

Format	Формат	Зона	Поз.	Item	Code Обозначение	Nomenclature Наименование	Qty.	Кол.	Примечание
						Documentation Документация			
						Assembly drawings Сборочный чертеж			*1A2x6
						Assembly units Сборочные единицы			
A4			1	сб.3342-81-1	Oil extractor	Маслоотделитель		1	
A4			2	сб.3342-185-2	Flange	Фланец		1	
A4			3	сб.3342-222-2	Clamp	Хомут		1	
A4			4	сб.3342-295-2	Pipe	Труба		1	
B			5	сб.402-93-1	Discharge pump	Насос откачивающий		1	ITEM DELETED
A4			6	сб.3321-05-3	Clamp	Хомут	Ⓐ 2	✗	
A4			7	SB 421-18-2	Clamp	Хомут		2	Ⓐ
A4			8	SB 3321-05-4	Clamp	Хомут		2	Ⓐ
						Детали Parts			
A4			10	3342-27-2	Plate	Планка		1	
A4			11	3342-28	Clamp	Хомут		1	
*1			12	3342-47-6	Pipe	Труба		1	*1A0x2
*1			13	3342-47-7	Pipe	Труба		1	*1A2x3
*1			14	3342-49-2	Pipe	Труба		1	*1A2x3
A4			15	3342-235	Shaft	Валик	Ⓐ10	✗	ТИ
A4			16	3342-251	Hose	Шланг	Ⓐ4	✗	ТИ
A4			18	3342-252-3	Hose	Шланг		1	ТИ
A4			19	3342-253	Hose	Шланг		2	ТИ
A4			20	3342-254	Ring	Кольцо		1	

Подп. и дата
Взам. инв. №
Инв. № дубл.
Взам. инв. №
Инв. № дубл.
Подп. и дата
Инд. № подл.
44374

B GM SANCTION LTR
EFA/PI/P&P/118 DT. 16.12.2013

INSTALLATION OF BREATHING SYSTEM
WITHOUT SCAVENGE PUMP

A 06-06 Dt-23-09-0

сб.3342-00-21A

Trans. & Ckd by:
M/s SWYAZ
Authenticated by:
Approved by:
Engine Factory, Avadi

Установка системы
суфлирования

Letter Sheet Sheets
Лист Лист Листов
0, 1 4
F 6

DRN	ENGINE FACTORY, AVADI		
CHD	TITLE:		
TCD	INSTALLATION OF BREATHING SYSTEM WITHOUT SCAVENGE PUMP		
APPD	D/S CAT NUMBER	ITEM LIST FOR	
DATE	SHT. No. ___ OF ___	CB 3342-00-21 A CB	

Formal	Формат	Зона	Поз.	Item	Code Обозначение	Nomenclature Наименование	Qty.	Кол.	Примечание
A4	Zone	21		3342-256	Hose	Шланг		3	ТИ
A4		22		3321-216 (A)	HOLDER			2	
		23		3321-215 (A)	HOLDER			2	
A4		24		3342-279	Pipe	Труба		1	
A4		25		3342-298	Hose	Шланг		1	ТИ
		26		420-198 (A)	HOLDER			4	
		27		3321-213 (A)	HOLDER			2	
A4		28		301-97-1	Gasket	Прокладка		1	
A4		29		3320-140	Clamp	Хомут		1	
A4		30		420-149-2	Gasket	Прокладка		3	
A4		31		420-149-3	Gasket	Прокладка		1	
A4		32		420-149-5	Gasket	Прокладка		2	
A3		33		3320-386	Plate	Планка		1	
A3		34		3335-77-3	Clamp	Хомут		3	
		35		3321-214 (A)	HOLDER			2	

Подп. и дата	(A)	54	37		Strap	Лента 10-М-3-0,5x10 ГОСТ	2	L=475 мм	
		54	38		Strap	Лента 10-М-3-0,5x10 ГОСТ	6	L=225 мм	Ц9хр.п
		54	39		Strap	Лента 10-М-3-0,5x10 ГОСТ	4	L=300 мм	Ц9хр.п
Взам. инв. №	A4	40		700-41-3442-01	Frame	Рамка	(A)10	12	
	A4	41		351-02	Nut	Гайка М8		2	ТИ
	A4	42		351-13	Nut	Гайка М5	(A)2	2	ТИ
	A4	43		351-50	Nut	Гайка М10		2	ТИ
Подп. и дата	A4	44		351-67	Nut	Гайка М8	(A)3	2	ТИ
	A4	45		3342-304 (A)	RING	(ALTERNATE)		1	
	A4	(A)	47	353-04-1	Finished washer	Шайба чистая 6		1	ТИ
Инв. № подл.	A4	48		353-21	Locking washer	Шайба стопорная 9		1	ТИ
	A4	49		356-22-2	Screw	Винт М5x12		2	ТИ Sheet

Trans. & Ckd. by: M/S SWYAZ
 Authenticated by: A 06-06 Dt. 23-09-08
 Approved by: _____
 Engine Factory, Avadi

сд. 3342-00-21 F 6/2 2

DRN	(B) GM SANCTION LTR
CHD	EFA/PI/P&P/118 ENGINE FACTORY, AVADI
TCD	TITLE: DT. 16.12.2013
APPD	INSTALLATION OF BREATHING SYSTEM WITHOUT SCAVENGE PUMP
DATE	SHEET No. _____ OF _____
	D'S CAT NUMBER: _____
	ITEM LIST FOR: CE 3342-00-21 A CE

Format	Формат	Зона	Поз.	Item	Code Обозначение	Nomenclature Наименование	Qty.	Кол.	Remarks Примечание
A4	Zone	50		356-22-5	Ⓐ	Screw	Винт М5х16	1	ТИ
A4	Zone	51		356-138		Bolt	Болт М8х20	Ⓐ 2	* ТИ
Standard articles Стандартные изделия									
A3		52		353-93-1		Washer	Шайба 5Т65Г ГОСТ 6402-70	2 Ⓐ	ТИ
A3		53		353-24		Washer	Шайба 8Т65Г ГОСТ 6402-70	* 5 Ⓐ	ТИ
A3		54		353-26		Washer	Шайба 10Т65Г ГОСТ 6402-70	2	ТИ

№ подл. Подп. и дата
 Взам. инв. № Инв. № дубл.
 Подп. и дата

(B) GM SANCTION LTR
 EFA/P/P&P/118 DT. 16.12.2013
 A Notification No. 2003-26

Trans. & Ckd. by: M/S SWYAZ
 Authenticated by:
 Approved by:
 Engine Factory, Avadi

Подп. Дата

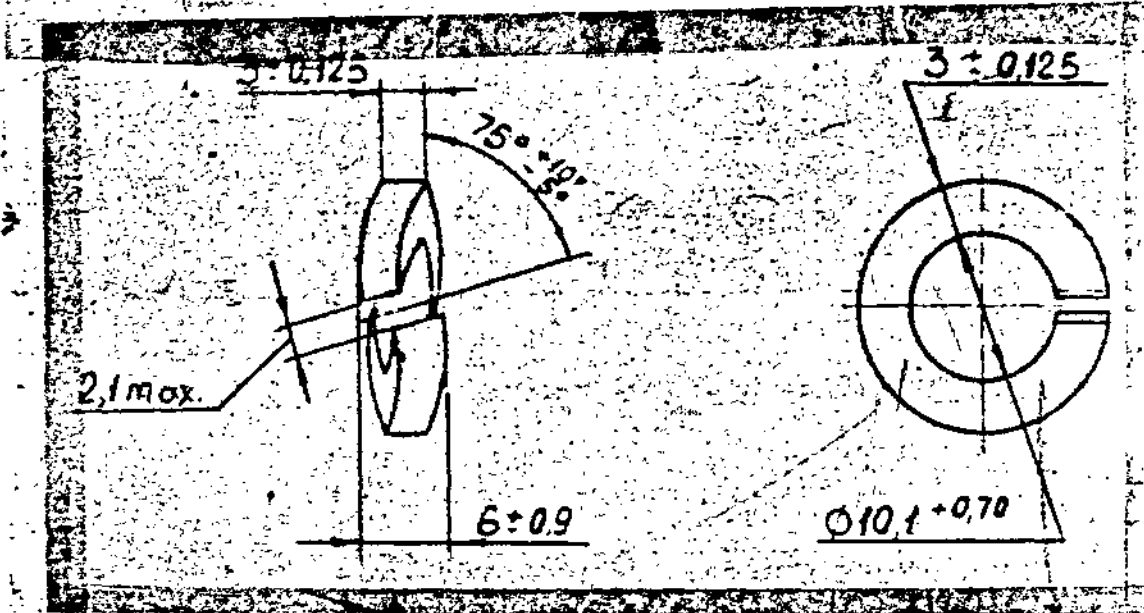
СД.3342-00-21

F 6
 3

Sheet 3

DRN	ENGINE FACTORY, AVADI TITLE: INSTALLATION OF BREATHING SYSTEM WITHOUT SCAVENGE PUMP		
CHD			
TOD			
APPD			
DATE	SHE. No. _____ OF _____	ID S CAT NUMBER	ITEM LIST FOR CE 3342-00-21 A CE

DRAWING NUMBER
353-26



1. Washer 10 TO 65Г 06 GOST 6402-70
may be used.

EXPLANATORY NOTE:

Material Quoted: 65Г 06 GOST 6402-70

Alternate material quoted: washer 10 TO 65Г 06 GOST 6402-70

65Г : Spring (lock) washers (Heavy washer) manufactured from
Steel grade of 65Г to GOST 1050-74.

06 : Parkerising followed by oiling

washer 10: oxy-anodizing followed by chromate passivation.

Chemical Composition: as per GOST 1050-74

C	Si	Mn.	Cr	S	P	Cu	Ni
			MAXIMUM				
0.62-0.70	0.17-0.37	0.70-1.00	0.25	0.040	0.035	0.25	0.25

(i) General Properties: as per GOST 6402-70.

1. Theoretical weight of 1000 washers in kg \approx 2.914

2. Estimated resilience of washers from steel of
grade 65 G in kg \approx } = 87.0

(ii) Mechanical Properties: for 65Г, as per GOST 1050-74

1. yield point kgf/mm² (min) = 44

2. ultimate tensile strength kgf/mm² (min) = 75

3. Elongation % (min) = 9

4. Hardness BHN (max) = 229

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

EST. WT. 1000 PIECES 2.914 kg
TO BE STAMPED OR MARKED WHERE INDICATED THUS # 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>Subraha</i>	MATERIAL:-	USED ON C53338-00-16
CHD	<i>see above</i>	65Г.06 GOST 6402-70	CE 20-09-01-6
TCD	<i>see above</i>		
APPD	<i>S.E.</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
DATE	20-4-89	AVADI	
SCALE:-	2:1	TITLE	
DIMENSIONS IN mm		WASHER 10T	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		D S CAT NUMBER	
ALL THREADS TO CONFORM TO		DRAWING NUMBER	
ISSUE DATE		353-26	
NATURE OF AMENDMENTS			

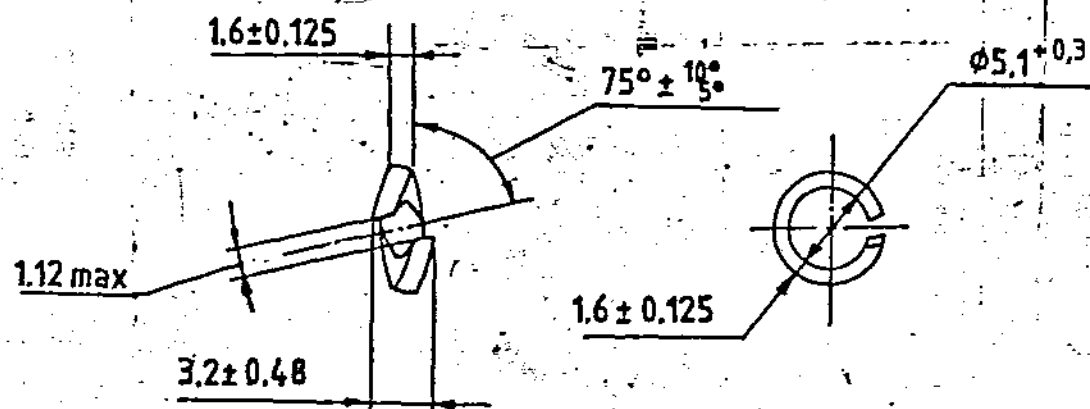
KVD No. 78687
(V-46)

KVD No. 63634
(UTD)

SIZE A3

KVD.No. 78696

DRAWING NUMBER
353-93-1



1. IN TROPICAL MANUFACTURE, COATING Cd 9 Cr AS PER UCL-104 WITH REMOVAL OF HYDROGEN EMBRITTLEMENT.
2. WASHER ST65Γ09 GOST 6402-70 MAY BE USED, IN VISUAL AND TROPICAL MANUFACTURE.

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

		EST. WT. ¹⁰⁰⁰ / _{Pcs} 0.424 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THUS $\frac{\oplus}{\ominus}$ (LETTERS)
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.			
A	16.8.10	1 st Alt. Comm. Meeting Minutes Point No.12 Dt: 26-10-09	MATERIAL:- ST 65 Γ 06 GOST 6402-70
ISSUE DATE		NATURE OF AMENDMENTS	USED ON Cb 311-10-4 Cb 311-10-4
DRN	<i>Ughle</i>	SCALE:- 2 : 1 DIMENSIONS IN mm	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.
CHOC	<i>S. S. S.</i>	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS 2102 -69	TITLE WASHER
APPO	<i>S. S. S.</i>	ALL THREADS CONFORM TO	D S CAT NUMBER
DATE	<i>28.5.01</i>		DRAWING NUMBER 353-93-1
SIZE A4			

EXPLANATORY NOTE:

MATERIAL QUOTED: WASHER 5T, 65Γ, 06 GOST 6402-70.

CORRESPONDS DESIGN AND DIMENSIONS OF SPRING (LOCK) WASHERS.

06 = CONVENTIONAL SYMBOL OF FINISH. (PARKERISING FOLLOWED

5 = NOMINAL THREAD DIA OF BOLT OR SCREW BY OILING).

T = HEAVY ; 65Γ = GRADE OF STEEL AS PER GOST 1050-74.
(65G)

CHEMICAL COMPOSITION: AS PER GOST 1050-74.

CONTENT OF ELEMENTS %							
C	Si	Mn	Cr	S	P	Cu	Ni
MAXIMUM							
0.62-0.70	0.17-0.37	0.90-1.20	0.25	0.040	0.035	0.25	0.25

WEIGHT OF STEEL WASHERS AND THEIR RESILIENCE PROPERTIES AS PER GOST 6402-70.

THEORITICAL WEIGHT OF 1000 STEEL WASHERS IN kg = 0.424.

ESTIMATED RESILIENCE OF WASHERS FROM STEEL GRADE 65G = 28.7.
IN kg

MECHANICAL PROPERTIES: AS PER GRADE 65G GOST 1050-74.

YIELD POINT kgf/mm² (MIN) = 44

ULTIMATE TENSILE STRENGTH (MIN) = 75
kgf/mm².

ELONGATION % (MIN) = 9

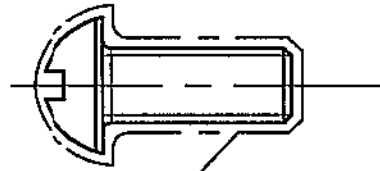
REFERENCE NOTE: 09 = ZINC PLATING (CONVENTIONAL SYMBOLOF FINISH)

Ⓐ EQUIVALENT MATERIAL
75 C6 TO IS: 2507/EN 42 J BS: 970

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 7

F-4
226
253

DRAWING NUMBER
356-22-2



Coating : Zinc-6 microns, chromium-1micron as per
ИЛ-749-88 by removing hydrogen embrittlement.

