:

12X18H9 GOST 5632-72

12X18H9 = GRADE OF STEEL

CHEMICAL COMPOSITION (AS PER GOST 5632-72) %

CARBON = 0.12 (MAX); SILICON = 0.8 (MAX)

MANGANESE = 2.0 (MAX) CHROMIUM = 17.0-19.0;

NICKEL = 8.0-10.0; IRON = BASE;

SULPHUR = 0.020; PHOSPHORUS = 0.035.

MECHANICAL PROPERTIES (AS PER GOST 5949-75)

1. INSTANTANEOUS STRENGTH Kgf/mm^2 (MIN) = 50
2. YIELD POINT Kgf/mm^2 (MIN) = 20
3. RELATIVE ELONGATION % (MIN) = 45
4. REDUCTION IN AREA % (MIN) = 55

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

EST. WT. 0.003 kg TO BE STAMPED OR MARKED - WHERE INDICATED THIS # 1 LETTERS

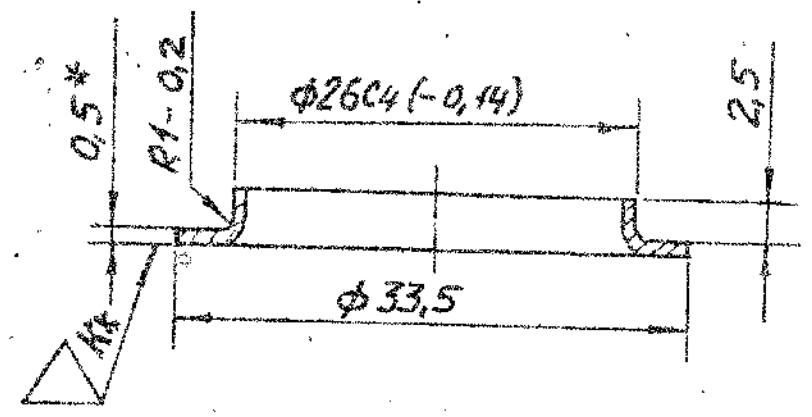
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

DRN	<i>10/11/91</i>	MATERIAL - 12X18 H9	USED ON
CHK	<i>Kumar</i>	GOST 5632-72	CB 20-11-15-1
TCD	<i>G. N. S. A.</i>	CONTROLLERATE OF QUALITY ASSURANCE HEAVY VEHICLES	
APPO	<i>10/11/91</i>	AVADI	
DATE	3-7-91	TITLE	
SCALE	1:1	HOLDER	
DIMENSIONS IN mm		D S CAT NUMBER	
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2102-89		DRAWING NUMBER	
ALL THREADS TO CONFORM TO		20-11-22	
ISSUE DATE	NATURE OF AMENDMENTS		

AMD.T. NO. 12-1308-B1



SIZE A3



NOTE:-

1. ALTERNATE MATERIAL IS BRASS J168, GOST 931-78.
2. REQUIREMENTS, PLACED UPON STAMPING ARE AS PER STANDARD B2050-16
3. * DIMENSION IS GIVEN FOR REFERENCE.

EXPLANATORY NOTE:-

MATERIAL QUOTED:- SHEET M 0.5 J163 GOST 931-78

BRASS SHEET TO GRADE J163. 0.5 = THICKNESS OF SHEET.

M = SOFT CONDITION.

CHEMICAL COMPOSITION:- %

C4 = 62-65 ; ZINC = REMAINDER.

ADMIXTURES: (MAX)

LEAD = 0.07 ; ANTIMONY = 0.005 ; IRON: 0.2 ;

BISMUTH: 0.002 ; PHOSPHORUS: 0.01 ; TOTAL ADMIXTURES = 0.5 (MAX)

MECHANICAL PROPERTIES:-

ULTIMATE TENSILE STRENGTH = 30-41 kgf/mm².

% ELONGATION = 38 (MIN)

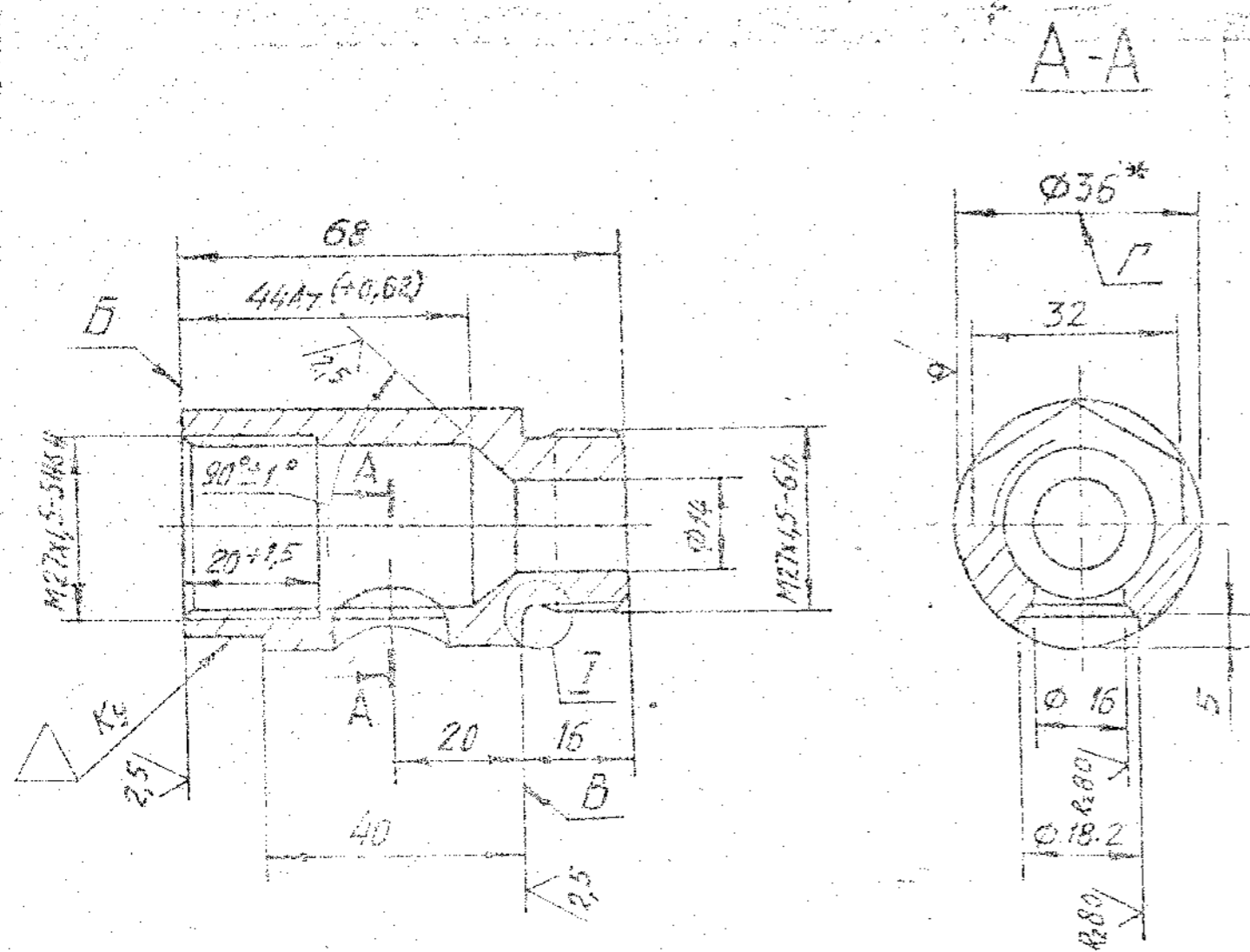
BRINNEL HARDNESS = 70 (MAX)

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

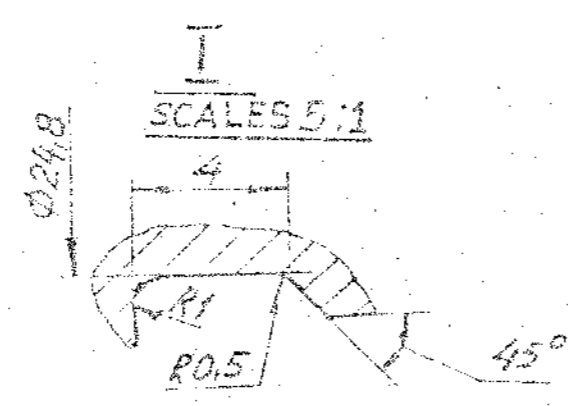
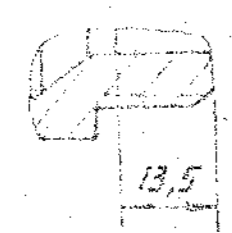
EST. WT. 0.0025 kg TO BE STAMPED OR MARKED WHERE INDICATED THIS # 1 LETTERS)

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

DRM	<i>[Signature]</i>	MATERIAL:- SHEET M 0.5 J163 GOST 931-78	USED ON	CB 20-11-01-9
CHKD	<i>[Signature]</i>			
TED	<i>[Signature]</i>			
APPD	<i>[Signature]</i>			
DATE	27-4-91		CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	
SCALE:-	2:1		AVADI	
DIMENSIONS IN mm			TITLE	GASKET
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69				
ALL THREADS TO CONFORM TO			D S CAT NUMBER	DRAWING NUMBER
ISSUE DATE	NATURE OF AMENDMENTS			20-11-23-1



I ALTERNATE



- Alternate material is steel grade 45.50 GOST 1050-74
- Unspecified limit deviations of machined dimensions are follows:
For Holes as per A7
shafts as per B7
others as per C47
- Non-squareness of surfaces B and B with respect to the axes of corresponding threads is 0.05 mm.
- Axial misalignment of hexahedron and diameter r is R 0.5 mm.
- While facing butt end B, the single point tool may cut the cylindrical surface to a depth of not more than 0.3 mm.

* Dimension is given for reference.

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

EST. WT. TO BE STAMPED OR MARKED WHERE INDICATED THUS =
0.224 kg. 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

EXPLANATORY NOTE:-

MATERIAL QUOTED: ROUND BAR: 36 GOST 2590-71
40 GOST 1050-74

36 = DIAMETER AS PER GOST 2590-71
40 = GRADE OF MATERIAL AS PER GOST 1050-74

CHEMICAL COMPOSITION % (AS PER GOST 1050-74)
CARBON = 0.57-0.45
SILICON = 0.17-0.37
MANGANESE = 0.50-0.80
CHROMIUM = 0.25 (MAX)
SULPHUR = 0.040 (MAX) COPPER = 0.25 (MAX)
PHOSPHORUS = 0.035 (MAX) NICKEL = 0.25 (MAX)

MECHANICAL PROPERTIES:

ULTIMATE TENSILE STRENGTH Kgf/mm^2 (MIN) = 58
YIELD POINT Kgf/mm^2 (MIN) = 34
% ELONGATION (MIN) = 19
REDUCTION IN AREA % = 45 (MIN)
IMPACT STRENGTH $Kg \cdot m/cm^2$ (MIN) = 6

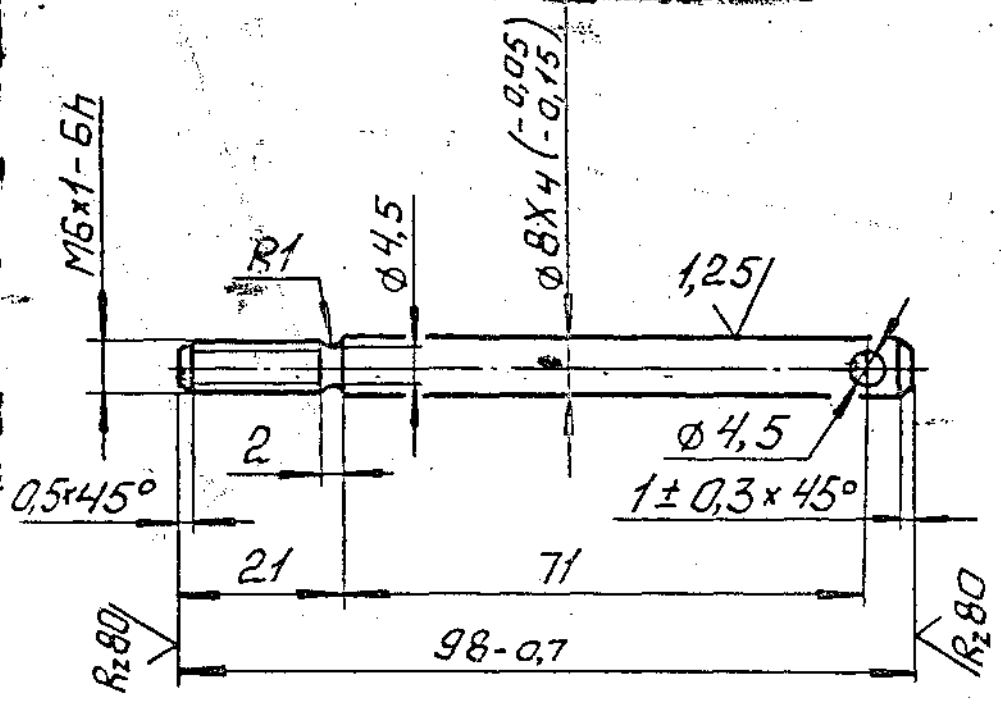
DRN	<i>Manoj</i>	MATERIAL - ROUND BAR	USED ON -
DPO	<i>Ram</i>	36 GOST 2590-71	CB 20-11-28
TED	<i>Manoj</i>	40 GOST 1050-74	
APPD	<i>V. Ramana</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	17-5-71	A V A D I	
SCALE	1:1	TITLE	
DIMENSIONS IN mm		COCK BODY	
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2102-69		DRAWING NUMBER	
ALL THREADS TO CONFORM TO		20-11-29	
ISSUE	DATE	NATURE OF AMENDMENTS	

Верно. Нех брака Магд. 11.04.86

20-11-32

Rz 40 (✓)

ПРОЦЕДУРА
№ 0862



- 1, NON-INDICATED LIMIT DEVIATIONS OF THE DIMENSIONS: HOLES-BY A7; SHAFTS-BY B7, THE REST-BY CM7.
- 3, MATERIAL SUBSTITUTE IS A STEEL 20x13 TY 14-1-378-72.

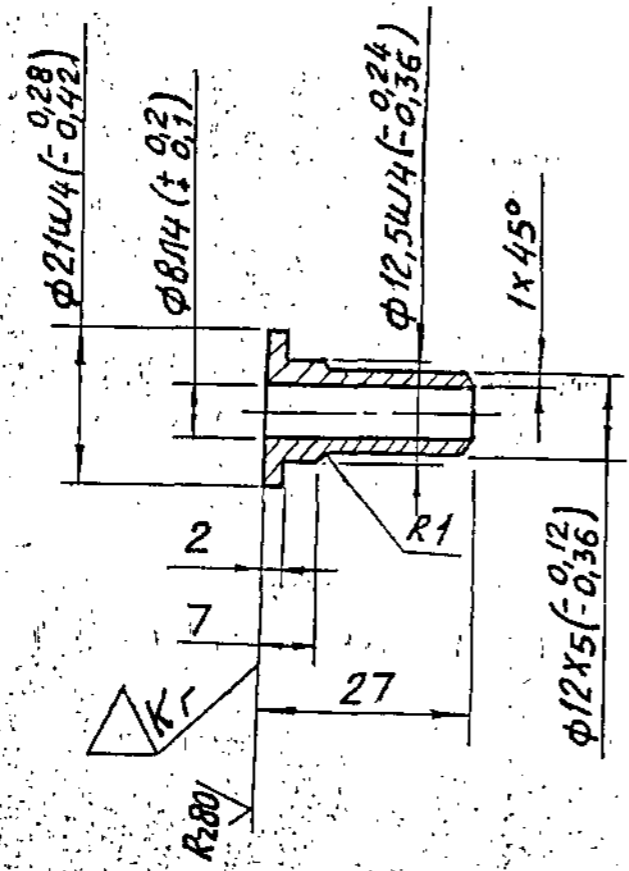
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

УНБ. Непадан. Падн. у дама ВЗДМ УНБ.Н. УНБ. Непадан. Падн. у дама

			EST. MASS 0.032 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 OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE	
ISSUE	DATE	NATURE OF AMENDMENTS	MATERIAL:- 20x13-72 GOST 5632-72	USED ON: CB 20-11-05-32
DRN		SCALE - 1:1	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI	
CHD		DIMENSIONS IN mm.	TITLE:-	ROD
TCD		TOLERANCE ON DIMS UNLESS OTHERWISE STATED	D 5 CAT NUMBER	DRAWING NUMBER
APPO		ALL THREADS CONFORM TO		20-11-32
DATE	12/2/86			

DRAWING NUMBER
20-11-36

24 (✓)



EXPLANATORY NOTE:

MATERIAL QUOTED: 20X13 GOST 5632-72.
20X13 = GRADE OF MATERIAL.

CHEMICAL COMPOSITION %:

CARBON = 0.16 - 0.25
SILICON = 0.8 MAX.
MANGANESE = 0.8 MAX.
CHROMIUM = 12.0 - 14.0
IRON = BASE
SULPHUR = 0.025 MAX.
PHOSPHORUS = 0.030 MAX.

MECHANICAL PROPERTIES (AS PER GOST 5949-75)

INSTANTANEOUS STRENGTH kgf/mm^2 (MIN) = 66.
YIELD POINT kgf/mm^2 (MIN) = 45.
RELATIVE ELONGATION % (MIN) = 16
REDUCTION IN AREA % (MIN) = 55
IMPACT ELASTICITY kgf.m/cm^2 (MIN) = 8
HARDNESS NUMBER HB = 197 - 126.
(DIA OF IMPRESSION 4.3 - 5.3 mm)

- 1 ALTERNATE MATERIAL IS STEEL 30X13 GOST 5632-72.
- 2 UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS: FOR HOLES - AS PER A7, SHAFTS - AS PER B7, OTHERS - AS PER CM7.

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

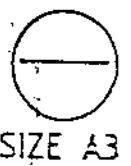
EST. WT. 0.015 KG. TO BE STAMPED OR MARKED WHERE INDICATED THIS $\#$ 1 LETTERS)

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

DRN	G. N. S.	MATERIAL:-	USED ON
CHKD		20x13 GOST 5632-72	CB 20-11-05-2
TCD	G. N. S.	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES) AVADI	
APPD	V. Ramana		
DATE	4-6-91	SCALE:- 1:1	
DIMENSIONS IN mm		TITLE	BUSH
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS:2102-69			
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
ISSUE DATE			20-11-36
NATURE OF AMENDMENTS			

ISSUE II-1308-81

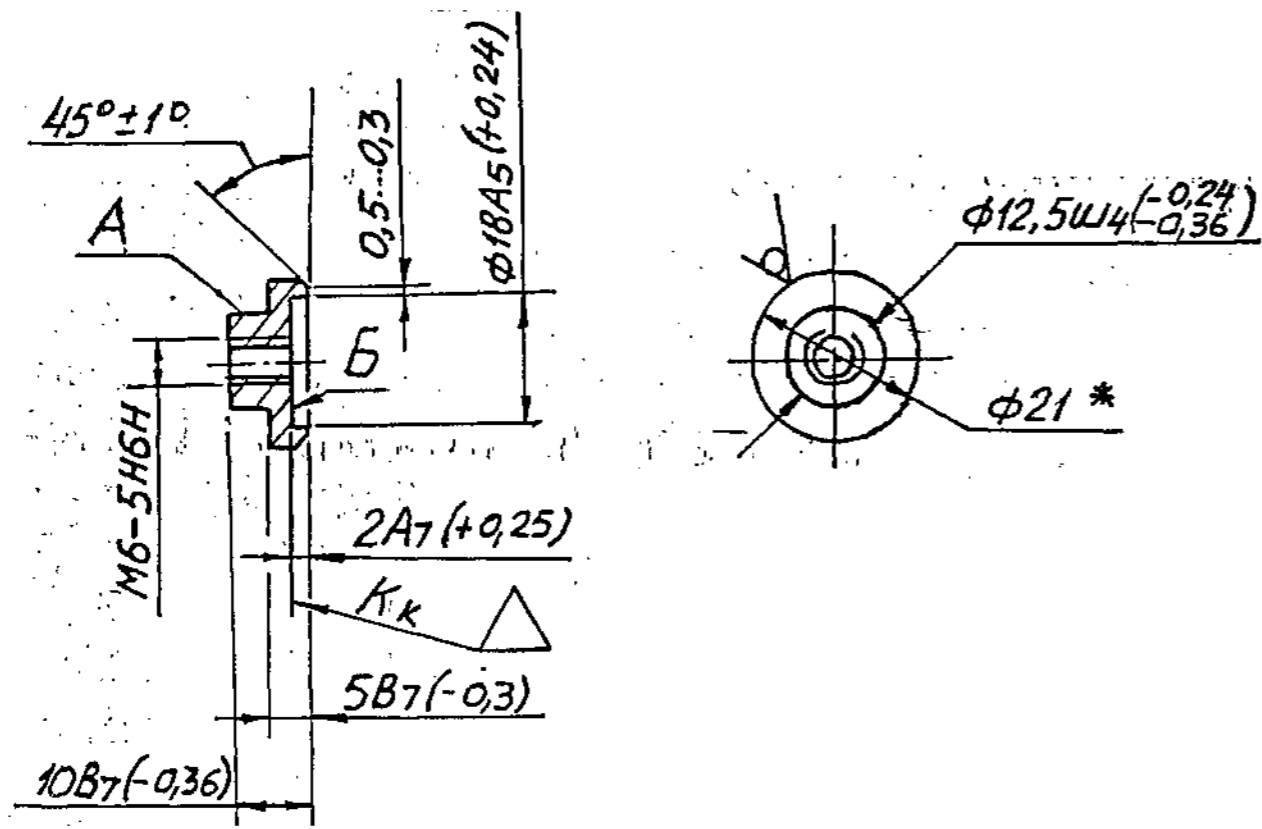
KVD No. 63241



SIZE A3

DRAWING NUMBER
20-11-45

Rz 40/ (✓)



EXPLANATORY NOTE:

MATERIAL QUOTED: - ROUND BAR 21 GOST 2590-71
20X13 GOST 5949-75

21 = DIAMETER, HOT ROLLED STEEL TO GOST 2590-71.
20X13 = GRADE OF STEEL

CHEMICAL COMPOSITION % (AS PER GOST 5632-72)

CARBON = 0.16-0.25 ; SILICON = 0.8 (MAX) ;
MANGANESE = 0.8 (MAX) ; CHROMIUM = 12.00-14.00 ;
IRON = BASE ; PHOSPHORUS = 0.030 (MAX) ;
SULPHUR = 0.025 (MAX).