1. In tropical construction, plating cadmium-9microns, chromium-1 micron as per ИЛ-569-84 with removal of hydrogen embrittlement.
2. Blank should match with requirement Gost 1759.0-87 for class of accuracy B.

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

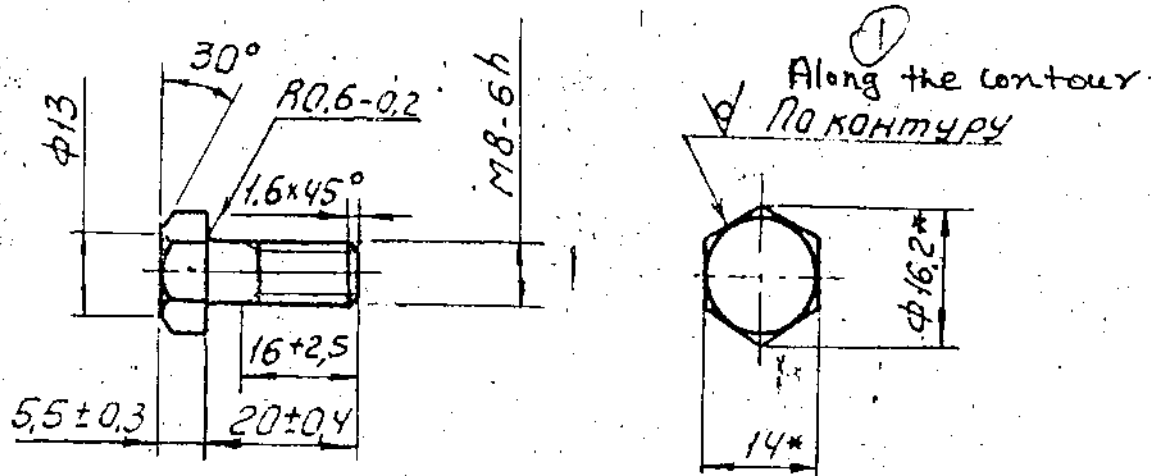
		EST. WT. (Kg) 0.003	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	
		MATERIAL :- <i>Blank</i> Screw M5-6gx12.58 GOST 17473-80	USED ON :- CB 322-14-9 CB 322-15-9 CB 323-00-10 CB 3320-00-43
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN	<i>[Signature]</i>	SCALE :- 2:1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI
		DIMENSIONS IN mm	
CHD	<i>[Signature]</i>	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED	TITLE :- SCREW M5x12
APPD	<i>[Signature]</i>	IS : 2102 - 69	
DATE	<i>26/1/07</i>	ALL THREADS TO CONFORM TO	D S CAT NUMBER
			DRAWING NUMBER 356-22-2

SIZE A4

DRAWING NUMBER

356 138

Rz40



Ⓑ EQUIVALENT MATERIAL
STEEL 709M40 (EN19) TO BS: 970/
40Cr4 Mo3 TO IS: 1570

1. Inspection group IV - TT - 11
2. HRC \geq 35-39
3. The thread may be made by rolling with the diameter of unthreaded portion within the pitch diameter of thread.
4. The rest of the technical requirements - as per Standard 82052-00.
5. Coating: Cu 6 - as per U 2.1 - 124
- 6* Dimensions for reference.

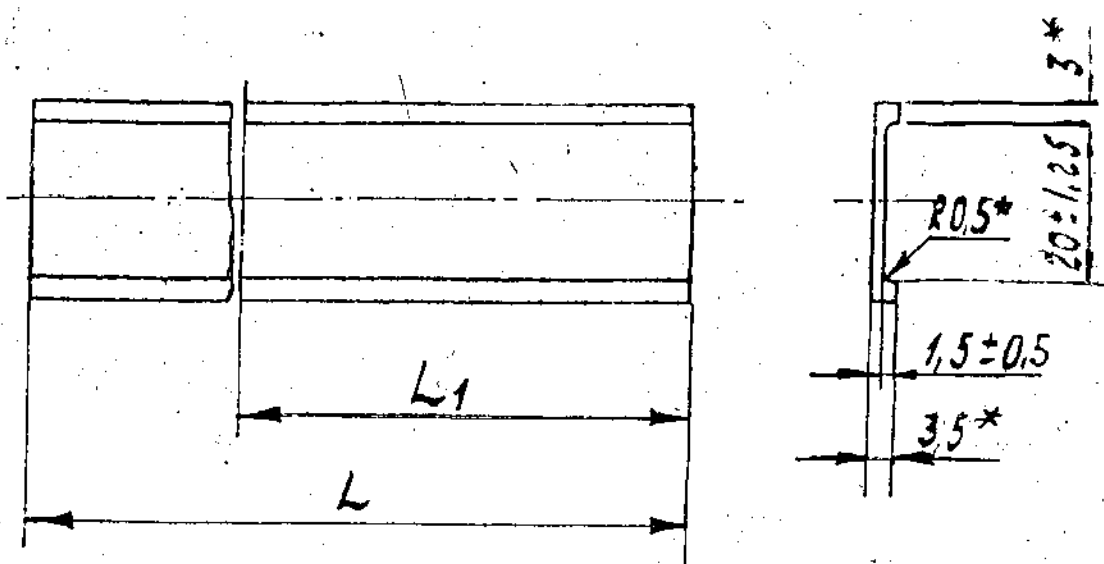
A-11

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 THUS # (LETTERS)
B	15-7-10	4 1/2 ALT. COMM. Mtg. MINUTES POINT N. 10 DT. 26-10-09	ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE	
A	2/1/88 PSCD	TITLE WAS M8x25, AUTHY. DT LETTER 81152/CIHV/DB IV.5/1/87	MATERIAL: HEXAGON BAR 14-5 GOST 8560-78	USED ON: C6 3342 00 8 C6
ISSUE	AMDT APPD	NATURE OF AMENDMENTS	38xA GOST 1051-73	
DRN		SCALE: 1 : 1	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI	
CHD		DIMENSIONS IN mm		
TCD		TOLERANCE ON DIMNS UNLESS OTHERWISE STATED		TITLE: BOLT M8 x 20 Ⓐ
APPD		ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 356 138
DATE	20/1/88			

SIZE A4

DRAWING NUMBER
420-149-1 TO 5



KVD-No	PART NO. ОБОЗНАЧЕНИЕ	L ₁ MM/mm	MASS Kg	USED ON
78558	420-149-1	37±2	0,0026	CB 3335 00 24-30
78234	420-149-2	42±2	0,0029	CB 3335 00 24-30 C53342-00-8 CB
78235	420-149-3	60±2	0,0042	
②	420-149-4	104±2	0,0073	
78236	420-149-5	135±2	0,01	CB 3342-00-8 CB

EXPLANATORY NOTE:

6. REFERENCE MATERIAL QUOTED :

UNVULCANISED OIL AND PETROL RESISTANT RUBBER CODE OF CLASSIFIER

75 - 1231, RUBBER GRADE HO- 60-1 TO TY 005-216-75.

a) MECHANICAL PARAMETERS :

- i) RUPTURE STRENGTH Kg/cm² ----- 90 Min.
- ii) ELONGATION OF RUPTURE % ----- 250 Min.
- iii) RESIDUAL ELONGATION AFTER RUPTURE % ----- 12 Max.
- iv) HARDNESS No NP TO TM P DEVICE ARBITORY ----- 55 - 70

7. LIKELY EQUIVALENT GRADE / SPECIFICATION FOR NITRILE CHLOROPRENE

BASE. TO BA 60 BS 2751-82 AND C60 BS 2752-82.

1. *DIMENSIONS SHOULD BE ENSURED WITH TOOL.
2. LENGTH OF STRIP L, BEING SUPPLIED SHOULD NOT BE LESS THAN 1000 mm.
3. TO BE MANUFACTURED AS PER -T III H 100 GOST 15152-69
4. CB 420-149-1 SHOULD BE MARKED ON LABEL OF GASKETS BEING DELIVERED.
5. THE REST OF THE REQUIREMENTS AS PER SPECIFICATIONS 005216-75.

Ⓐ ALT. MATL. : RUBBER GRADE BNC TO SPECN. CQA(HV)/NBR+CR

KVD No. - 78234 - 420-149-2
 KVD No. - 78235 - 420-149-3
 KVD No 78236 - 420-149-5

Ⓐ-7
SIZE A2

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

EST. MASS TO BE STAMPED OR MARKED WHERE INDICATED THUS # LETTERS)

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

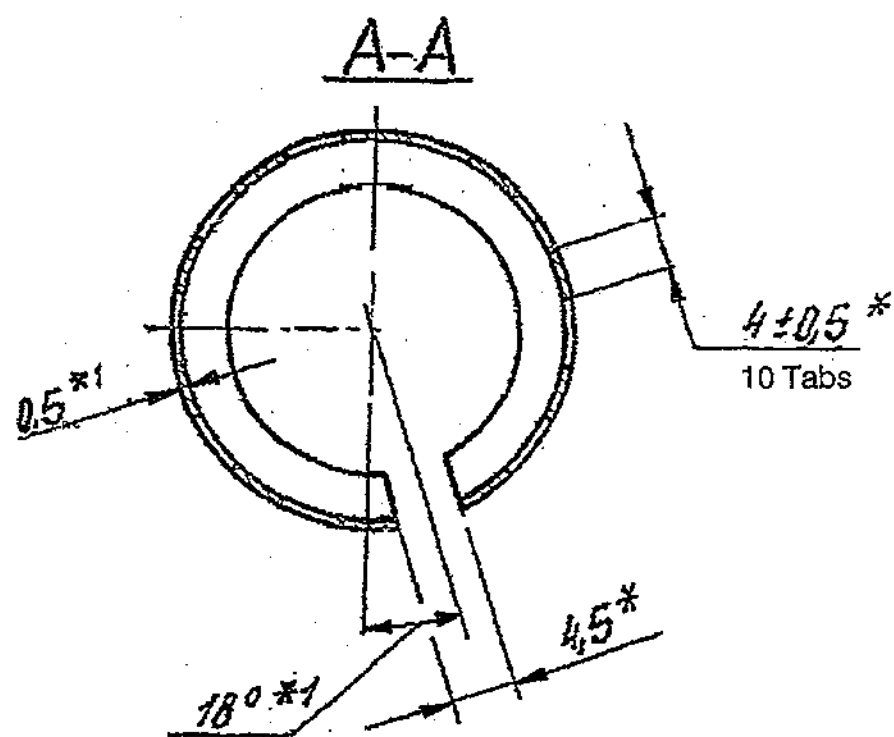
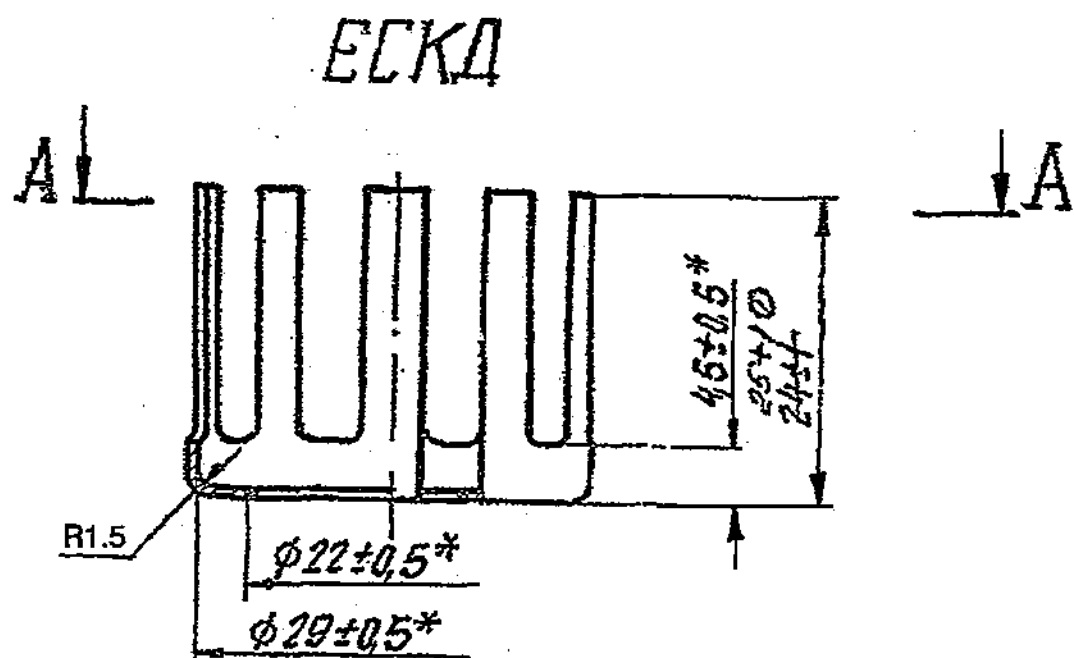
DRN	CHD	TCD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMS UNLESS OTHERWISE STATED.	ALL THREADS CONFORM TO	D S CAT NUMBER	DRAWING NUMBER
					1 : 1					420-149-1 TO 5
MATERIAL - RUBBER HO-60-1 SPECIFICATIONS 005216-75								USED ON - SEE ABOVE		
CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI								TITLE:- GASKET		
A 18-6-08 AUTHY: LT.No. TC/GEN/IND-III DT. 02-04-08.					ISSUE DATE		NATURE OF AMENDMENTS			

DRAWING NUMBER
420-198

SHEET No. 1 OF 1

✓(✓)

Premkumar
(P. JANARDHANAN)
JTO (D)
Dt. 16 Nov '10



1. ALTERNATE MATERIAL : STEEL 10 GOST 1050-88.
2. UNSPECIFIED RADII ARE 1....2 mm.
4. COATING : Zn 9 Cr ACCORDING TO INSTRUCTION ИЛ-749-88 WITH SUBSEQUENT BY CLIMINATION OF HYDROGEN EMBRITTEMENT.
5. COATING Cd 9 Cr ACCORDING TO INSTRUCTION ИЛ-569-84 WITH SUBSEQUENT BY ELIMINATION OF HYDROGEN EMBRITTEMENT FOR TROPICALIZED CONSTRUCTION.
6. * DIMENSIONS FOR REFERENCE.
7. *1 DIMENSIONS FOR REFERENCE.
8. MANUFACTURING WITH SHEET THICKNESS 0.6mm IS ALLOWED.