MECHANICAL PROPERTIES (AS PER GOST 5949-75)

INSTANTANEOUS STRENGTH kgf/mm^2 (MIN) = 66

YIELD POINT kgf/mm^2 (MIN) = 45

RELATIVE ELONGATION % (MIN) = 16

REDUCTION IN AREA % (MIN) = 55

IMPACT ELASTICITY kgf m/cm^2 = 8

HARDNESS HB = 197-126
(DIAMETER OF IMPRESSION 4.3-5.3mm)

1. ALTERNATE MATERIAL IS STEEL 30X13 GOST 5949-75
2. WITH RESPECT TO THREAD AXIS :
MISALIGNMENT OF SURFACE A IS R 0.3 MM
NONSQUARENESS OF SURFACE B IS 0.2MM
3. * DIMENSION IS GIVEN FOR REFERENCE.

KVD NO. 63242

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

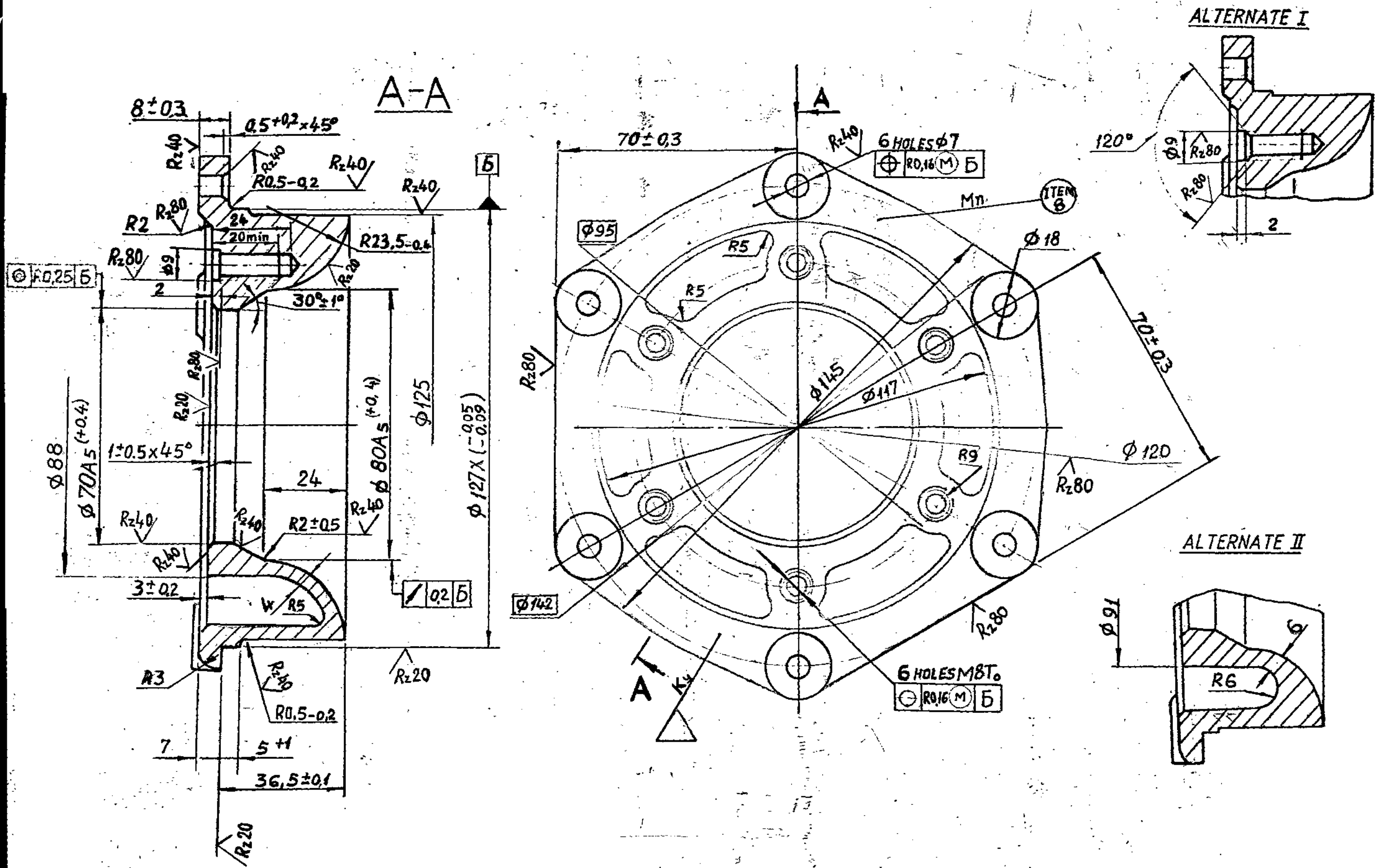
EST. WT. TO BE STAMPED OR MARKED - WHERE INDICATED THIS # (LETTERS)

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

DRN	<i>Ushch</i>	MATERIAL: ROUND BAR	USED ON
CHK	<i>Smirnov</i>	21 GOST 2590-71	CB 20-11-05-2
TED	<i>G. Vasya</i>	20X13 GOST 5949-75	
APPD	<i>V. Romanov</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	28-6-91	AVADI	
SCALE	1:1	TITLE	
DIMENSIONS IN mm		RING	
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS: 2102-69		D S CAT NUMBER	
ALL THREADS TO CONFORM TO		DRAWING NUMBER	
ISSUE DATE		20-11-45	
NATURE OF AMENDMENTS			



SIZE A3



EXPLANATORY NOTE :

9. REFERENCE MATERIAL QUOTED :

ALUMINIUM CASTING TO A19: GOST 2685
 METHOD OF CASTING : PRESSURE DIE CASTING MATERIAL GRADE = A19.

a) CHEMICAL COMPOSITION :

ELEMENTS	A19	A14
ALUMINIUM	BASE	BASE
MAGNESIUM	0.2 - 0.4	0.17 - 0.3
SILICON	6.0 - 8.0	8.0 - 10.5
MANGANESE	N I L	0.2 - 0.5
OTHER IMPURITIES	0.60 MIN	1.0 MIN

b) PHYSICAL PROPERTIES :-

PARTIAL RESISTANCE Kgf/mm ² (max)	17	20
SPECIFIC ELONGATION %	1	1.5
HARDNESS (H B)	50	70

- INSPECTION GROUP III AS PER TECHNICAL REQUIREMENTS TT-11. HB ≥ 80.
- ALTERNATE MATERIAL IS ALLOY A14, GOST 2685-75.
- REQUIREMENTS PLACED UPON ALLOY ARE AS PER TECHNICAL REQUIREMENTS TTA 1 310-5/65 AND STANDARD 82050-15.
- PERFORM PRESSURE TEST OF THE CASTING BEFORE BAKELITE COATING AND AFTER MACHINING WITH WATER AT A PRESSURE OF 0.5 mpa (5kgs/cm²) FOR 2 MINUTES AT A TEMPERATURE OF T=75° TO 85°C. NO LEAKAGE WILL BE TOLERATED.
 REPAIR LEAKAGE CASTINGS WITH BAKELITE COATING AND PERFORM PRESSURE TEST WITH WATER AT A TEMPERATURE OF T=75° TO 85°C AT 0.5 mpa (5kgf/cm²) FOR ONE MINUTE.
- COATING OF UNMACHINED SURFACES IS BAKELITE VARNISH 16C-1, GOST 901-78. V. 4/1-C1.
- UNSPECIFIED LIMIT DEVIATIONS FOR MACHINED DIMENSIONS ARE AS FOLLOWS :-
 FOR HOLES - AS PER A7,
 SHAFTS - AS PER B7,
 OTHERS - AS PER CM 8.
- MAKE THREAD AS PER STANDARD 82020-12, EDITION 7.
- MARK THE GRADE OF MATERIAL AS PER GOST 2171-79, TYPE 110-8 GOST 2930-62.

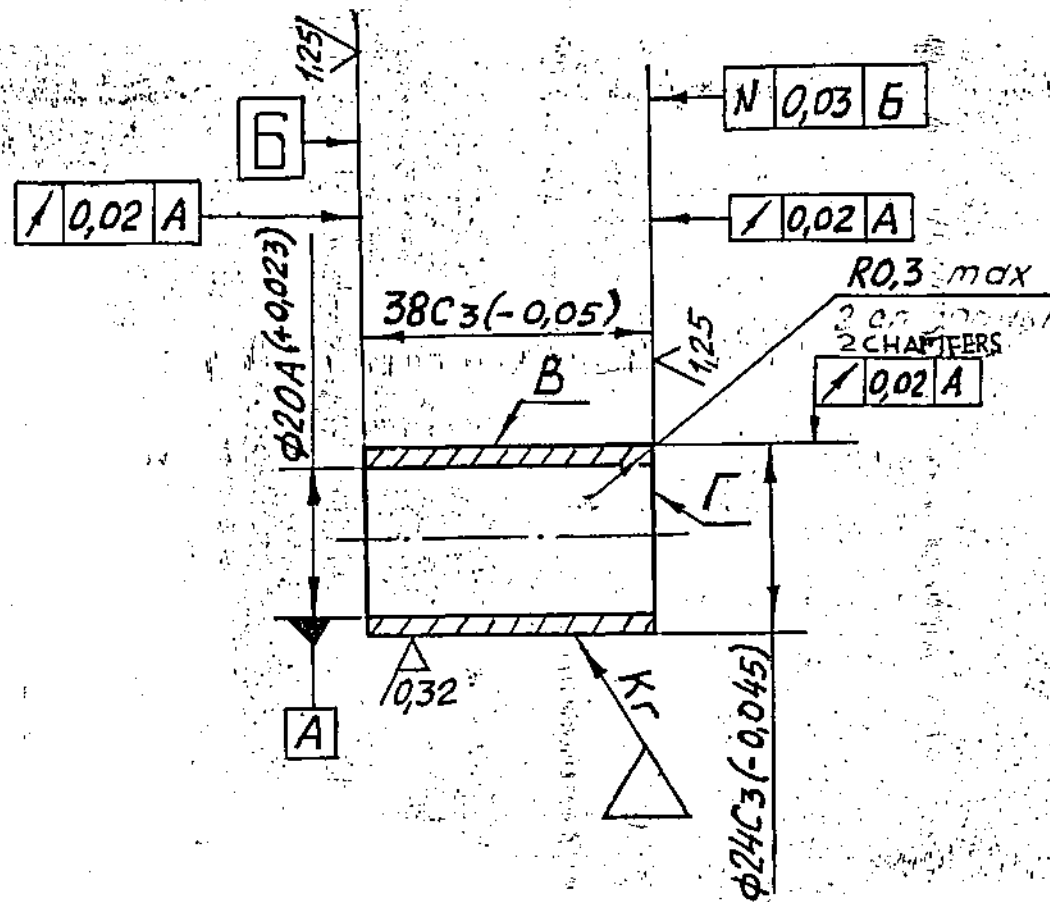
PILOT SAMPLE SHOULD BE APPROVED BY AHS P BEFORE BULK PRODUCTION

EST. MASS 0.570 Kg	TO BE STAMPED OR MARKED WHERE LOCATED THIS LETTERS
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED EDGES TO HAVE A RADIUS OR INSIDE EQUIVALENT CHAMFERS ARE PERMITTED.	
ISSUE DATE	NATURE OF AMENDMENTS
DRW. SCALE: 1:1	MATERIAL: A19 GOST 2685-75
CHD	USEP ON: CG 20-11-16
YED	CONTROLLEDATE OF INSPECTION: (HEAVY VEHICLES) AYAD
APPD	TITLE: PUMP FUNNEL
DATE	D'S CAT NUMBER
	DRAWING NUMBER: 20-11-50-8

DRAWING NUMBER

20-11-69-2

2.5 / (X)



EXPLANATORY NOTE:

MATERIAL QUOTED: 45X GOST 4543-71

45X ± CHROMIUM STEEL GRADE

CHEMICAL COMPOSITION

C = 0.41-0.49 , Si = 0.17 - 0.37, Mn = 0.50 - 0.80,
 Cr = 0.80 - 1.10, P = 0.035 (max), S = 0.035 (max),
 Cu = 0.30 (max), Ni = 0.30 (max).