(4A) EQUIVALENT MATERIAL Gr. DD
IS : 513-1994

DRG. REINDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 4

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

EST. WT. (Kg) 0.0065 TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

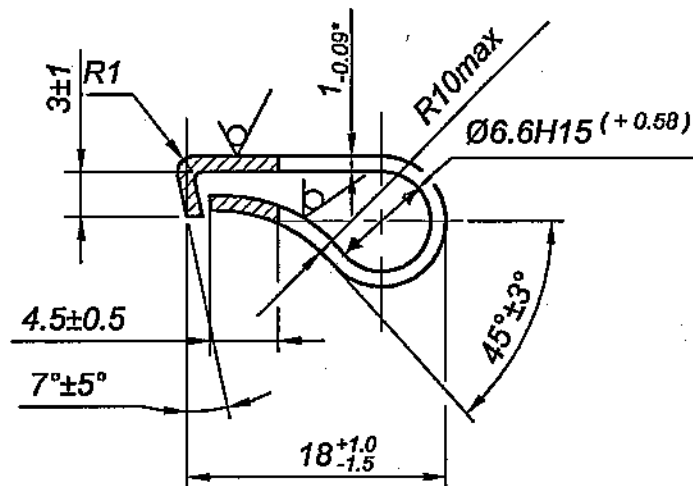
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

			DRN	Sd/=	MATERIAL :- SHEET	USED ON :- Cb 3342-00-21
			CHD	Sd/=	A1-0.5 GOST 19904-90	
			APPD	Sd/=	ИІ-ВГ-08кп GOST 9045-98	
			DATE	Nov 2010	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
			SCALE:- 2 : 1			
			DIMENSIONS IN mm			
			TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69		TITLE :- YOKE (HOLDER)	
		4A	13.11.10	4 th Alt. Comm. Mtg. Minutes Point No.1 Dated 26.10.09	D S CAT NUMBER	DRAWING NUMBER 420-198
		ISSUE	DATE	NATURE OF AMENDMENTS		

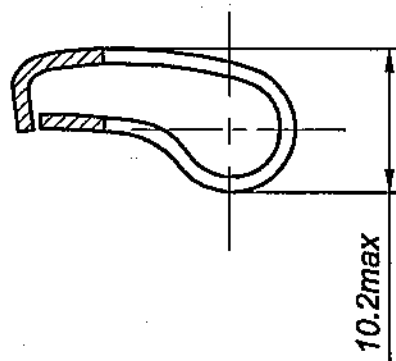
F-
SIZE A3

DRAWING NUMBER
700-41-3442/(01)

SHEET No. 1 OF 1

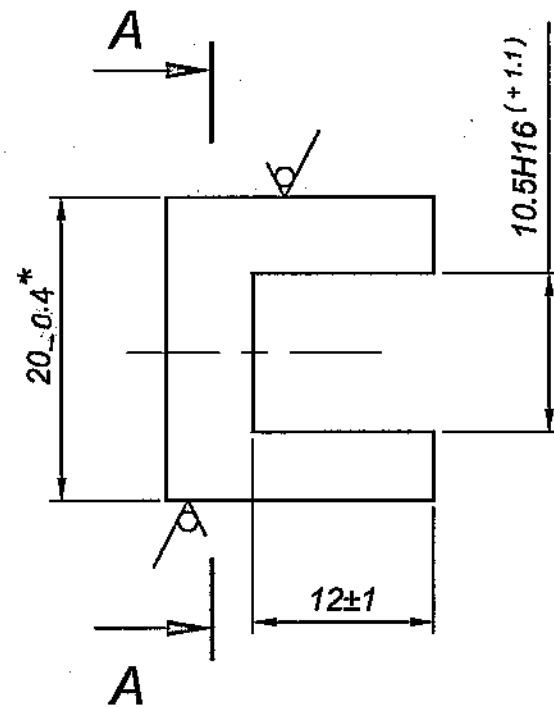


ALTERNATE

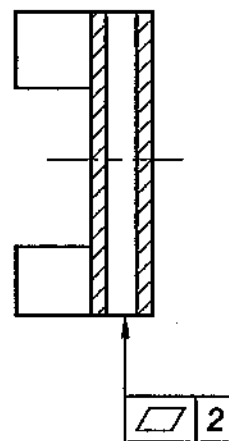


1. Allowed to use steel Grade-08 nc, 10nc GOST 1050-88.
2. Cracks and dents are not allowed.
3. *Dimensions are given for reference.

Marking	Coating
700-41-3442	—
-01	Zinc - 9microns Chromium - 1micron Tungsten - 1micron



A-A



DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 2

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) 0.004

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

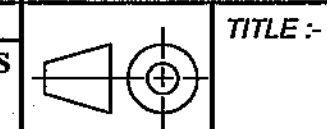
DRN
CHD
APPD
DATE 09.5.07

MATERIAL :-
BAND 10 M-3-1 x20
GOST 503-81

USED ON :-
Cb 3342-00-21

CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)
AVADI

SCALE:- 2:1
DIMENSIONS IN mm
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69



TITLE :-

FRAME

ALL THREADS TO CONFORM TO

D S CAT NUMBER

DRAWING NUMBER
700-41-3442/(01)

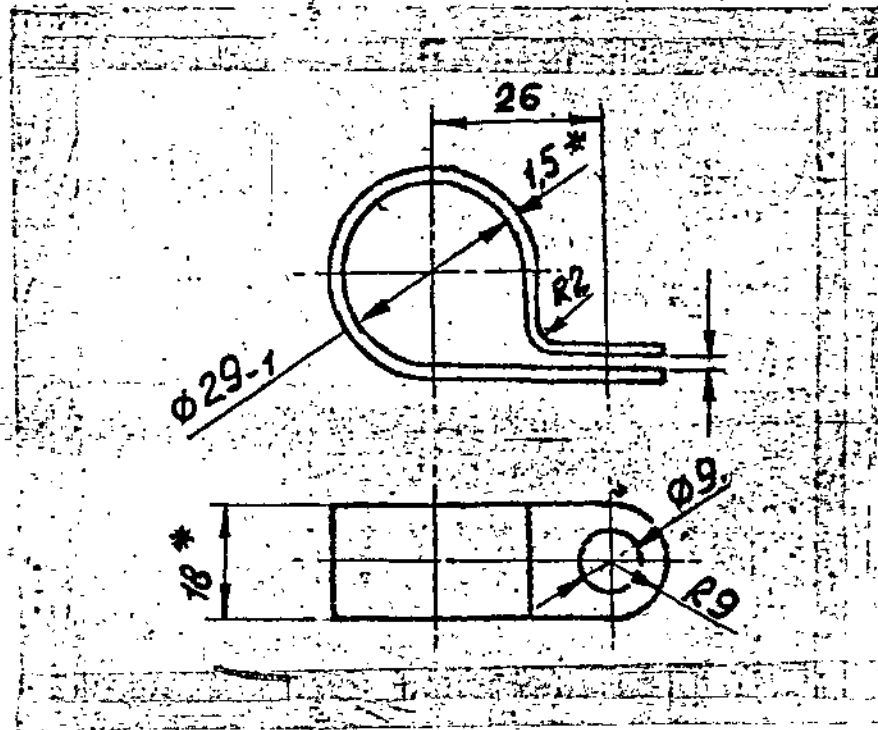
F-6
58
106

SIZE A3

ISSUE	DATE	NATURE OF AMENDMENTS

DRAWING NUMBER

3320-140



1. REQUIREMENTS PLACED UPON STAMPING ARE AS PER STANDARD 82050-16.
2. ALTERNATE MATERIAL IS 08KN GOST 1050-74.
3. TOTAL LENGTH IS APPROXIMATELY = 138.
4. *DIMENSIONS ARE GIVEN FOR REFERENCE.
5. COATING: ZINC-PLATED, 15 MICRONS THICK, OILED, WITH REMOVAL OF HYDROGEN EMBRITTLEMENT.
6. PERMISSIBLE COATING: VARNISH ГФ-95, GOST 8018-70.

Ⓐ EQUIVALENT MATERIAL
Gr.DD IS: 513-1994.

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

EST. WT. TO BE STAMPED OR MARKED WHERE INDICATED THIS # (LETTERS)
0.0235 kg.

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

EXPLANATORY NOTE:-MATERIAL QUOTED:

STRIP 08ΠC-M-2-1.5x18 GOST 503-71.

08ΠC= COLD ROLLED LOW CARBON STEEL STRIP

M = CONDITION OF MATERIAL- SOFT

2 = GROUP OF SURFACE QUALITY (ROUGHNESS PARAMETERS $R_a \leq 1.25$ MICRON)

1.5 = THICKNESS. 18 = WIDTH OF STRIP.

CHEMICAL COMPOSITION (AS PER GOST 1050-74)

CARBON = 0.05 - 0.11 ; SILICON = 0.05 - 0.17 ;

MANGANESE = 0.35 - 0.65

CHROMIUM 0.1

SULPHUR 0.040

PHOSPHORUS 0.035 MAXIMUM

COPPER 0.25

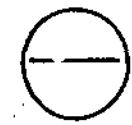
NICKEL 0.25

MECHANICAL PROPERTIES :-ULTIMATE TENSILE STRENGTH $Kgf/mm^2 = 32-45$

RELATIVE ELONGATION % = 17 (MIN)

KVD NO. 63357

EXPLANATORY NOTE ADDED ON 16-4-91.



SIZE A3

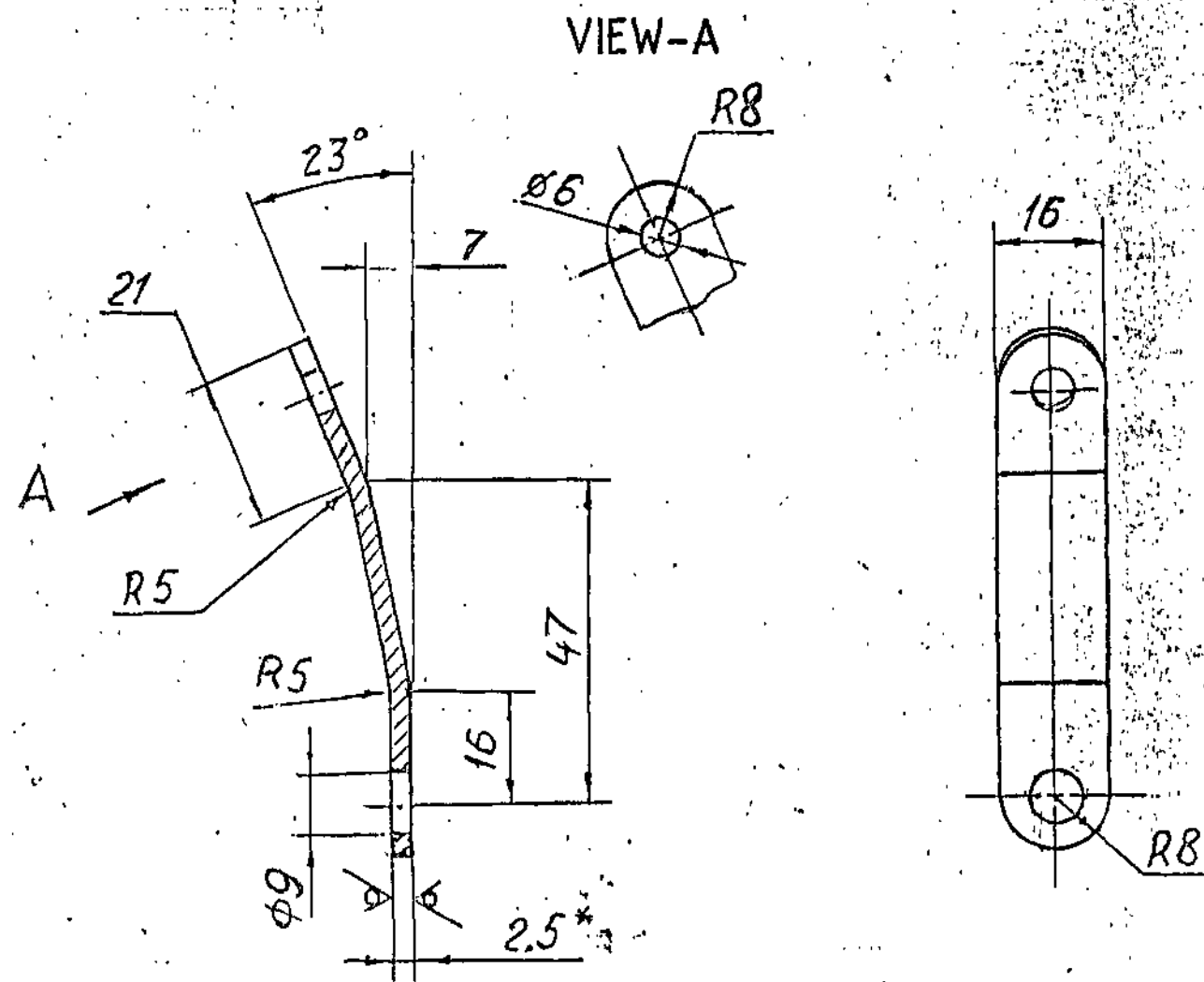
			DRN		MATERIAL: STRIP 08ΠC-M-2-1.5x18 GOST 503-71.	USED ON CB20-20-00-10 CB 3342-00-B
			CHK	<i>Pathan</i>		
			TCD	<i>Pathan</i>		
			APPO	<i>Pathan</i>		
			DATE	19-8-87	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
			SCALE:-	1:1	AVADI	
			DIMENSIONS IN mm TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS:2102-69		TITLE SUSPENSION CLAMP	
			ALL THREADS TO CONFORM TO		D S. CAT NUMBER	DRAWING NUMBER 3320-140
			A	18.03.10/4 th Alt. Comm. Mt. Minutes Pt. No. 1 Dt. 26.10.09		
			ISSUE DATE	NATURE OF AMENDMENTS		

DRAWING NUMBER

3320 - 386

ECKA

Rz 320 (✓)



1. LENGTH OF STRAIGHTENED COMPONENT L = 77mm.
2. TOLERANCE UNLESS OTHERWISE STATED ± 0,5mm.
3. *DIMENSION FOR REFERENCE.

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

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

EST WT	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
0,022 Kg	

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

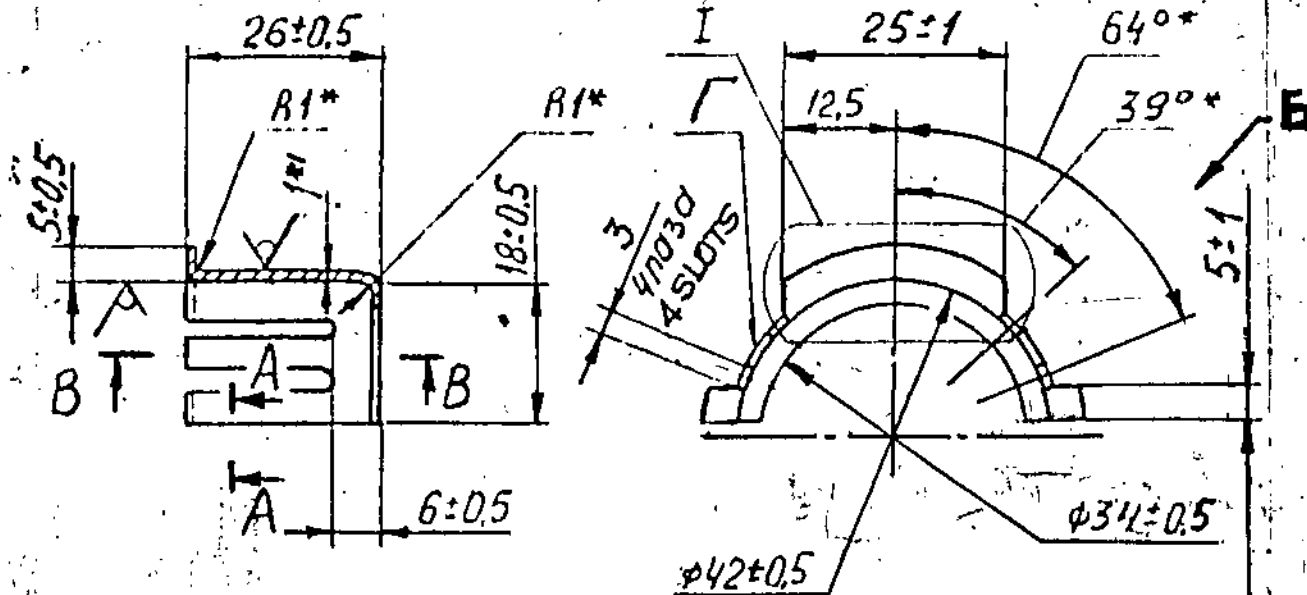
DRN	<i>[Signature]</i>	MATERIAL :-	USED ON :-
CHO	<i>[Signature]</i>	SHEET A 2,5 GOST 19904-74	Cb 3320-385
TCD	<i>[Signature]</i>	IV 10 GOST 16523-70.	
APPO	<i>[Signature]</i>	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI	
DATE	31-08-87		
SCALE :- 1 : 1			
DIMENSIONS IN MM			
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		TITLE PLATE	
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
- A 1-7-10			3320 - 386
ISSUE	DATE	NATURE OF AMENOMENTS	