MECHANICAL PROPERTIES

HARDENING TEMPERATURE °C = 840
 COOLING MEDIUM = OIL
 TEMPERING TEMPERATURE °C = 520
 COOLING MEDIUM = WATER OR OIL
 YIELD POINT Kgf/mm² (min) = 85
 ULTIMATE TENSILE STRENGTH Kgf/mm² (min) = 105
 RELATIVE ELONGATION % = 9 (min)
 RELATIVE REDUCTION ACROSS SECTION % (min) = 45
 IMPACT STRENGTH Kgf/cm² = 5 (min)

1. HRC 33 TO 37.
2. COATING OF SURFACE 'B' IS HARD CHROME PLATED, 24 MICRONS. CHROME PLATING UPTO 0.06mm IN THICKNESS IS ALLOWED. NO TRACES OF CHROME PLATING ARE ALLOWED ON SURFACES 'E' AND 'F'.
3. *SURFACE FINISH AFTER PLATING AND POLISHING.
4. CHECK SURFACE 'B' AND 'F' BY PRUSSIAN BLUE. BEARING PATTERN IS CIRCULAR.

(A) EQUIVALENT MATERIAL STEEL
 709M40 (EN19) TO BS:970/40Cr4Mo3
 IS:1570

KVD No. 63243

EXP. NOTE ADDED ON 16-4-91

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

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

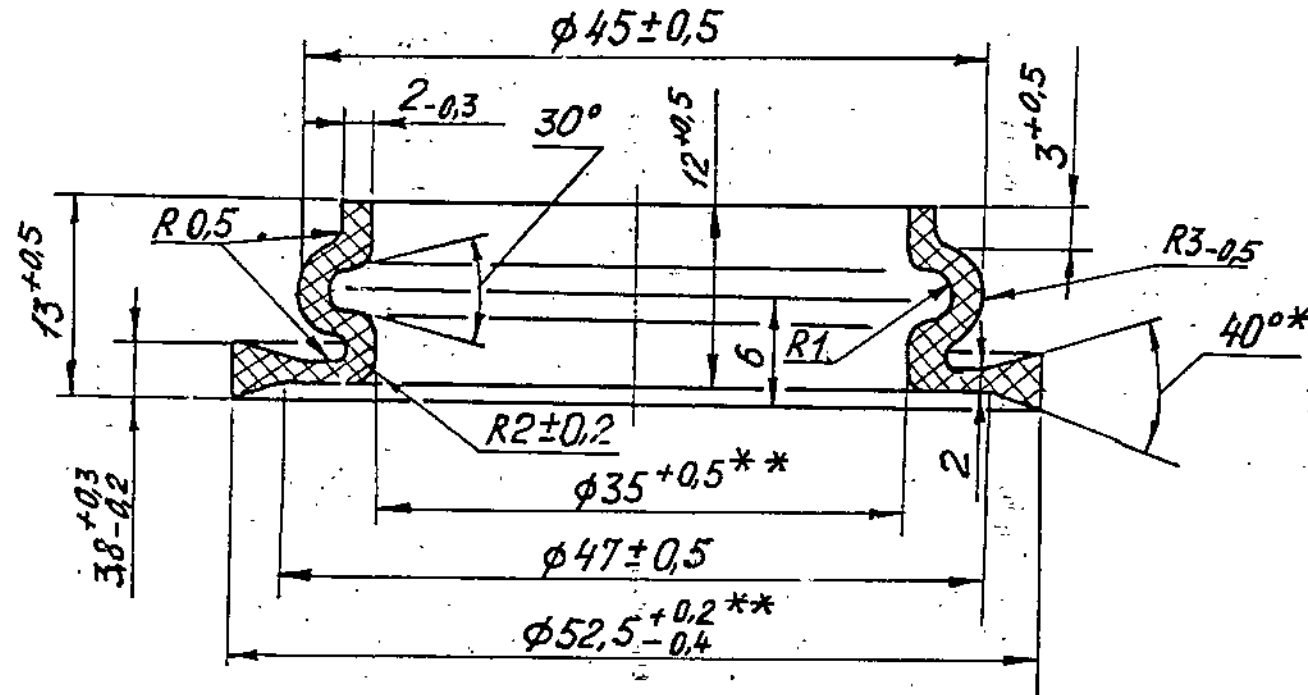
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	<i>[Signature]</i>	MATERIAL:-	USED ON
CHK	<i>[Signature]</i>	45X GOST 4543-71	CS 20-11-01-9
TCD	<i>[Signature]</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHs)	
APPO	v. Rama	AVADI	
DATE	22-4-91	TITLE	
SCALE:-	1:1	BUSH	
DIMENSIONS IN mm		D S CAT NUMBER	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS:2102-69		DRAWING NUMBER	
ALL THREADS TO CONFORM TO		20-11-69-2	
ISSUE DATE	12-8-10	NATURE OF AMENDMENTS	
4 th Alt. Comm. Meeting Minutes		Point No.11 Dt: 26-10-09	



SIZE A3

DRAWING NUMBER
20-11-71-1



EXPLANATORY NOTE:-

MATERIAL QUOTED:

RUBBER 9831 TY 005-216-75

9831 = GRADE OF RUBBER

PARAMETERS:

1. WORKING MEDIUM = WATER, LOW FREEZING LIQUID WITH OIL PENETRATION
2. OPERATING TEMPERATURE = -30 °C TO +150 °C
3. OPERATING PRESSURE = 100 kgf/cm² (MIN)
4. RUPTURE STRENGTH = 100 kgf/cm² (MIN)
5. ELONGATION AT RUPTURE = 300 % (MIN)
6. DENSITY = 1.18 ± 0.05 g/cm³
7. HARDNESS AS PER TNP DEVICE = 55-70

- * DIMENSION IS GIVEN FOR REFERENCE.
2. DIMENSIONS EXCEPT THOSE MARKED BY ** ARE PROVIDED WITH TOOLS.
3. MARK ON TAG.
4. OTHER REQUIREMENTS ARE AS PER TECHNICAL SPECIFICATIONS TY 005 216-75 FOR ARTICLE, CODE 25 3114

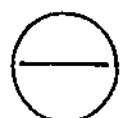
KVD NO: 63244

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

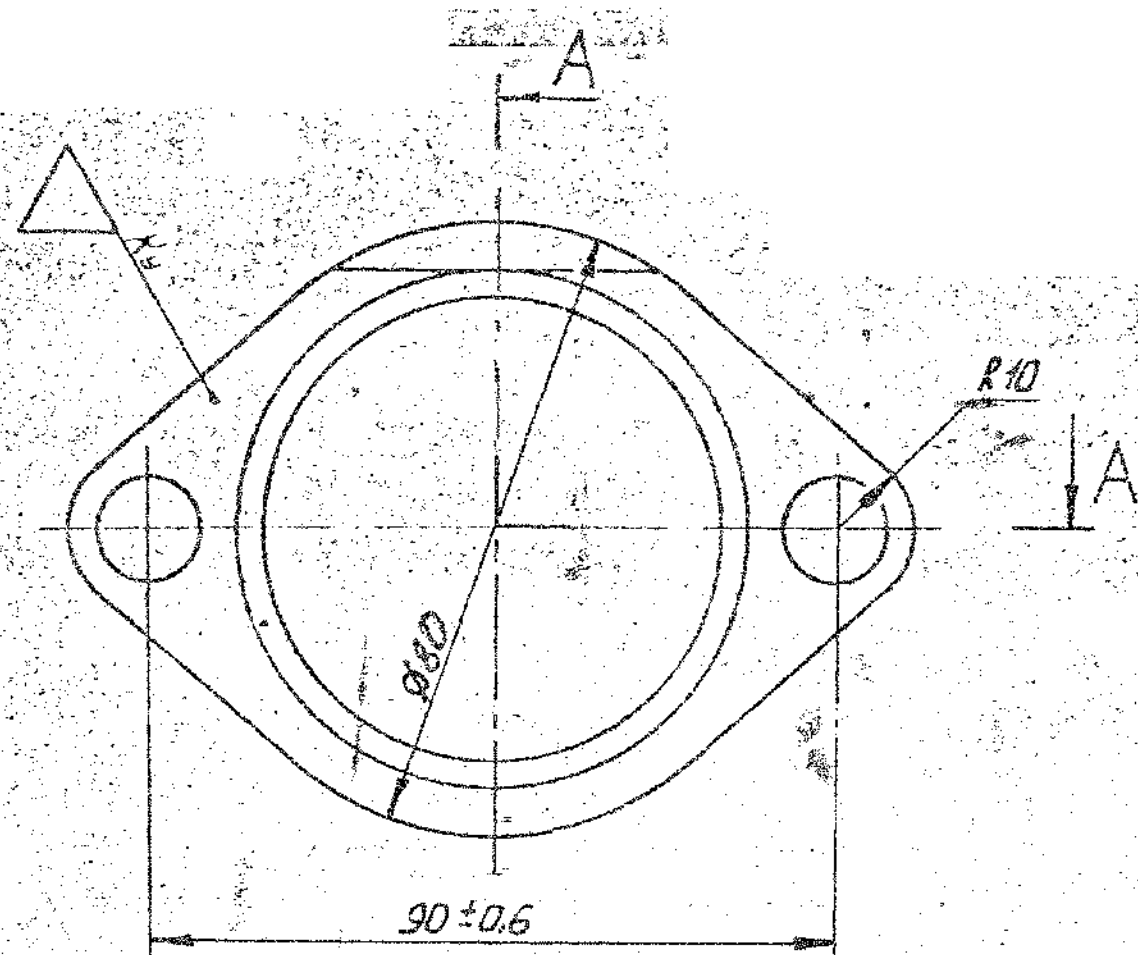
EST. WT. TO BE STAMPED OR MARKED WHERE INDICATED THIS # 1 LETTERS)