A-7
81

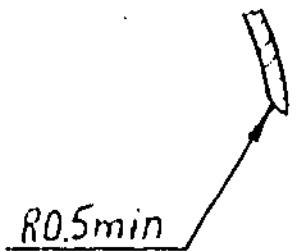
SIZE A3

DRAWING NUMBER
3321-213

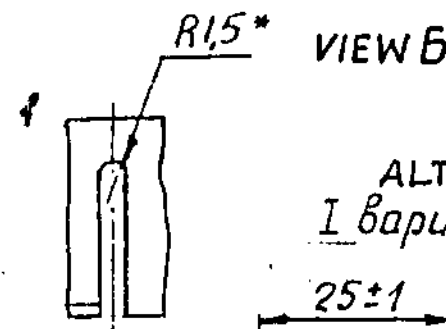
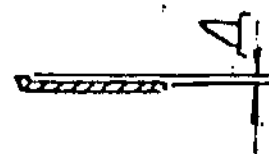
80 V(✓)



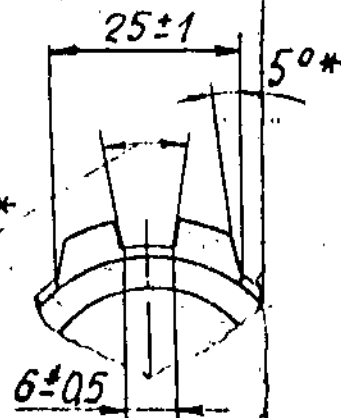
A-A
M2:1
SCALE 2:1



B-B



ALTERNATIVE
I вариант



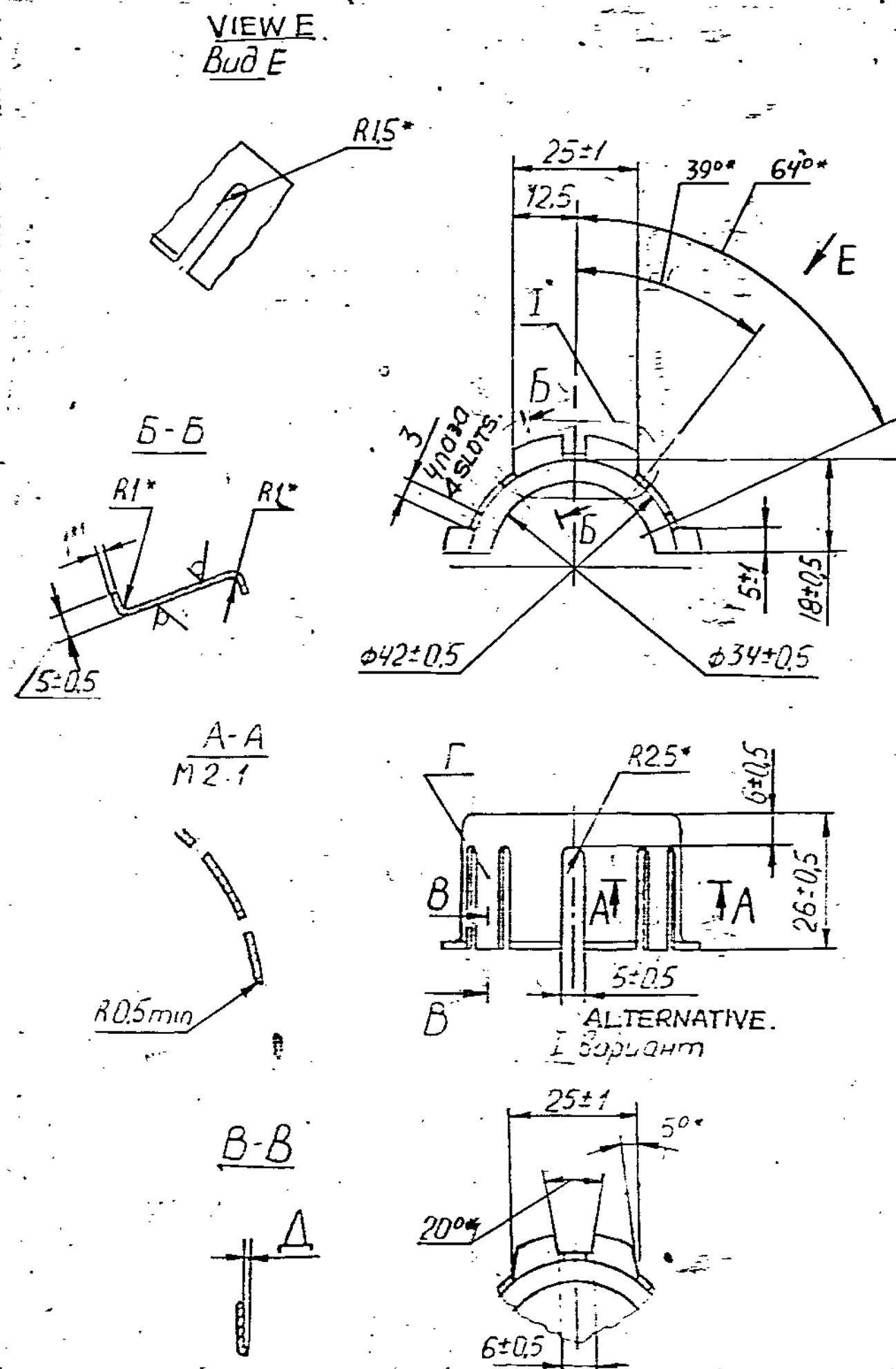
1. Заменитель материала сталь 10 ГОСТ1050-74.
2. Покрытие Ц9.хр по ИЛТ-82 с удалением водородной хрупкости.
3. Деталь подвергнуть высокому отпуску.
4. На наружной поверхности лепестков Г допускается выступ Д не более 0,5мм.
5. *Размеры обеспечиваются инструментом.
6. *1 Размер для справок.

1. Alternate material: steel 10 GOST 1050-74.
2. Coating: Zn 9, chromating in accordance with ИЛ 483-82 with subsequent elimination of hydrogen embrittlement.
3. The component should be subjected to high tempering.
4. On outer surface of tabs Г projection Д not exceeding 0.5mm is permissible.
5. *Dimensions should be ensured with tool.
6. *1Dimension for reference.

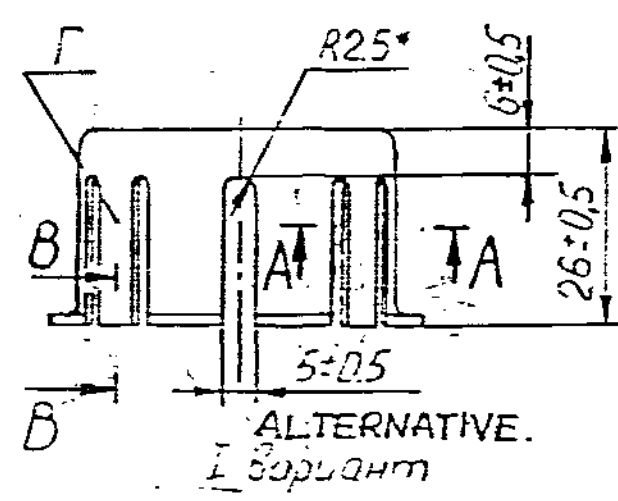
Ⓐ EQUIVALENT MATERIAL
Gr. D IS : 513-1994

PLOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION		DRN: [Signature]		MATERIAL: A 1 GOST 19904-74		USED ON: CB 3321-00-16	
EST. WT. 0.011 Kg. TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)		CHD: [Signature]		SHEET II-BI-08RT GOST 9045-80		CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES) AVADI	
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.		APPD: [Signature]		DATE 31-5-88		TITLE YOKE	
A 18.03.10 4 th Alt. Comm. Mt. Minutes Pt. No. 1 Dt. 26.10.09		SCALE: 1:1		DIMENSIONS IN mm TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		D S CAT NUMBER	
ISSUE DATE		NATURE OF AMENDMENTS		ALL THREADS TO CONFORM TO		DRAWING NUMBER 3321-213	

DRAWING NUMBER
3321-214



1. ALTERNATE MATERIAL : STEEL 10 GOST 1050-74 .
2. COATING : Zn 9, CHROMATIZING IN ACCORDANCE WITH GOST 9045-82 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
3. THE COMPONENT SHOULD BE SUBJECTED TO HIGH TEMPERING .
4. ON OTHER SURFACE OF TABS Γ PROJECTION Δ NOT EXCEEDING 0.5mm . IS PERMISSIBLE .
5. * DIMENSIONS ; SHOULD BE ENSURED WITH TOOL .
6. *1 DIMENSION FOR REFERENCE .



Ⓐ EQUIVALENT MATERIAL
Gr.D IS: 513-1994

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

EST. WT. 0.010 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.

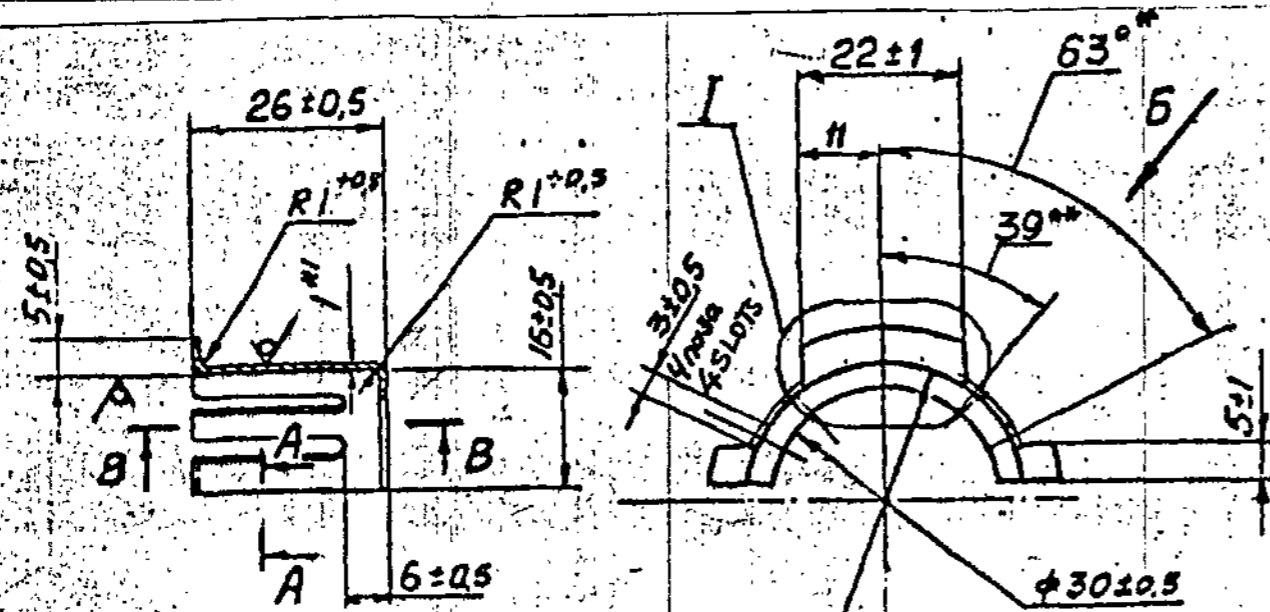
DRN	END	TCB	APPD	DATE	SCALE	DIMENSIONS IN MM	TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS: GOST 9045-82	MATERIAL :- A1 GOST 19904-74	USED ON
				31.5.85	1:1			08K1 GOST 9045-80	CB 3321-00-16
CONTROLLERATE OF QUALITY ASSURANCE (MVA) VER. TLES: A V A B								TITLE	
								YOKE	
ALL THREADS TO CONFORM TO								DRAWING NUMBER	
A 18.03.10 14 th Alf. Comm. Mt. Minutes Pt. No. 1 Dt. 26.10.09								3321-214	
ISSUE	DATE	NATURE OF AMENDMENTS							

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE No: 1 (BK 82-513)

A7
138
SIZE A2

DRAWING NUMBER
3321-215

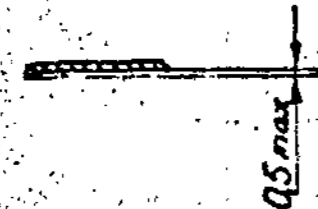
80 (✓)



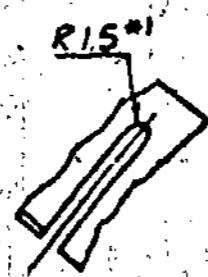
SCALE A-A
M2:1



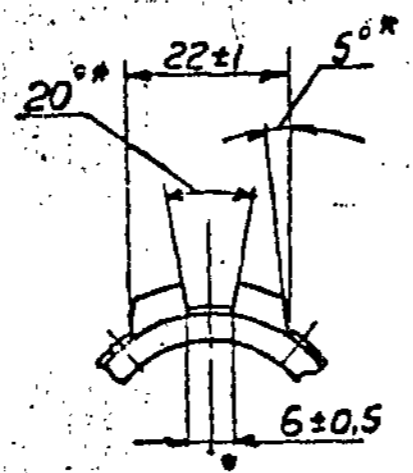
B-B



VIEW B-B



ALTERNATIVE
I вариант



1. ALTERNATE MATERIAL : STEEL 10 GOST 1050-74.
2. COATING Zn 9, Cr AS PER UΛ 483-82 OR Cd 9, Cr AS PER UΛ 569-84 WITH SUBSEQUENT REMOVAL OF HYDROGEN EMBRITTLEMENT.
3. IN TROPICALISED MAKE, THE COATING IS Cd 9, Cr AS PER UΛ 569-84 WITH SUBSEQUENT REMOVAL OF HYDROGEN EMBRITTLEMENT.
4. COMPONENT IS SUBJECTED TO HIGH TEMPERING.
5. * DIMENSION FOR REFERENCE.
6. * DIMENSIONS ARE TO BE ENSURED BY TOOL.

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

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

EST. WT. 0.010 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.