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

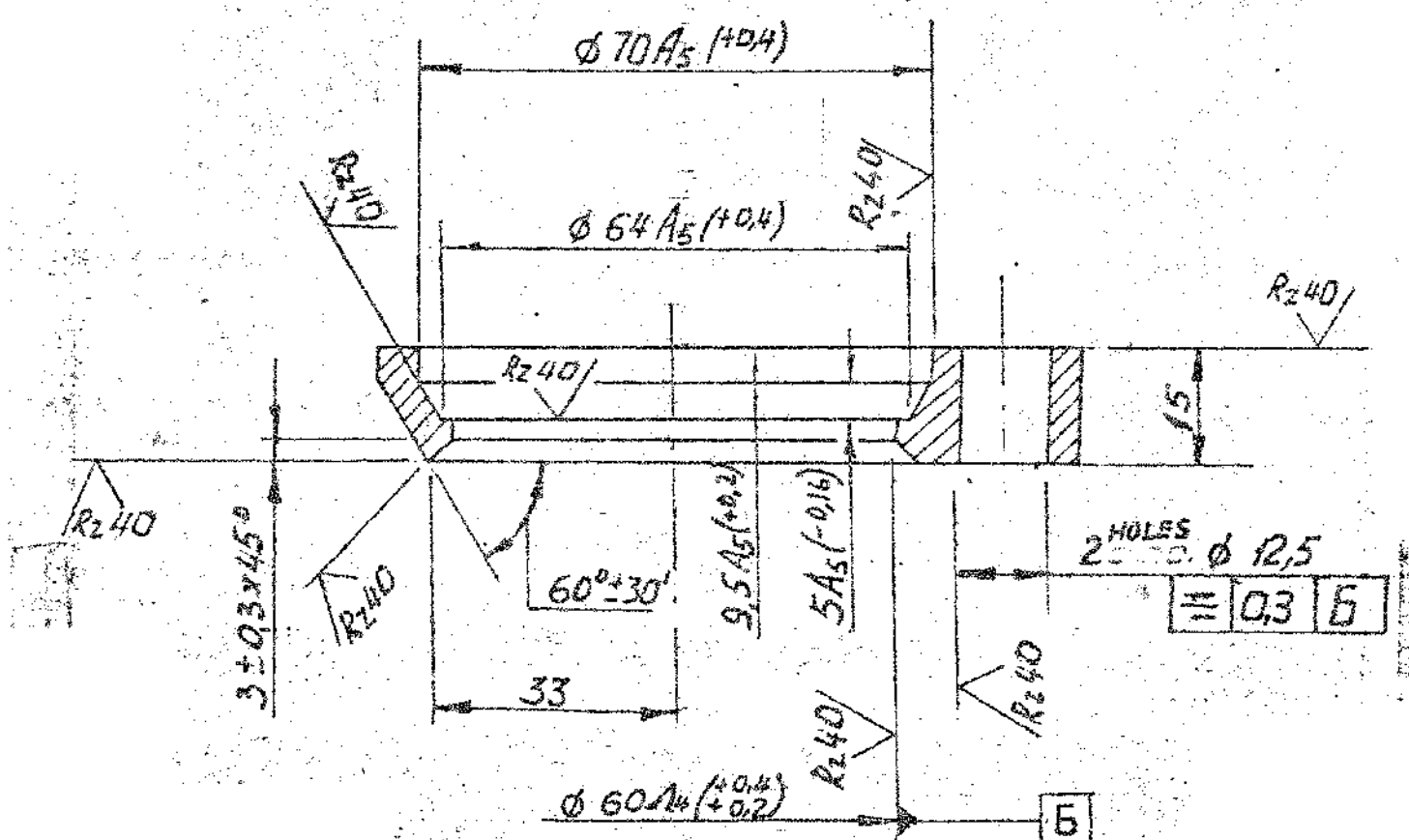
DRN	<i>[Signature]</i>	MATERIAL = RUBBER	USED ON
CHKD	<i>[Signature]</i>	9831 TY005 216-75	CB 20-11-15-1
TCD	<i>[Signature]</i>		
APPD	V. Ramanand	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	26-4-91	AVADI	
SCALE:- 2:1			TITLE
DIMENSIONS IN mm TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69			RING
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
ISSUE DATE			20-11-71-1
NATURE OF AMENDMENTS			



SIZE: A3



A-A



Explanatory Note:-

Material Quoted: AL9 GOST 2685-75

Method of casting: Die casting (Pr)

Chemical composition %

Aluminium	=	Base
(A) Magnesium	=	0.2 - 0.4
Silicon	=	6.0 - 8.0
Admixtures:-		
Iron	=	1.00 (max)
Manganese	=	0.50
Copper	=	0.20
Zinc	=	0.30
Tin	=	0.01
Lead	=	0.05
Berilium	=	0.10
Zirconium	=	0.15
Total	=	2.00

Physical Properties

Partial resistance kgf/mm² (max) = 17

Specific elongation % = 1

Hardness (H B) = 50

1. REQUIREMENTS PLACED UPON CASTING ARE AS PER TECHNICAL REQUIREMENTS TT AL 310-5/65 AND STANDARDS B2050-15.
2. COATING OF UNMACHINED SURFACES IS BAKELITE VARNISH GOST 901-78 V 6/1 - C1
3. UNSPECIFIED LIMIT DEVIATIONS OF MACHINED DIMENSIONS ARE AS FOLLOWS:-

FOR HOLES - AS PER A7
SHAFTS - AS PER B7
OTHERS AS PER CM7

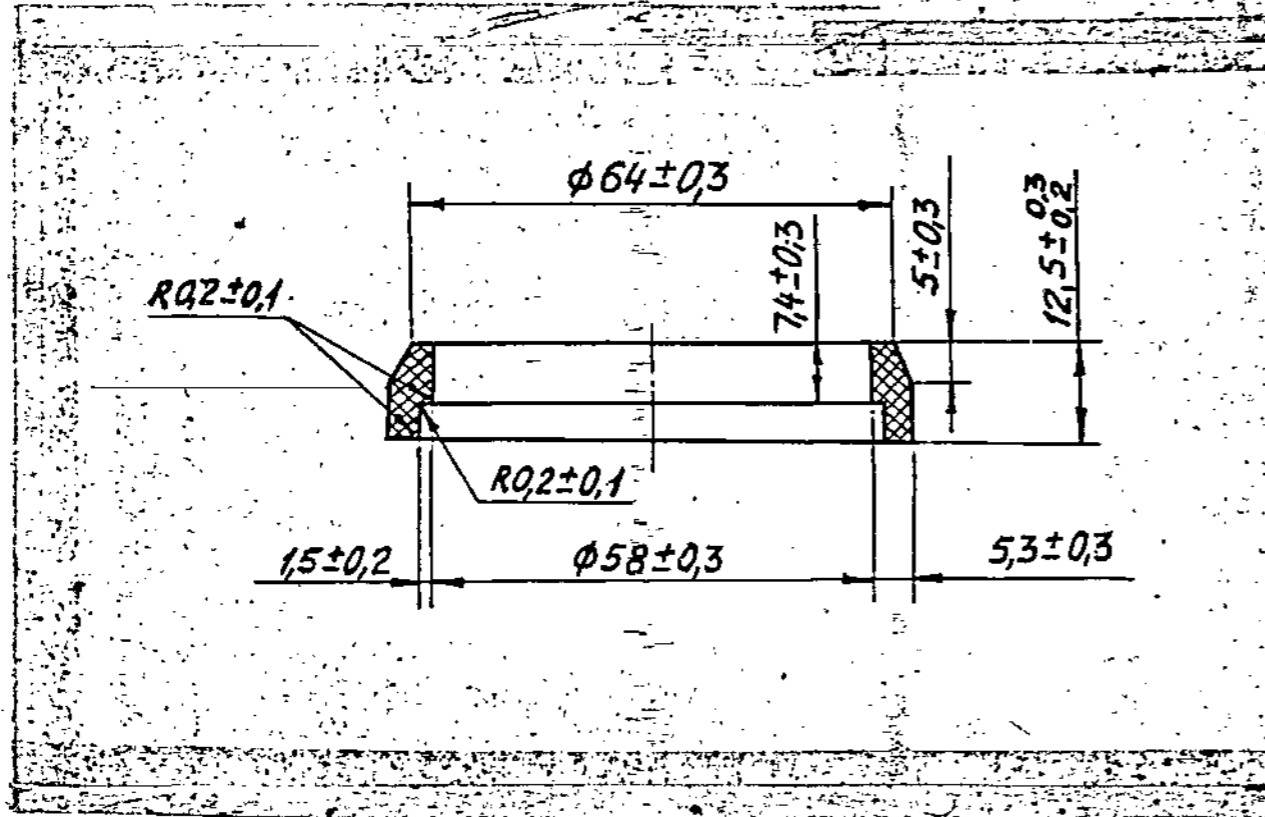
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. 0.082 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 OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

ERN	01/11/73	MATERIAL :-	AL9 GOST 2685-75	USED ON :-	CE 20-11-00-6
CHD					
TD					
APP	V. Raman	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)			
DATE	27-4-91	AVADI			
SCALE	1:1	TITLE			
DIMENSIONS IN mm		FLANGE			
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2102-69		D S CAT NUMBER			
A	12-11-07	110642/IND-III/1116 dt. 31-10-07.	DRAWING NUMBER		20-11-73-4
ISSUE	DATE	NATURE OF AMENDMENTS			

DRAWING NUMBER
20-11-74-2



EXPLANATORY NOTE:-

MATERIAL QUOTED:

RUBBER 9831 TY 005-216-75

9831 = GRADE OF RUBBER

PARAMETERS:

1. WORKING MEDIUM = WATER, LOW-FREEZING LIQUID WITH OIL PENETRATION
2. OPERATING TEMPERATURE = -30°C TO $+150^{\circ}\text{C}$
3. OPERATING PRESSURE = 100 kgf/cm^2 (MIN)
4. RUPTURE STRENGTH = 100 kgf/cm^2 (MIN)
5. ELONGATION AT RUPTURE = 300 % (MIN)
6. DENSITY = $1.18 \pm 0.05 \text{ g/cm}^3$
7. HARDNESS AS PER TYP DEVICE = 55-70

1. PROVIDE ALL DIMENSION WITH TOOLS...
2. MARK THE LABEL.
3. THE REST OF REQUIREMENTS ARE SPECIFIED IN TECHNICAL SPECIFICATIONS TY 005216 - 75, FOR ARTICLES CODE 253114.

KVD No. 63247

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

EST. WT. 0.012 kg. TO BE STAMPED OR MARKED WHERE INDICATED THIS # (LETTERS)

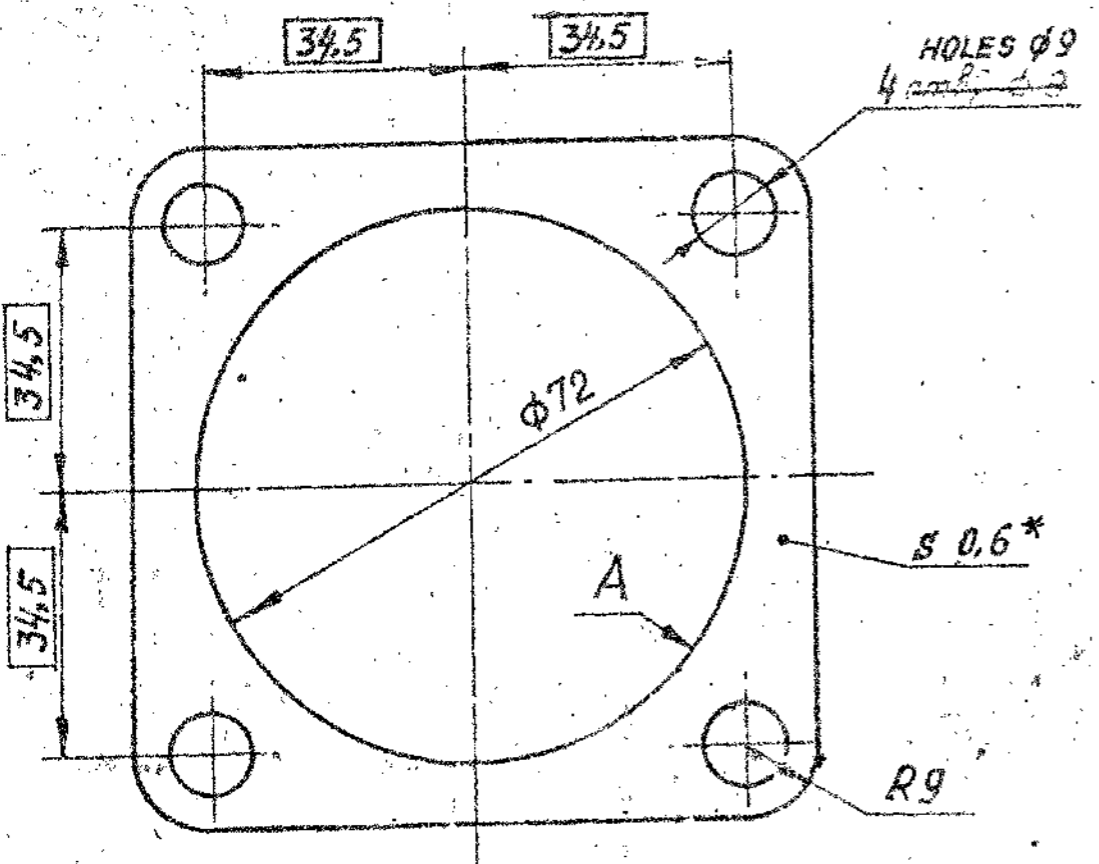
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