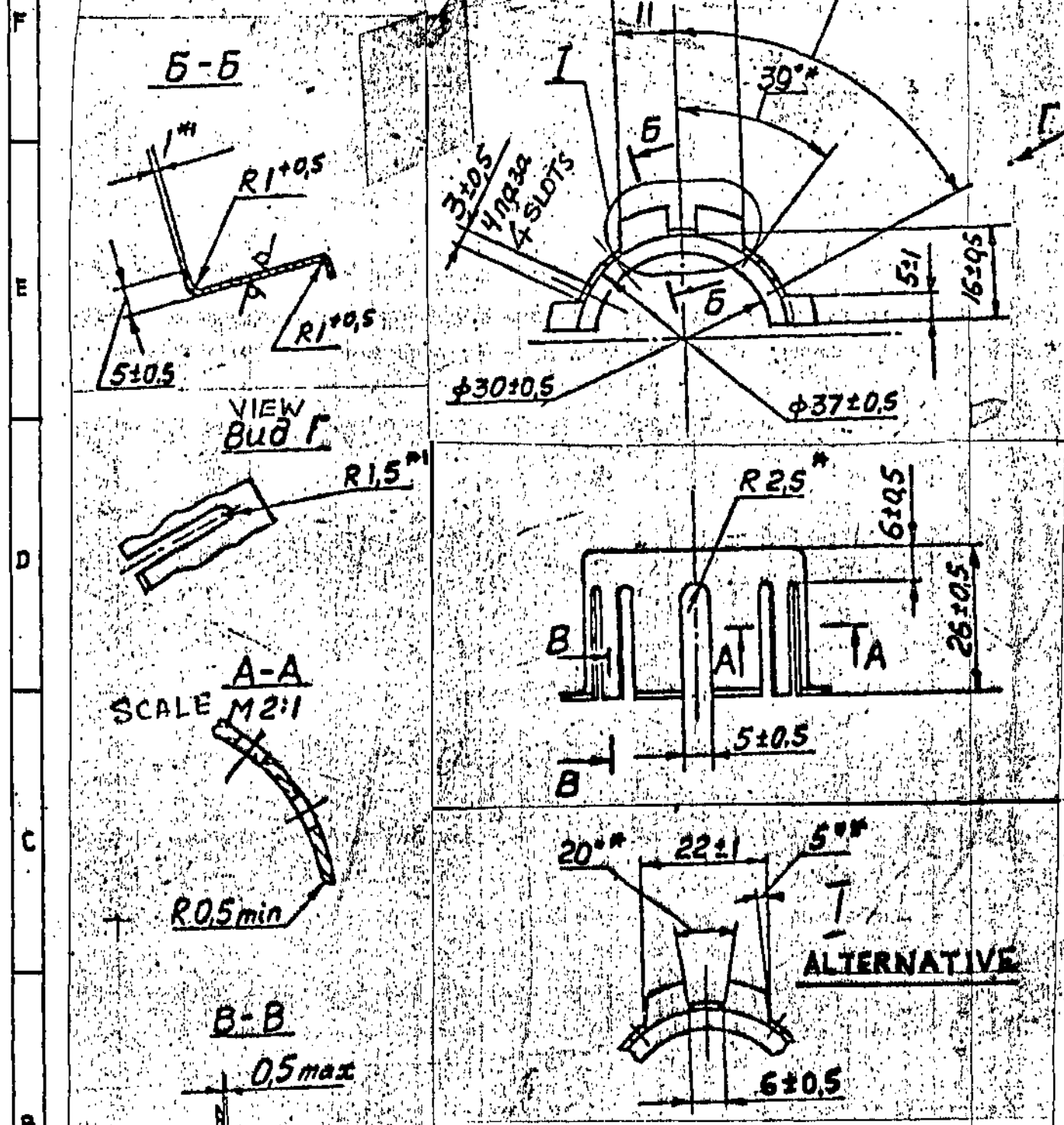
DRN	CHD	TCD	APPD	DATE	SCALE:-	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69.	MATERIAL:- SHEET A1 GOST 19904-74	USED ON C5 3321-00-16	
				21/1/99	1:1			II-BΓ-08K7 GOST 9045-80	C5 3321-00-26 (A)	
							CONTROLLERATE OF QUALITY ASSURANCE (BEML) BANGALORE			
							TITLE:- SLEEVE			
							D S CAT NUMBER		DRAWING NUMBER 3321-215	
ISSUE	DATE	NATURE OF AMENDMENTS								

SIZE A3

DRAWING NUMBER

3321-216

90° (✓)



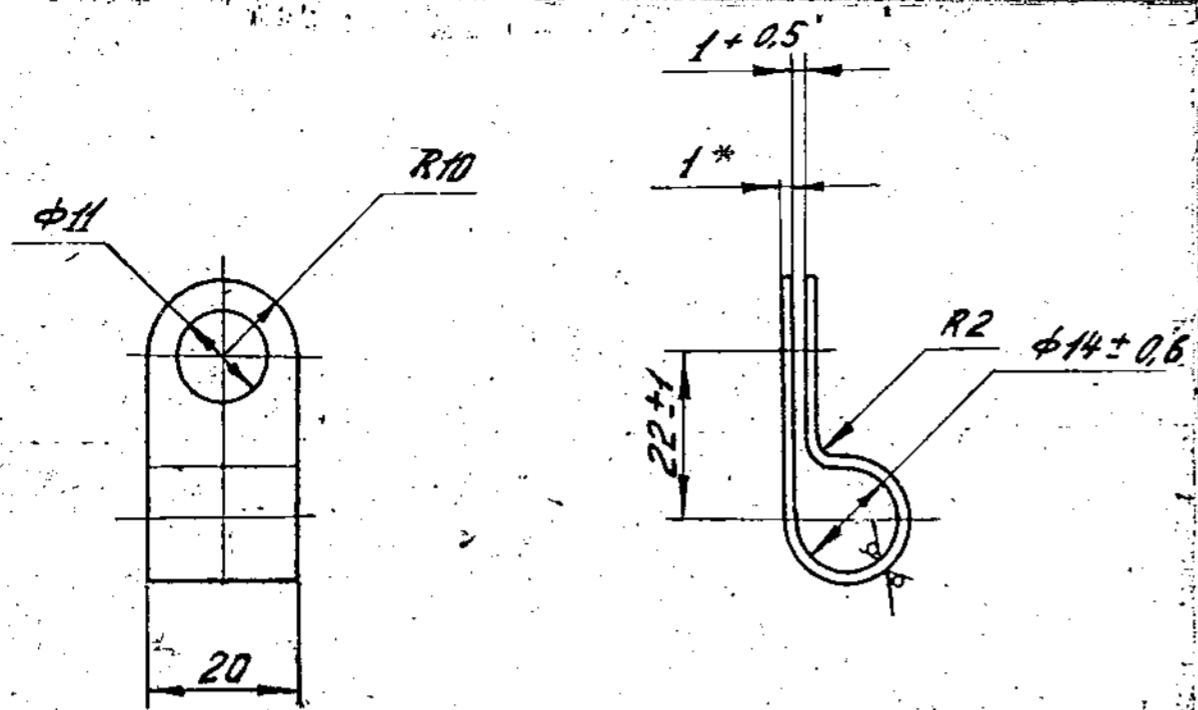
1. ALTERNATE MATERIAL : STEEL 10 GOST 1050-74.
2. COATING : Zn 9, Cr AS PER. UJ 483-82 OR Cd 9, Cr AS PER UJ 569-84 WITH SUBSEQUENT REMOVAL OF HYDROGEN EMBRITTLEMENT.
3. IN TROPICALISED MAKE, THE COATING IS Cd 9, Cr AS PER UJ 569-84 WITH SUBSEQUENT REMOVAL OF HYDROGEN EMBRITTLEMENT.
4. COMPONENT IS SUBJECTED TO HIGH TEMPERING.
5. * DIMENSIONS ARE TO BE ENSURED BY TOOL.
6. * DIMENSIONS FOR REFERENCE.

ⓑ EQUIVALENT MATERIAL
DRG Gr D IS: 513-1994

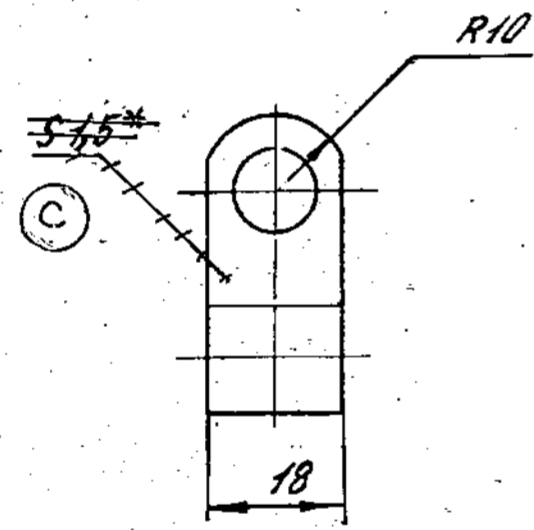
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.		DRN	MATERIAL - SHEET	USED ON
EST. WT.	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)	CHD	A1 GOST 19904-74	CE 3321-00-16
0.009 Kg		TCO	II-BF-08 Rn GOST 9045-80	CE 3321-00-26 (A)
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE R. INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.		APPD	CONTROLLERATE OF QUALITY ASSURANCE (BEML) BANGALORE	
		DATE	TITLE:-	
		SCALE:-	SLEEVE	
		DIMENSIONS IN mm		
		TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69.		
		ALL THREADS TO CONFORM TO	D S CAT NUMBER	
		ISSUE	DRAWING NUMBER	
		DATE	3321-216	
		NATURE OF AMENDMENTS		

SIZE A3

DRAWING NUMBER
3335 77 3



ALTERNATIVE
Вариант



1. MAY BE MANUFACTURED FROM BAND 08nc-M-2-1.5, GOST 503-71, AS PER ALTERNATIVE
2. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS $\pm 0.5\text{mm}$.
3. LENGTH OF STRAIGHTENED CLAMP $L = 94\text{mm}$.
4. COATING: Cd 9, CHROMATIZING AS ER INSTRUCTIONS ЦУН-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
5. * DIMENSIONS FOR REFERENCE.
6. IN TROPICAL DESIGN COATING Cd.9, CHROMATIZING AS PER ЦУН-569-84 REMOVING HYDROGEN EMBRITTLEMENT.

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

EST. MASS 0.012 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:

6. REFERENCE MATERIAL QUOTED:

COLD ROLLED CARBON STEEL STRIP MATERIAL CONDITION SOFT 'M', SURFACE QUALITY GROUP '2' WITH TRIMMED EDGES' NORMAL MANUFACTURING ACCURACY, 1.0(-0.09)mm THICK TO GOST 503-81 AND MANUFACTURED IN ACCORDANCE WITH QUALITY CARBON STRUCTURAL SEMI KILLED STEEL STRIP GRADE 08nc TO GOST 1050-74.

a) CHEMICAL COMPOSITION AS PER GOST 1050-74:

GRADE OF STEEL	CONTENT OF ELEMENTS %					
	C	Si	Mn	Cr	S	P
08nc	0.05 - 0.11	0.05 - 0.17	0.35 - 0.65	0.10	0.040	0.035

RESIDUAL CONTENT OF COPPER AND NICKEL SHOULD NOT EXCEED 0.25% EACH.

b) MECHANICAL PROPERTIES AS PER GOST 503-81:

CONDITION OF MATERIAL	GRADE OF STEEL	ULTIMATE TENSILE STRENGTH Kgf/mm ²	ELONGATION % min
M	08nc	32 - 45	17

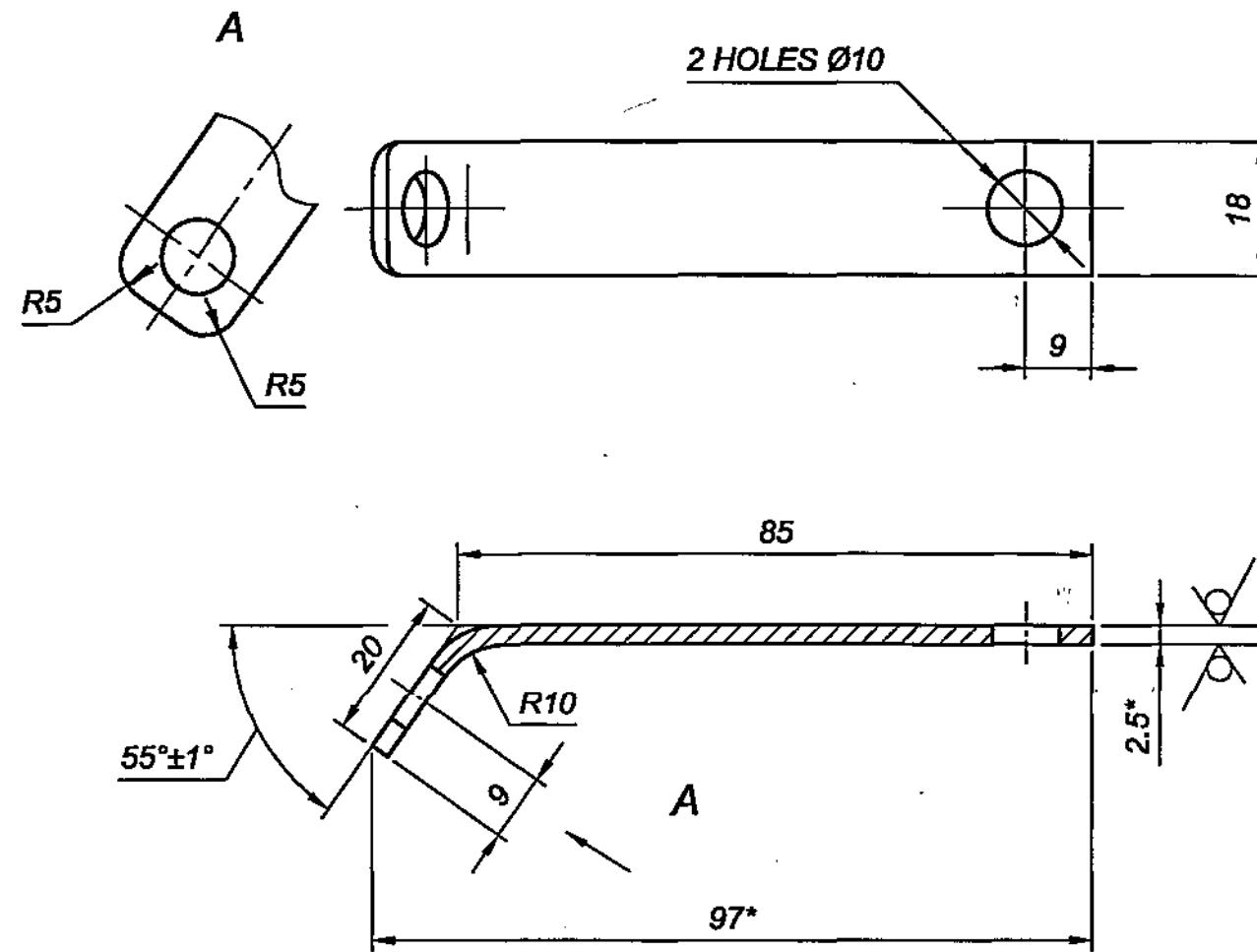
Ⓓ EQUIVALENT MATERIAL
GOST 15:513-1994

DRN	CHD	TCD	APPD	DATE	SCALE - 1:1	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED.	ALL THREADS CONFORM TO	D S CAT NUMBER	DRAWING NUMBER
				02/20					3335 77 3
MATERIAL:- STRIP 08nc-M-2-1 GOST 503-71 81					USED ON:- C 33342-00-805 C 5 3335 00 2430 C 5 3342-				
CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI					TITLE:- CLAMP				
ISSUE DATE					NATURE OF AMENDMENTS				

DRAWING NUMBER
3342-27-2

SHEET No. 1 OF 1

80/ (✓)



1. Allowed to make Roll AT-2.5 GOST 19904-90
5-II-CB-08nc GOST 9045-93
2. Straightened length $L \approx 105\text{mm}$.
3. Coating to be carried out with thickness of Zinc-6microns, chromium-1micron as per instructions ИП-749-88.
4. Unspecified limit deviations of dimensions are $\pm 0.5\text{mm}$.
5. *Dimension is given for reference.
6. In tropical use, coating of cadium - 9microns, chromium - 1micron, Titanium - 1micron is allowed as per instruction ИП-569-84.