DRN	Granger	MATERIAL:- RUBBER	USED ON
CHK	Shankar	9831 TY 005216-75	CB.20-11-00-6
TED	Pranayak		
APPD	V. Ramanao		
DATE	2-5-71	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	
SCALE:-	1:1	AVADI	
DIMENSIONS IN mm		TITLE	RING
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS:2102-69			
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
			20-11-74-2
ISSUE DATE	NATURE OF AMENDMENTS		



SIZE A3

DRAWING NUMBER
20-11-76-2



EXPLANATORY NOTE

MATERIAL QUOTED: PARONITE TME 0.6 GOST 481-80
TME RUBBERIZED ASBESTOS FABRIC GRADE
0.6 = THICKNESS WITH TOLERANCE ±0.10

PHYSICAL, MECHANICAL AND TECHNICAL REQUIREMENTS:

1. WORKING MEDIUM = OIL, FRACTION (DEISEL AUTOMOBILES AVIATION, INDUSTRIAL TURBINES AND TRANSFORMER OILS.
2. LIMITING PRESSURE $\text{Kgf/cm}^2 = 25$
3. LIMITING TEMPERATURE $^{\circ}\text{C} = 150$
4. DENSITY $\text{g/cm}^3 = 1.5 - 2.0$
5. CONVENTIONAL BREAKING POINT TRANSVERSE DIRECTION $\text{Kgf/cm}^2 (\text{MIN}) = 130$
 - (a) AFTER SOAKING IN KEROSENE AT 23°C FOR 12 Hrs = 70
 - (b) AFTER SOAKING IN OIL MS-20 OR MK-22 AT 150°C FOR 12 Hrs. = 100.
6. INCREASE IN WEIGHT IN LIQUID MEDIA % (MAX)
 - (a) IN KEROSENE AT 23°C FOR 12 Hrs. = 10-24
 - (b) IN OILS MS-20 OR MK-22 = 23
7. COMPRESSIBILITY AT 350 Kgf/cm^2 % = 5-16
8. RECOVERY AFTER REMOVAL OF PRESSURE $350 \text{ Kgf/cm}^2 = 35 (\text{MIN})$

NOTE:-

1. REQUIREMENTS, PLACED UPON STAMPING, AS PER STANDARD B2050-16.
2. POSITIONAL TOLERANCE OF AXES OF HOLES R 0.3 mm DATUM LINE - AXIS OF HOLE A.
3. * DIMENSION IS GIVEN FOR REFERENCE.
4. STAMP FINAL ACCEPTANCE ON TAG (PART 540-551) FOR BATCH OF PARTS AND SEAL.

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

EST. WT. 0.004 kg TO BE STAMPED OR MARKED WHERE INDICATED THIS # (LETTERS)

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

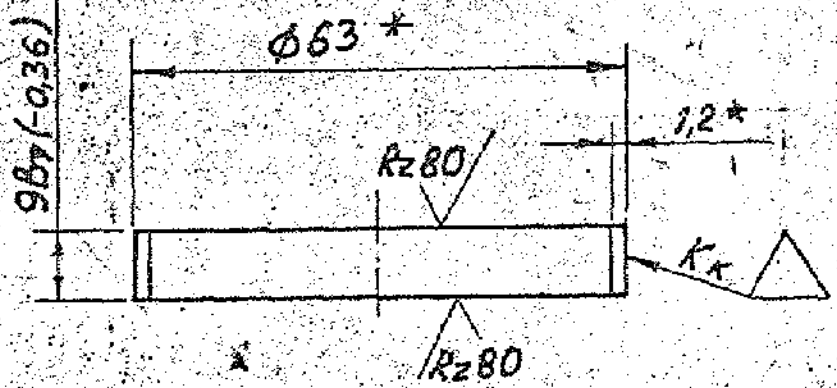
DRN	<i>[Signature]</i>	MATERIAL:- RUBBERISED ASBESTOS FABRIC TME 0.6 GOST 481-80	USED ON	CB 20-11-00-6
CHKD	<i>[Signature]</i>			
TCD	<i>[Signature]</i>			
APPD	<i>[Signature]</i>			
DATE	27-4-91	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLE) AVADI		
SCALE:-	1:1			
DIMENSIONS IN mm				
TOLERANCE ON DIMS				
UNLESS OTHERWISE STATED IS: 2102-69				
ALL THREADS TO CONFORM TO				
ISSUE DATE		D S -CAT NUMBER		DRAWING NUMBER
NATURE OF AMENDMENTS				20-11-76-2



TITLE
GASKET

DRAWING NUMBER
20-11-77-1

Q (✓)



1. ALTERNATE MATERIAL IS STEEL GOST 4543-71 AND 20, 25, 30, 35, 40 GOST 1050-74 WITH DIMENSIONS $\phi 63 \times 5_{-0.2}^{+0.4}$ AND $\phi 60_{-0.2}^{+0.4}$. SURFACE FINISH $R = \checkmark$
2. * DIMENSIONS ARE GIVEN FOR REFERENCE.
3. COATING: CADMIUM, 12 MICRONS, CHROME-PLATED. PRIOR TO COATING, PERFORM SAND BLASTING OR SHOT BLASTING.

EXPLANATORY NOTE:

MATERIAL QUOTED: 63x1.2 GOST 8734-75
520 GOST 8733-74

PIPE SEAMLESS STEEL TUBE COLD & DEFORMED
 Б(В) = GROUP OF MATERIAL 63 = OUTER DIAMETER
 1.2 = WALL THICKNESS; 20 = GRADE OF STEEL TO GOST 1050-74

CHEMICAL COMPOSITION% (AS PER GOST 1050-74)
 CARBON = 0.17-0.24; SILICON = 0.17-0.37;
 MANGANESE = 0.35-0.65
 CHROMIUM = 0.25; PHOSPHORUS = 0.035;
 SULPHUR = 0.040; COPPER = 0.25 } MAX.
 NICKEL = 0.25

MECHANICAL PROPERTIES (AS PER GOST 8733-74)
 YIELD POINT Kgf/mm^2 (MIN) = 25
 ULTIMATE TENSILE STRENGTH Kgf/mm^2 (MIN) = 42
 % ELONGATION (MIN) = 21

KVD NO: 63250

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

EST. WT. 0.020 kg TO BE STAMPED OR MARKED WHERE INDICATED THIS # 1 LETTERS

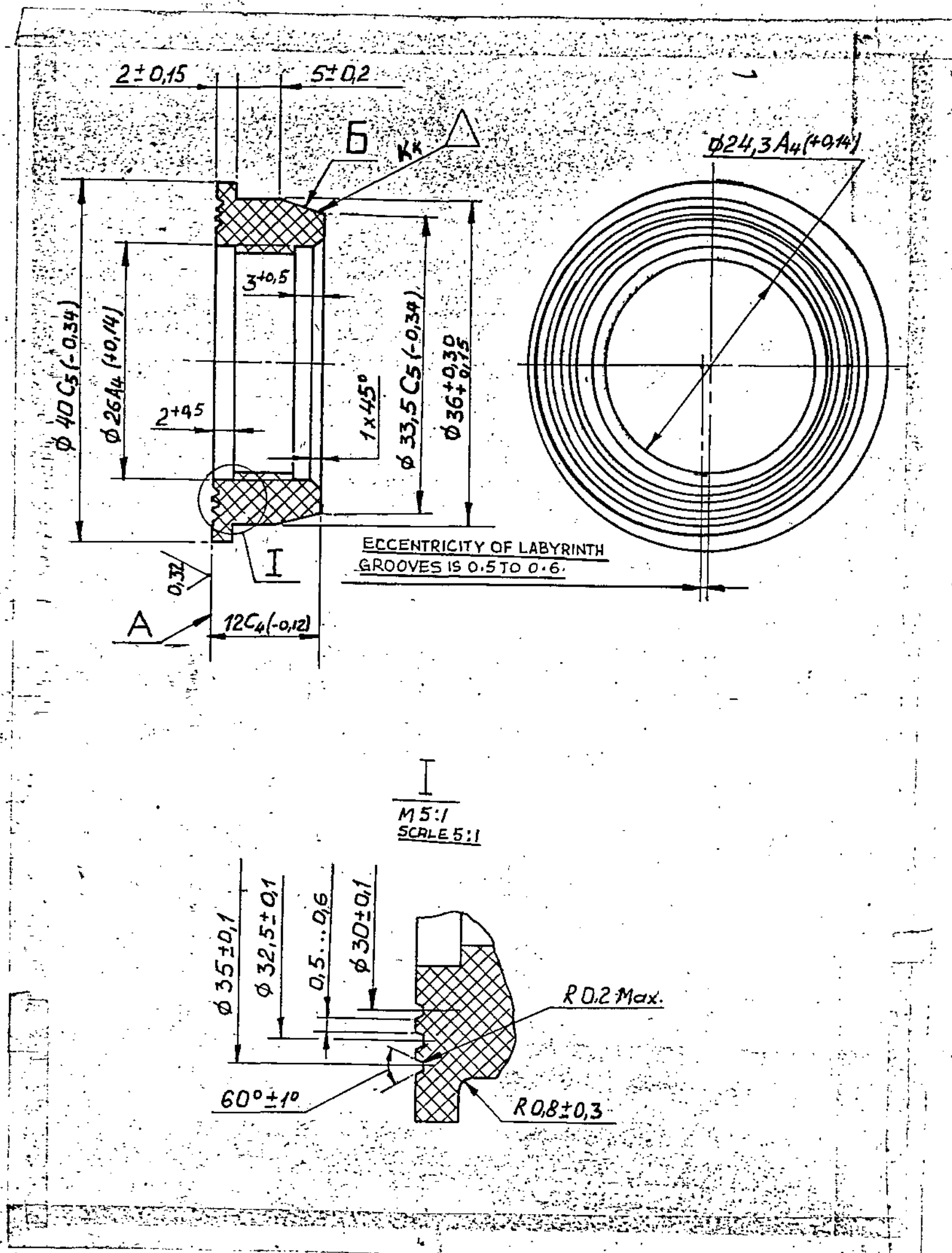
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	U. S. H. L.	MATERIAL:-	USED ON
CHK		63x1.2 GOST 8734-75	CB 20-11-00-6
TCD		520 GOST 8733-74	
APPD	V. ROSE	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	13-4-91	AVADI	
SCALE:-	1:1	TITLE	
DIMENSIONS IN mm		SPACER	
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS: 2102-69		D S. CAT NUMBER	
ALL THREADS TO CONFORM TO		DRAWING NUMBER	
ISSUE DATE	NATURE OF AMENDMENTS	20-11-77-1	