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

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

EST. WT. (kg) **0.023** 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		MATERIAL :- SHEET	USED ON :-
CHD		AT-2.5 GOST 19904-90	CB 3342-00-21
APPD		5-II-CB-08nc GOST 9045-93	
DATE	09.5.07	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
SCALE:-	1:1	AVADI	
DIMENSIONS IN mm			TITLE :-
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69			STRIP
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
			3342-27-2

ISSUE	DATE	NATURE OF AMENDMENTS
A	17-3-10	Alt.Comm.Mt.Minutes Pt.No.1 Dt.26.10.09

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - NIL

F-6
30
106

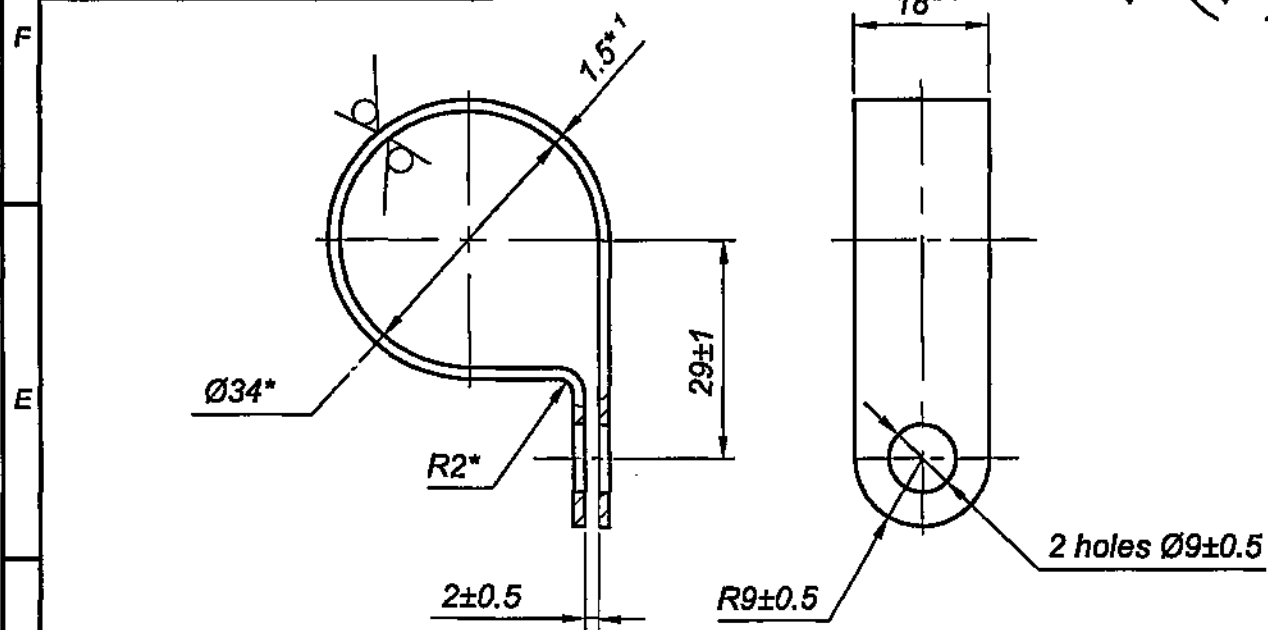
SIZE A3

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - NIL

DRAWING NUMBER
3342-28

SHEET No. 1 OF 1

80 / (✓)



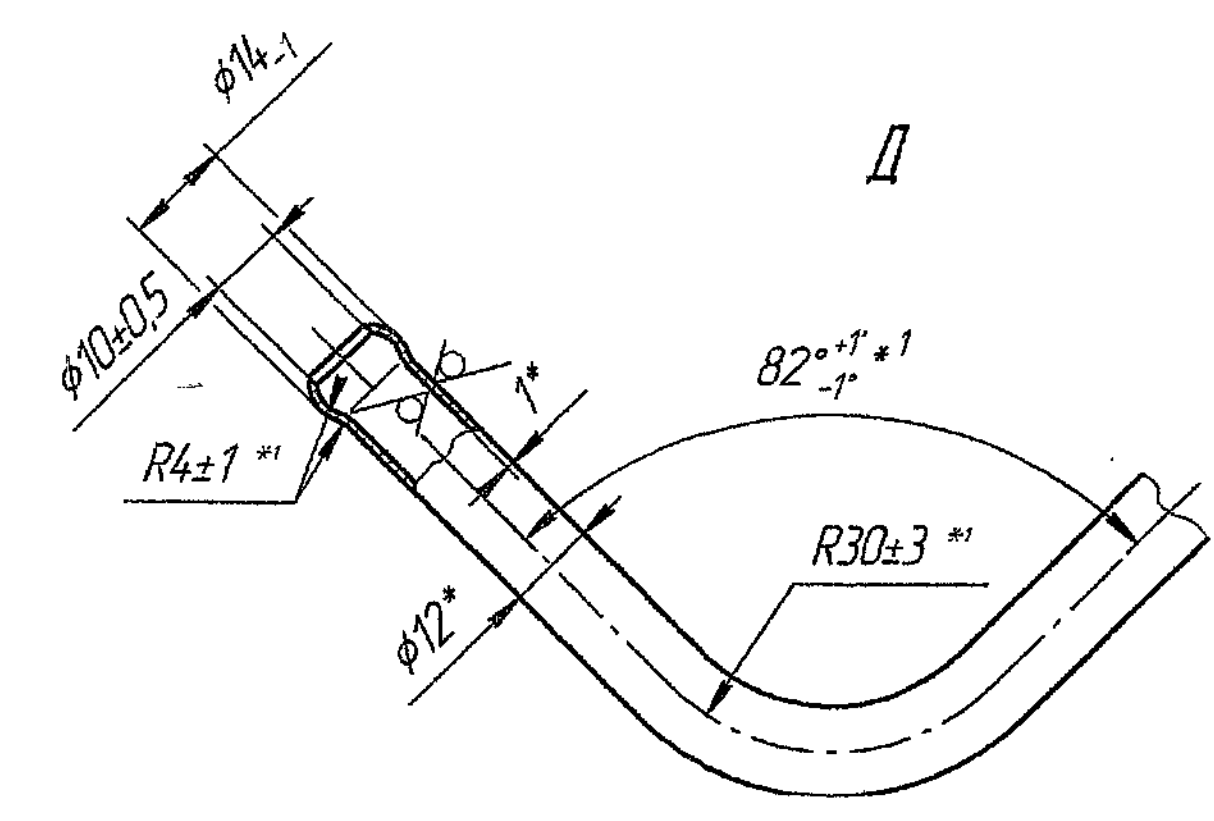
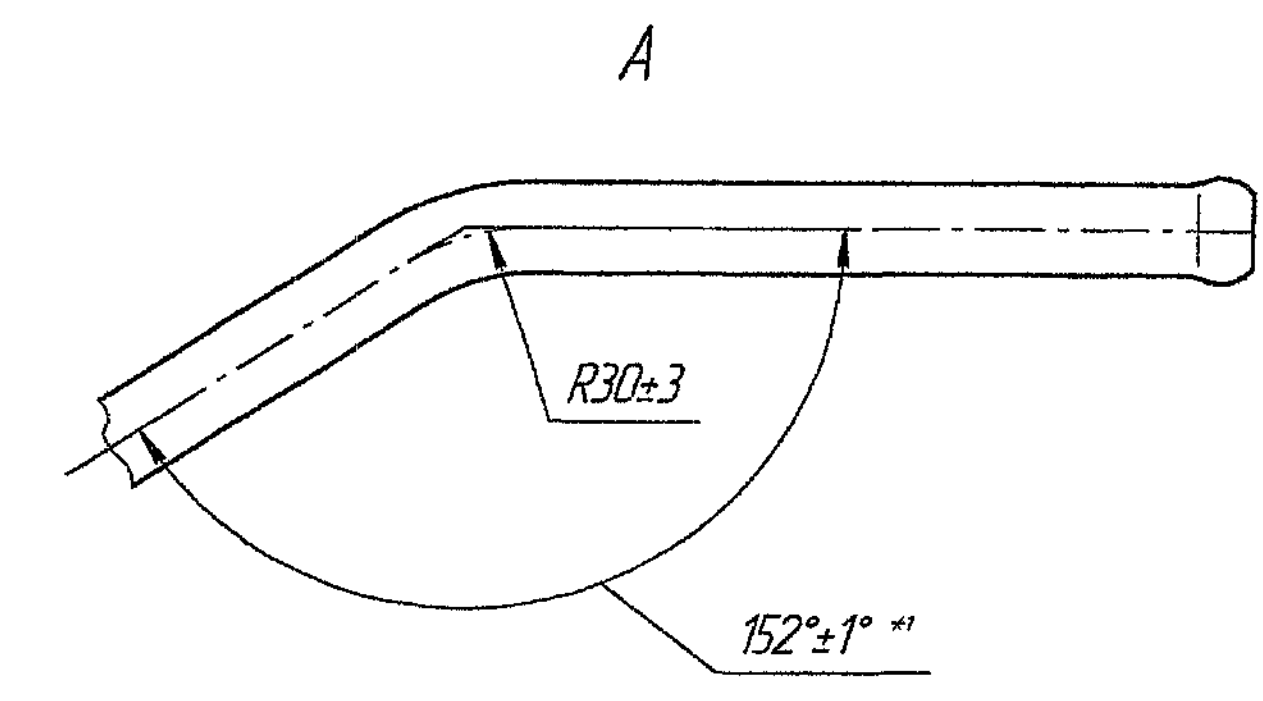
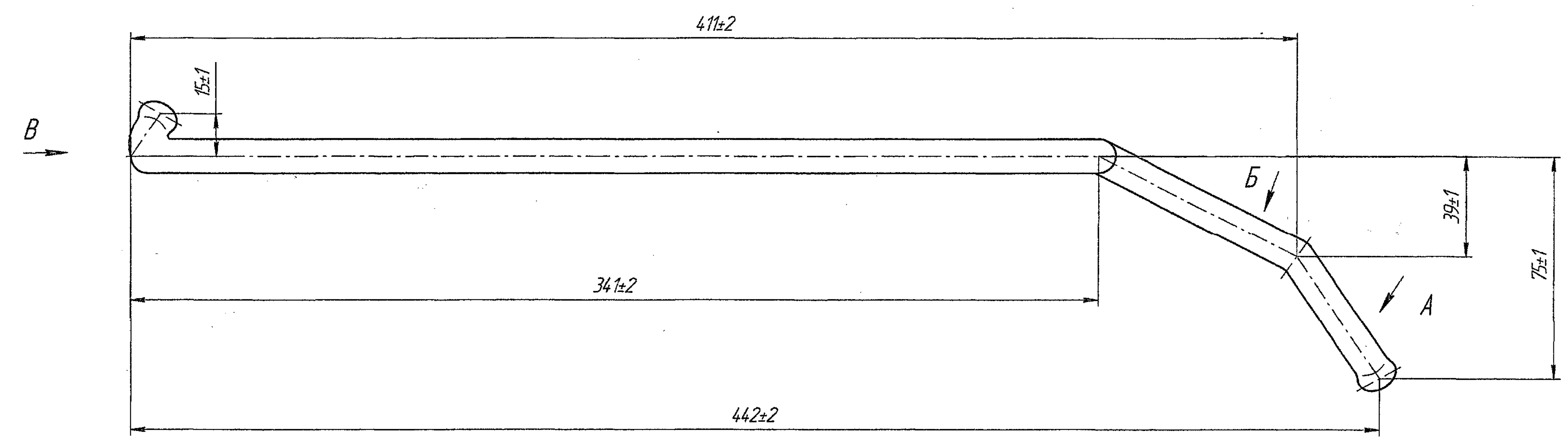
1. Straightened length L = 157mm.
2. Alternate material is steel 08 K17 Gost 1050-88.
3. Coating to be carried out with thickness of Zinc-6microns, Chromium-1micron, tungsten-1micron as per instruction ВЛ-749-88.
4. Coating for tropical use : Cadmium-9microns, chromium-1micron, Titanium-1micron is allowed as per instruction ВЛ-569-84.
5. *Dimensions are ensured by tool.
6. *Dimensions are given for reference.

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

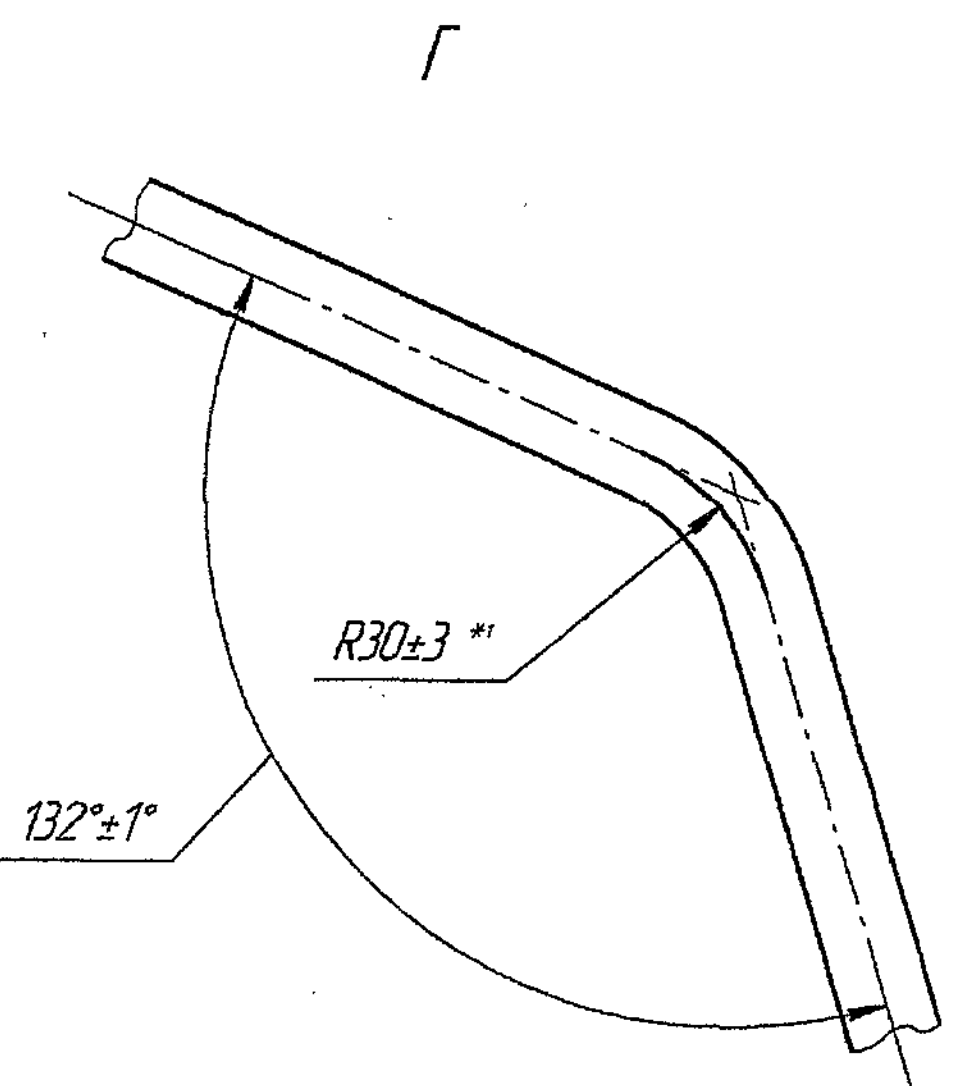
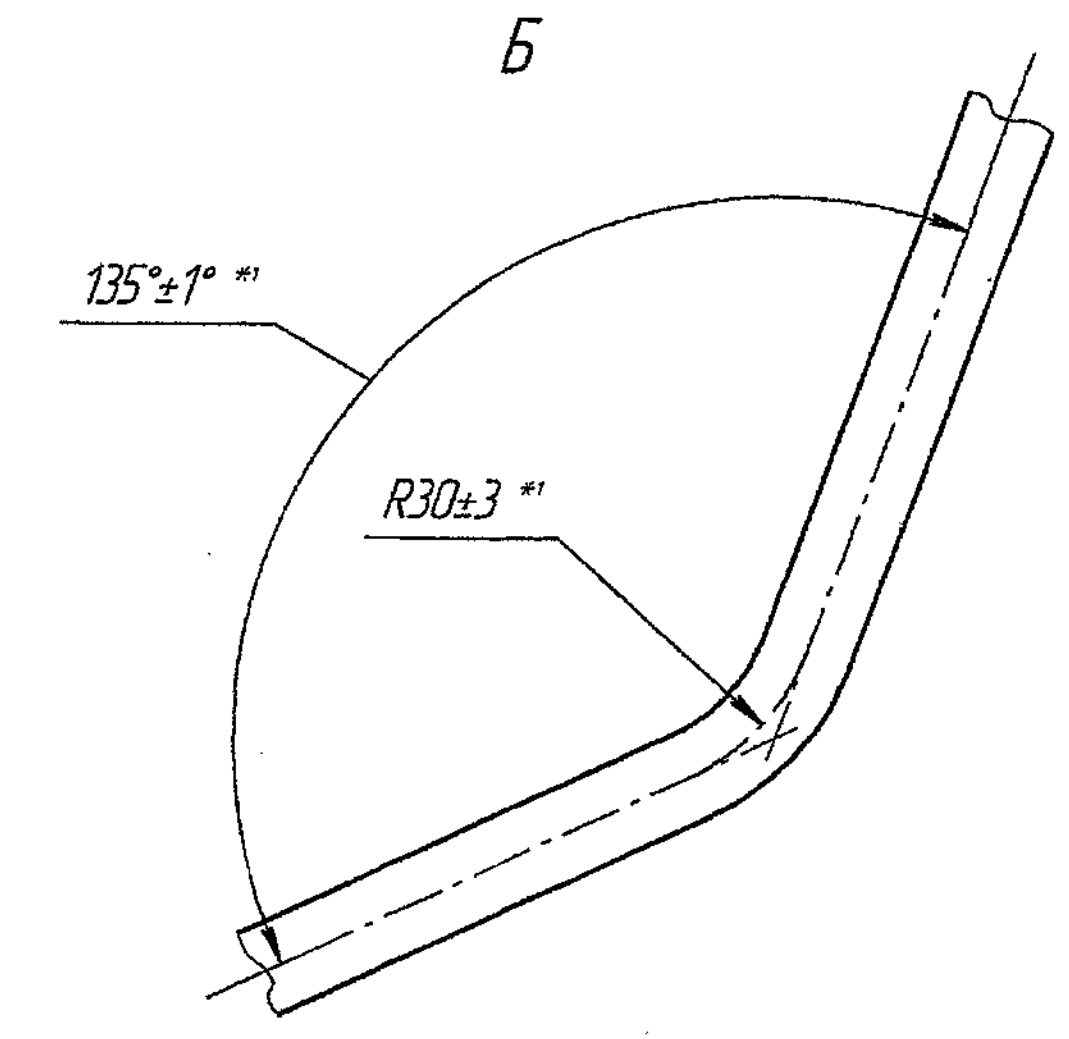
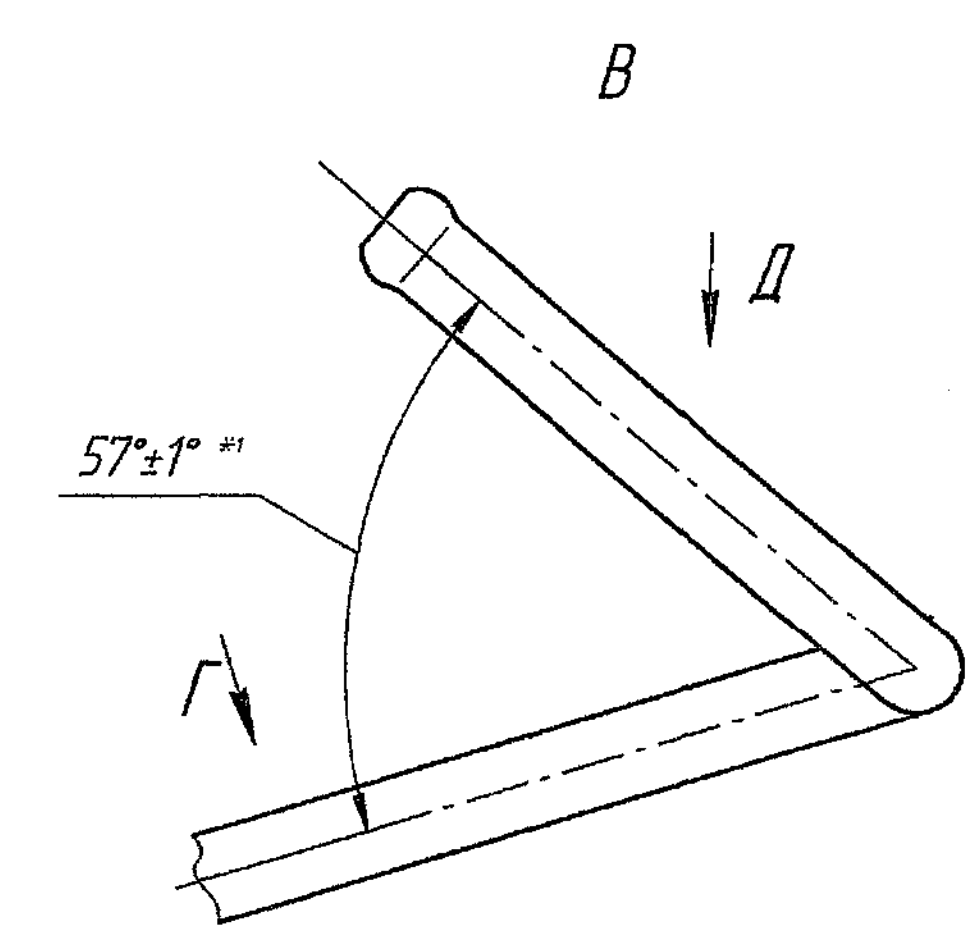
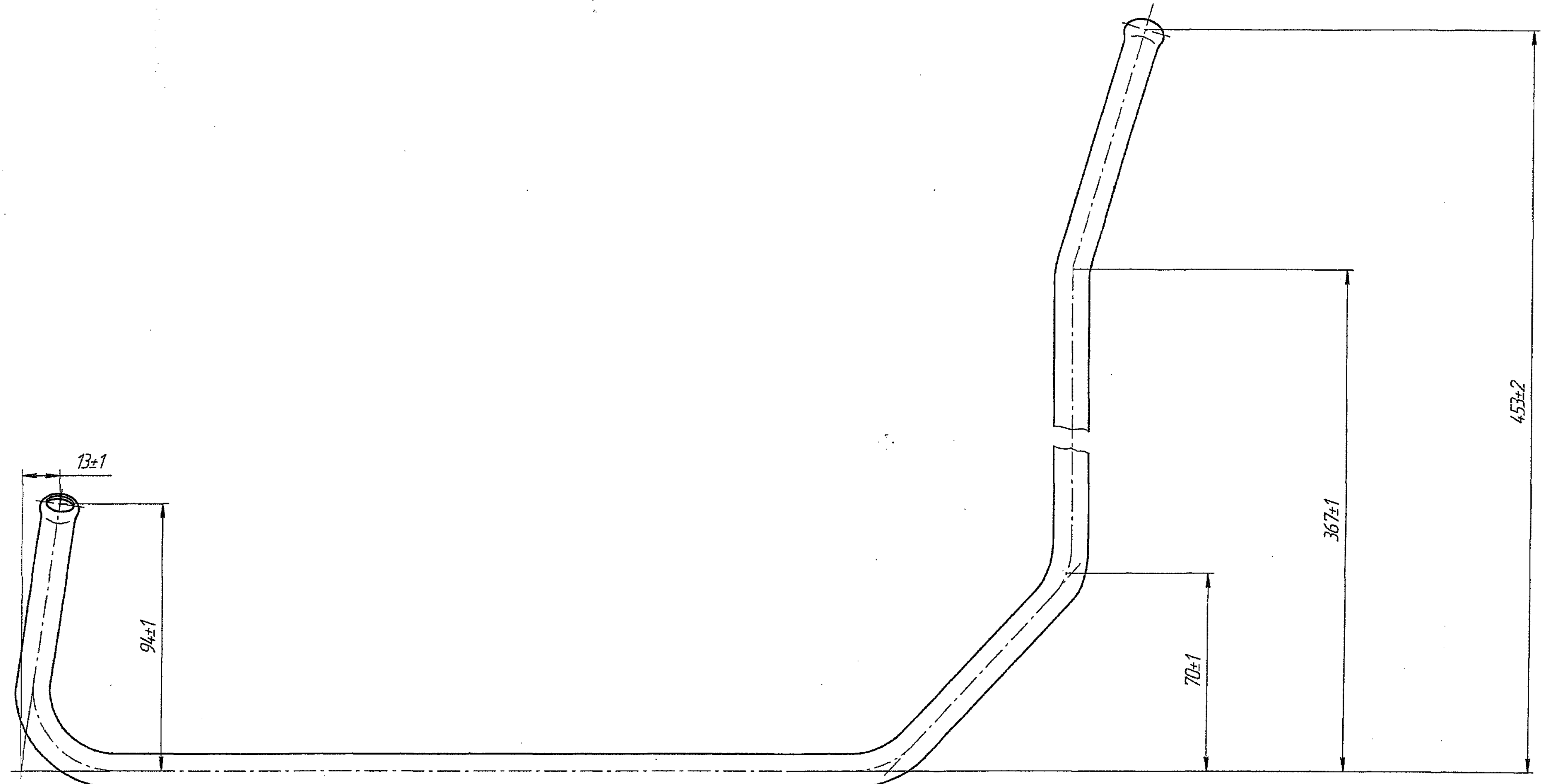
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

F-6
31
106

		EST. WT. 0.03	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.	
		MATERIAL :- BAND 08nc-M-2-1.5x18 GOST 503-81	USED ON :- Cb 3342-00-21
A	17.3.10	*Alt.Comm.Mf.Minutes Pf.No.1Dt.26.10.09	
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN		SCALE :- 1:1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI
CHD		DIMENSIONS IN mm	
APPD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69	TITLE :- CLIP
DATE	09.5.07	ALL THREADS TO CONFORM TO	D S CAT NUMBER
SIZE A4			DRAWING NUMBER 3342-28



- 1 Length of STRAIGHTENED pipe L ≈ 920 mm.
- 2 Tolerance of ovality in the place of bend is not more than 2 mm.
- 3 * Dimensions for reference.
- 4 *1 Dimension is ensured with tool.
- 5 Varnish coating ГФ-95 GOST 8018-70 as per ИЛ-628-86.
- 6 It is permitted to check and adjust as per sample.



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

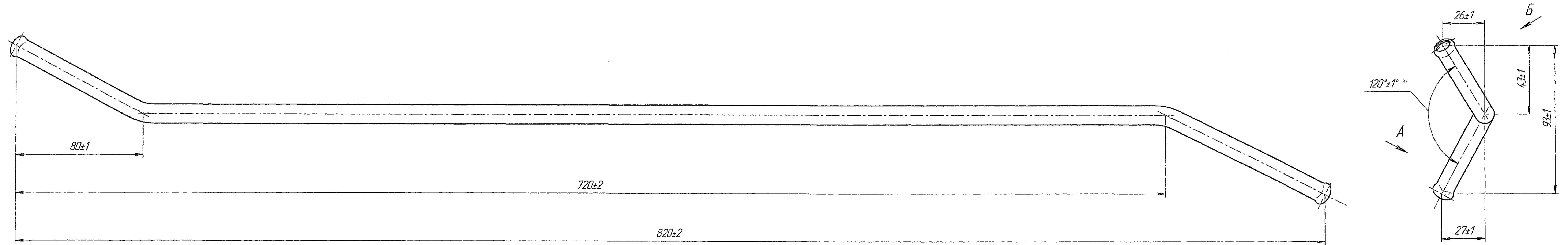
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST WT. (kg) TO BE STAMPED OR MARKED WHERE INDICATED THIS # (LETTERS)
0.25