SIZE A3

20-11-78

Rz20 (✓)



**
Anti friction material Aon-
1500-C05 TY 48-20-3-77

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

EST. WT. 0.0145 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 OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

EXPLANATORY NOTE:-

MATERIAL QUOTED:

ANTI-FRICTION MATERIAL AON-1500-C05 TY 48-20-3-77.
CARBON LEAD AND CARBON BABBITT ANTI-FRICTION MATERIAL.
AON-1500-C05 = GRADE OF MATERIAL

OPERATION CONDITIONS:

1. PERMISSIBLE SPECIFIC LOAD kgf/cm^2 (MAX) = 40
2. PERMISSIBLE WORKING SPEED m/sec (MAX) = 15
3. PERMISSIBLE WORKING TEMPERATURE $^{\circ}\text{C}$ (MAX) = 300

PHYSICAL AND MECHANICAL PROPERTIES:

1. DENSITY kg/m^3 (MIN) = 2000
2. % WATER ABSORPTION (MAX) = 0.5
3. COMPRESSION STRENGTH kgf/cm^2 (MIN) = 2000
4. WEAR WITHIN TOLERANCES (MICRONS) = 10-30

GENERAL NOTES:

1. CHECK QUALITY OF MATERIAL OF ANY BATCH, PER SECTIONS 3 AND 4 OF TECHNICAL SPECIFICATIONS TY 48-20-3-77.
2. CARRY OUT MACHINING ON SPECIAL FIXTURES, WITHOUT SUBJECTING ANTI-FRICTION MATERIAL TO BENDING OR STRETCHING.
3. NICKS AND SCRATCHES ARE NOT ALLOWED ON SURFACE A. SURFACE PLATE CHECK SHOULD REVEAL COMPLETE CONTACT, ANNULAR CONTACT SHOULD BE BETWEEN $\phi 40$ AND $\phi 26$. FINISH OF SURFACES A SHOULD COMPLY WITH STANDARD.
4. USE WHITE INTROCELLULOSE ENAMEL TO MARK THE BATCH NUMBER COMPLETELY AND YEAR OF MANUFACTURE BY LAST TWO FIGURES ON SURFACE B.

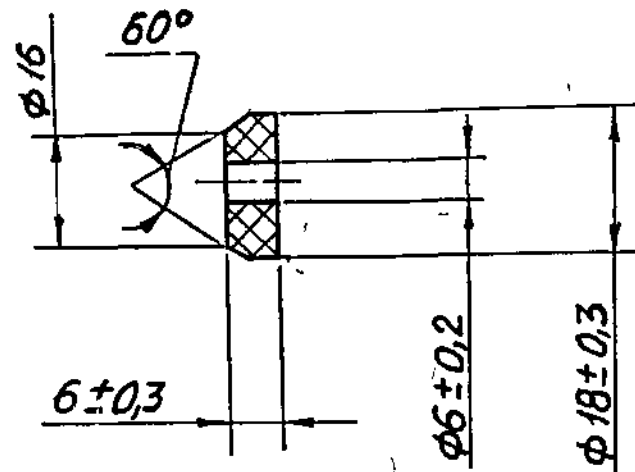
DRM	Grav J.	MATERIAL :-	USED ON :-
CHD	Grav J.	see above **	CB 20-11-15-1
TD	Grav J.		
APPD	V. Romard	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	2-8-91	A V A D I	
SCALE :- 2:1			
DIMENSIONS IN mm			
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2102-69		TITLE SEALING RING	
ALL THREADS TO CONFORM TO		DRAWING NUMBER 20-11-78	
ISSUE	DATE	NATURE OF AMENDMENTS	

AMDT. NO. 22-1308-B1

KVD NO. 63251

SIZE A2

DRAWING NUMBER
20-11-80-2



1. PROVIDE ALL DIMENSIONS WITH TOOLS.
2. MARK THE LABEL.
3. OTHER REQUIREMENTS AS PER TECHNICAL SPECIFICATION TY 005 216-75 FOR ARTICLES, CODE 25 3114.

EXPLANATORY NOTE:-

MATERIAL QUOTED:

RUBBER 9831 TY 005-216-75

9831 = GRADE OF RUBBER

PARAMETERS:

1. WORKING MEDIUM = WATER, LOW FREEZING LIQUID WITH OIL PENETRATION
2. OPERATING TEMPERATURE = -30°C TO $+150^{\circ}\text{C}$
3. OPERATING PRESSURE = 100 kgf/cm^2 (MIN)
4. RUPTURE STRENGTH = 100 kgf/cm^2 (MIN)
5. ELONGATION AT RUPTURE = 300 % (MIN)
6. DENSITY = $1.18 \pm 0.05 \text{ g/cm}^3$
7. HARDNESS AS PER TYP DEVICE = 55-70

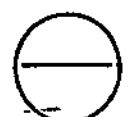
KVD NO. 63252

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

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

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

DRN	<i>Falkenberg</i>	MATERIAL:- RUBBER	USED ON
CHD	<i>Shankar</i>	9831 TY 005 216-75.	CS 20-11-05-2
TCD	<i>Shankar</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
APPO	<i>V. Ramana</i>		
DATE	26-4-91	SCALE:- 1:1	
DIMENSIONS IN mm		TITLE	RING
TOLERANCE ON DIMMS UNLESS OTHERWISE STATED IS 2102-69			
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
ISSUE DATE		20-11-80-2	
NATURE OF AMENDMENTS			

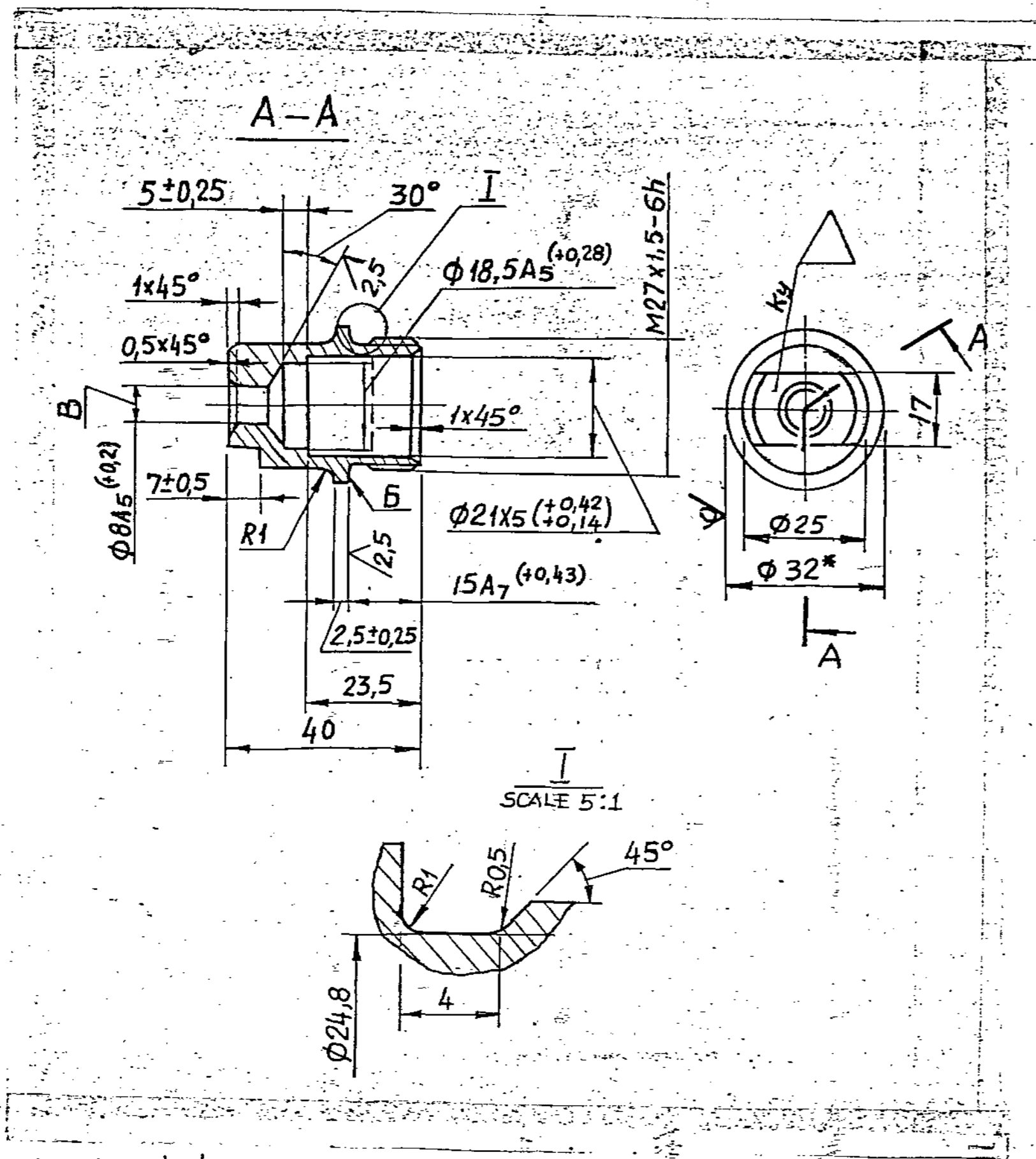


SIZE A3

ISSUE 1-12-82-81

DRAWING NUMBER
20-11-82-1

Rz 40 ✓(✓)



EXPLANATORY NOTE:-

MATERIAL QUOTED:- ROUND BAR: 32 GOST 2590-71
20x13 GOST 5949-75

32 = OUTER DIAMETER AS PER GOST 2590-71
20x13 = GRADE OF STEEL TEMPERING AND ANNEALING.

CHEMICAL COMPOSITION (AS PER GOST 5632-72)
CARBON = 0.16-0.25 ; CHROMIUM = 12.0-14.0 ;
SILICON = 0.8 (MAX) ; MANGANESE = 0.8 (MAX)
SULPHUR = 0.025 (MAX) ; PHOSPHORUS = 0.030 (MAX)

IRON = BASE

MECHANICAL PROPERTIES (AS PER GOST 5949-75)

INSTANTANEOUS STRENGTH kgf/mm^2 (MIN) = 66
YIELD POINT kgf/mm^2 (MIN) = 45
RELATIVE ELONGATION % (MIN) = 16
REDUCTION IN AREA % (MIN) = 55
IMPACT ELASTICITY kgfm/cm^2 = 8 (MIN)
HARDNESS HB = 197-126.

- Alternate material is steel 30x13, GOST 5949-75.
- Unspecified limit deviations of machined dimensions are as follows:-
For holes as per A₇
shafts as per B₇
others as per CM₇
- Non squareness of surfaces B with respect to the axis of thread is 0.1 mm.
- Axial misalignment and intersection of axes of threads & hole B should not exceed R0.2mm over a length of 55 mm (qualified tolerance).
- Dimension is given for reference.

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

EST. WT. 0.070 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.

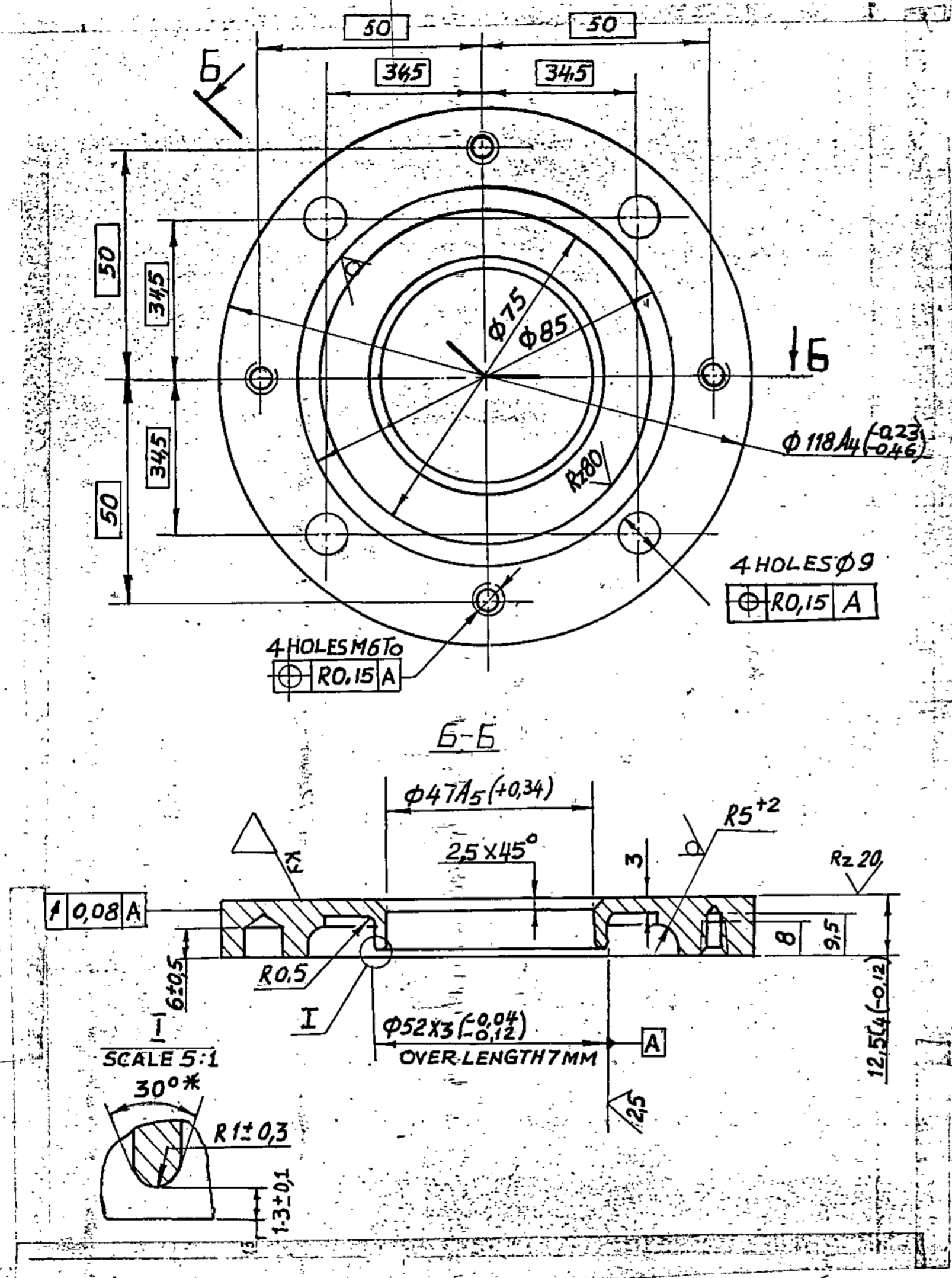
DRN	<i>Prady</i>	MATERIAL :- ROUND BAR	USED ON :-
CHK	<i>Prady</i>	32 GOST 2590-71	CE 20-11-05-2
TCD	<i>Prady</i>	20x13 GOST 5949-75	
APPD	<i>v. Ramana</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	15-5-91	A V A D I	
SCALE	1:1		
DIMENSIONS IN mm		TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2102-89	TITLE
		ALL THREADS TO CONFORM TO	NUT
ISSUE	DATE	NATURE OF AMENDMENTS	DRAWING NUMBER
			20-11-82-1

KVD NO. 65253

SIZE: A2

DRAWING NUMBER
20-11-84

Rz 40/√



EXPLANATORY NOTE :-

MATERIAL QUOTED :- A1 GOST 4784-74

A1 = GROUP OF ALLUMINIUM ALLOY.

CHEMICAL COMPOSITION %:

BASIC CONSTITUENT = ALUMINIUM

COPPER = 3.8 - 4.8

MAGNESIUM = 0.4 - 0.8

MANGANESE = 0.4 - 0.8

IMPURITIES (MAXIMUM)

IRON = 0.7

SILICON = 0.7

NICKEL = 0.1

ZINC = 0.3

TITANIUM = 0.1

OTHER IMPURITIES EACH INDIVIDUALLY = 0.05

TOTAL OF OTHER IMPURITIES = 0.1

1. REQUIREMENTS PLACED UPON STAMPING AS PER TECHNICAL REQUIREMENTS TT.20-10 AND 7505-74 ACCURACY GROUP II
2. UNSPECIFIED LIMIT DEVIATIONS OF MACHINED SURFACE DIMENSIONS ARE AS FOLLOWS: FOR HOLES AS PER A7; SHAFTS AS PER B7; OTHERS AS PER CM7.
3. THREADING IS PERFORMED AS PER STANDARD 82020-12 ISSUE 7.
4. * DIMENSION IS PROVIDED WITH TOOL.

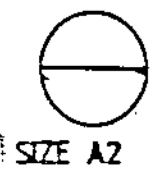
KVD.NO. 63254

ISSUE 28-1308-81

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

EST. WT. 0.210 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 OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	DRN	MATERIAL :-	USED ON :-
CHD	CHD	A1 GOST 4784-74	CB 20-11-04-3
TCO	TCO	CONTROLLER OF QUALITY ASSURANCE (HEAVY VEHICLES)	A V A D I
APPO	APPO	SCALE :- 1:1	TITLE
DATE	DATE	DIMENSIONS IN mm	FLANGE
		TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2102-69	
		ALL THREADS TO CONFORM TO	D S CAT NUMBER
ISSUE	DATE	NATURE OF AMENDMENTS	DRAWING NUMBER
			20-11-84



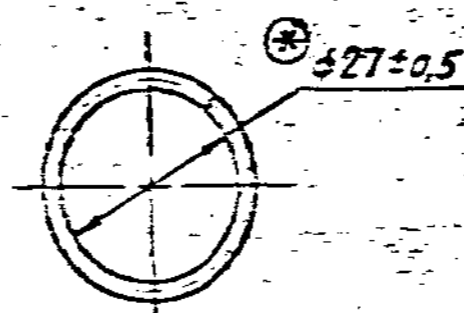
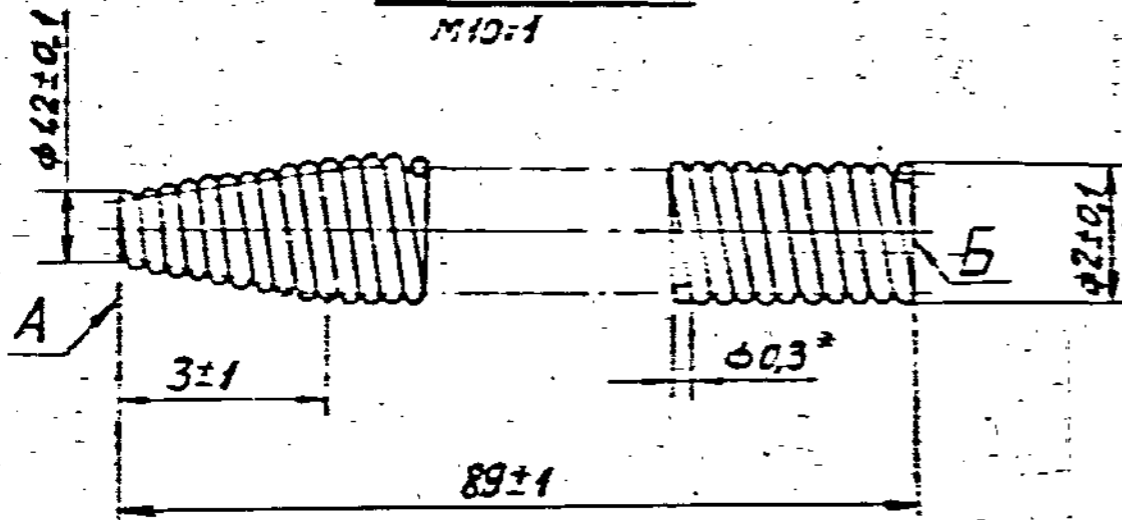
SIZE A2

DRAWING NUMBER

20-12-83

DEVELOPMENT

M10:1



EXPLANATORY NOTE :-

MATERIAL QUOTED : I 0.3 GOST 9389-75
70 GOST 1050-74

I = CATEGORY, 0.3 DIA OF THE WIRE AS PER GOST 9389-75

70 = GRADE OF STEEL

CHEMICAL COMPOSITION : (AS PER GOST 1050-74) %

C = 0.67 - 0.75, Si = 0.17 - 0.37, Mn = 0.50 - 0.80

Cr = 0.25
P = 0.035
S = 0.040
Ni = 0.25
Cu = 0.25

} MAXIMUM

MECHANICAL PROPERTIES : (AS PER GOST 9389-75)

TENSILE STRENGTH = 230 - 275

No: OF TWISTS = 23 (min)

- 1 TOTAL LENGTH OF WIRE IS APPROXIMATELY 1390mm
- 2 WINDING SHOULD BE TIGHT. CLEARANCES BETWEEN TURNS ARE NOT ALLOWED.
- 3 SPRING WINDING SHOULD BE WOUND IN THE RIGHT-HAND DIRECTION.
- 4 CHANGE FROM $\phi 12 \pm 0.1$ TO $\phi 2 \pm 0.1$ IS TAPER.
- 5 TO ASSEMBLE THE RING, DIAMETER 27 ± 0.5 ; TURN THE END OF SPRING 'A' INTO END 'B' TO OBTAIN TIGHT CONNECTION, TURN AT LEAST THREE TURNS.
- 6 SPRING COILED INTO A RING SHOULD LAY FLAT. A GAP OF NOT MORE THAN 2mm IS ALLOWED. CHECK THE LOCK STRENGTH BY FITTING THE SPRING ONTO MANDREL $\phi 35$ mm.
- 7 * DIMENSION IS GIVEN FOR REFERENCE
- 8 COATING :- CHEMICALLY OXIDIZED, OILED

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

EST WT. 0.0034 Kg TO BE STAMPED OR MARKED WHERE INDICATED THIS \equiv (LETTERS)

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

DRN	<i>[Signature]</i>	MATERIAL	USED ON
ENG	<i>[Signature]</i>	I-0.3 GOST 9389-75	CS 20-12-87-2
TED	<i>[Signature]</i>	70 GOST 1050-74	
APPD	<i>[Signature]</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	21-7-87	AVADI	
SCALE	1:1		
DIMENSIONS IN mm		TITLE	SPRING
TOLERANCE ON DIMNS. UNLESS OTHERWISE STATED IS: 2112-69			
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
ISSUE DATE			20-12-83
NATURE OF AMENDMENTS			



SIZE A3