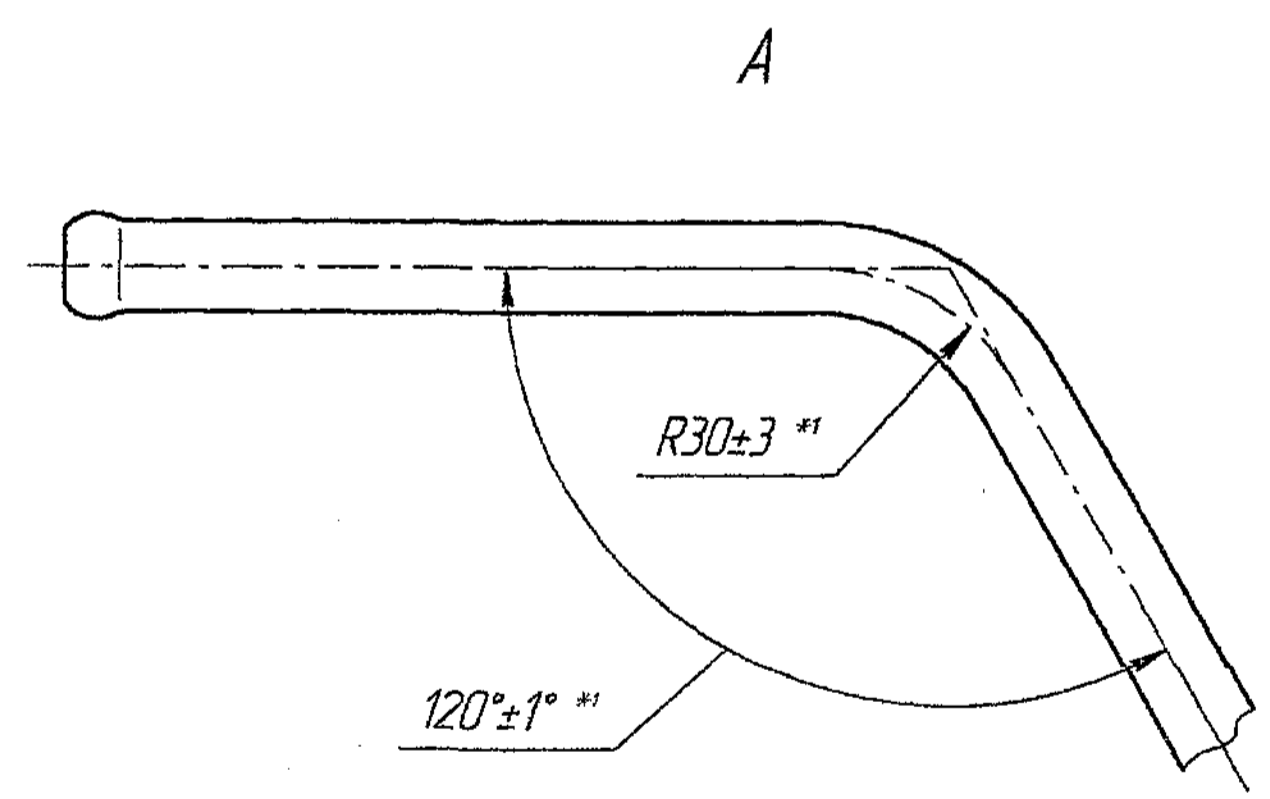
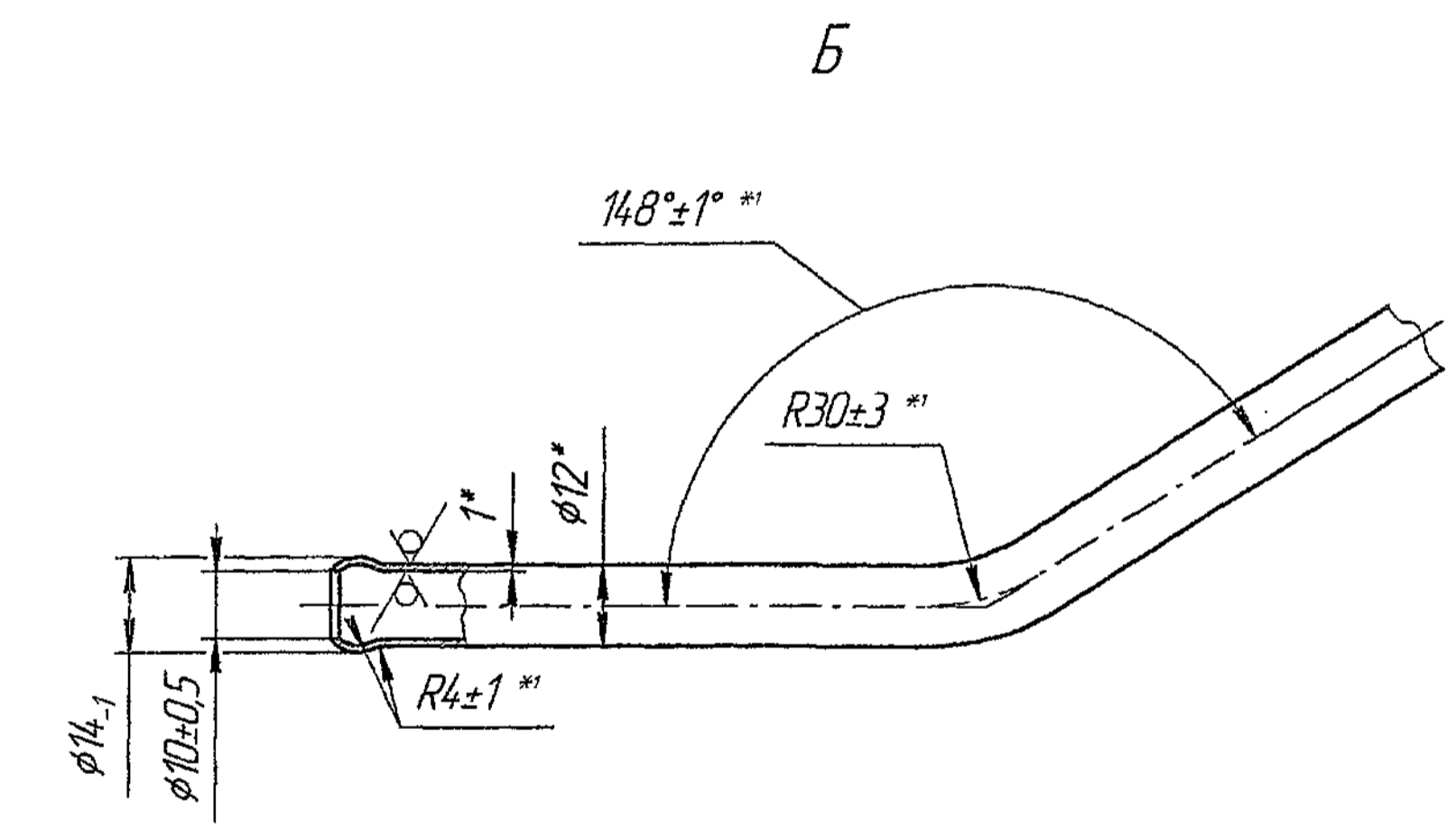
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	21.12.08	MATERIAL	PIPE 12X1 GOST 8734-75	USED ON	Cb 3342-00-21
CHD	21.12.08	PIPE	B 10 GOST 8733-87	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	AVADI
APPD	21.12.08	DATE	20.12.08	SCALE	1:1
DATE	20.12.08	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS .2102-69	TITLE	TUBE
SCALE	1:1	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER	3342-47-6
ISSUE	DATE	NATURE OF AMENDMENTS			

DRG. INDIAVISED BASED ON RUSSIAN ORIGINAL ISSUE-NL
DRG. REPLACES 3342-47-6 ISSUE-1, VIDE NOTN. NO: 2003-26



1. Length of STRAIGHTENED pipe L ≈ 855 mm.
2. Tolerance of ovality in the place of bend is not more than 2 mm.
3. * Dimensions for reference.
4. *1 Dimension is ensured with tool.
5. Varnish coating ГФ-95 GOST 8018-70 as per ИЛ-628-86.
6. It is permitted to check and adjust as per sample.



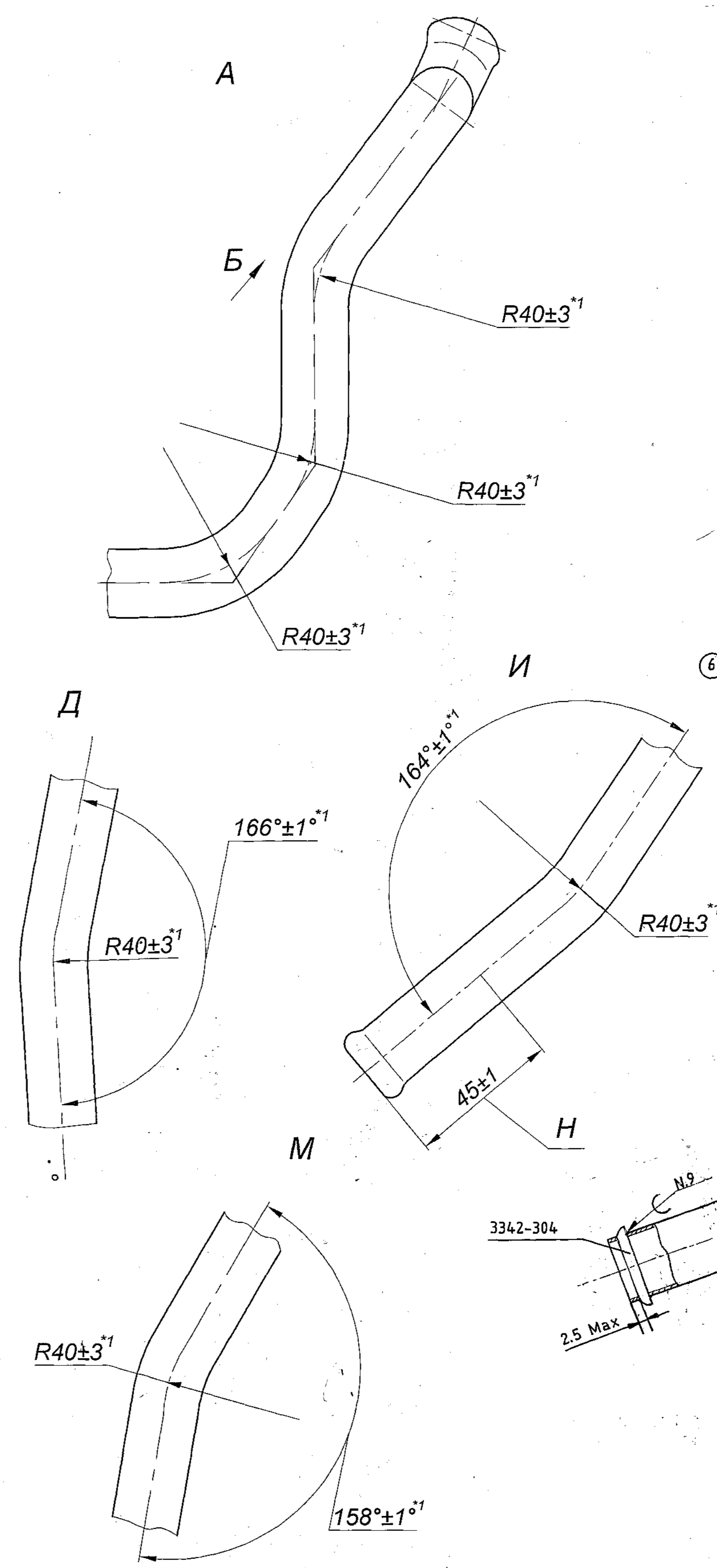
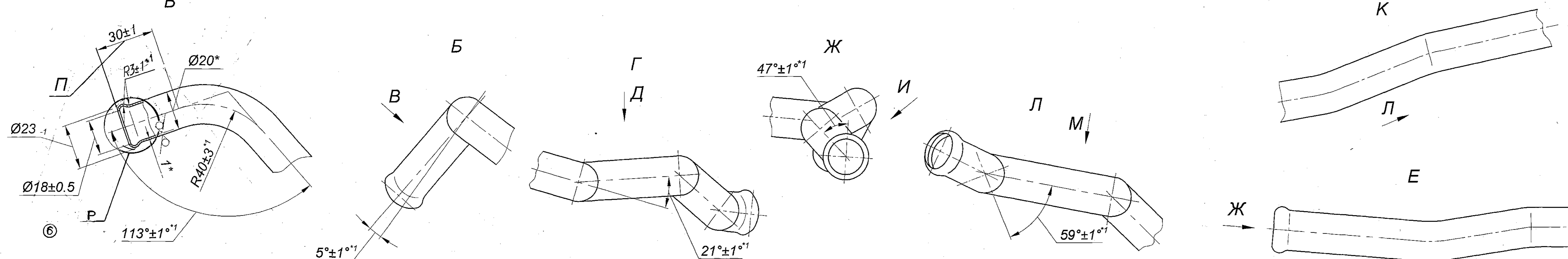
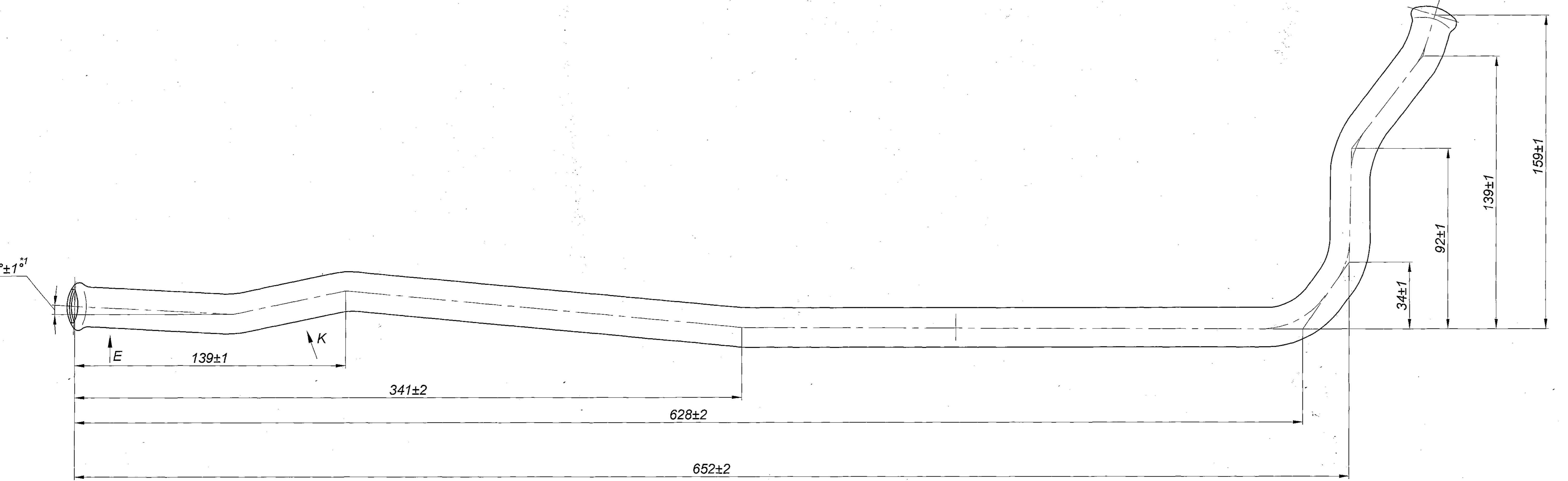
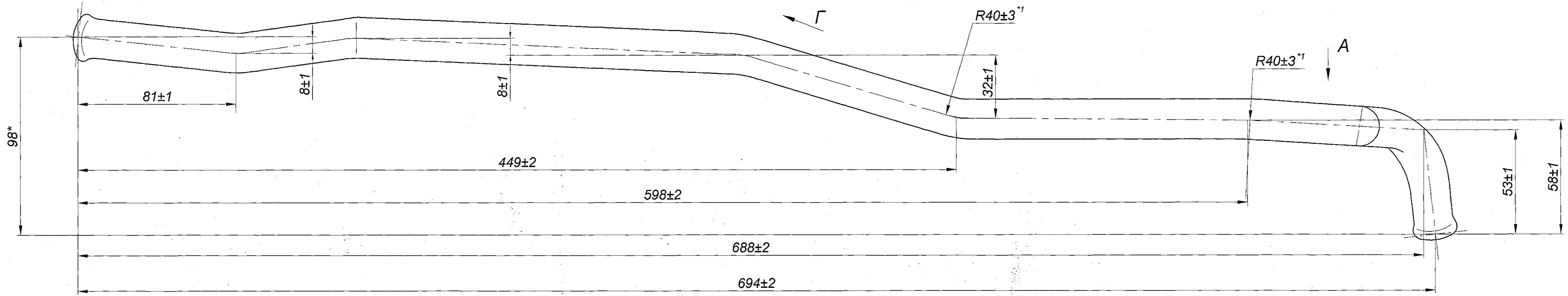
DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE-NIL
DRG. REPLACES 3342-47-7 ISSUE-NIL VIDE NOTN. NO: 2003-26

SIZE A2x3

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

EST. WT. (kg)	TO BE STAMPED OR MARKED WHERE INDICATED THIS # (LETTERS)
0.28	
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	

DRN	3342-47-7	MATERIAL:-	USED ON:-
CHD	CHD	PIPE 12 X 1 GOST 8734-75	PIPE B 10 GOST 8733-87
APFD	APFD	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DATE	12-12-08	AVADI	
SCALE:-	1:1	TITLE:- TUBE	
DIMENSIONS IN mm		D S CAT NUMBER	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2002-69		DRAWING NUMBER	
ALL THREADS TO CONFORM TO		3342 - 47 - 7	
ISSUE DATE	NATURE OF AMENDMENTS		



1. Straightened pipe length $L = 840$ mm.
2. Coating: Varnish ГФ-95 GOST 8018-70 as per instructions ИЛ-628-86.
3. Ovality tolerance at bent places is maximum 2 mm.
4. Bend the pipe as per drawing dimensions, correct and approve as per the dummy or inspection sample.
5. Bending tool traces are allowed. - Dents without cuts upto a depth of 1mm, should be maximum 2 Nos except on the sections H and П.
6. Corrugation within the limits of allowed ovality is allowed at pipe's bent places.
7. * Dimensions are given for reference.
8. * Dimensions are ensured by tool.
9. Wire ИЛ63 GOST 12920-67.

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 OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

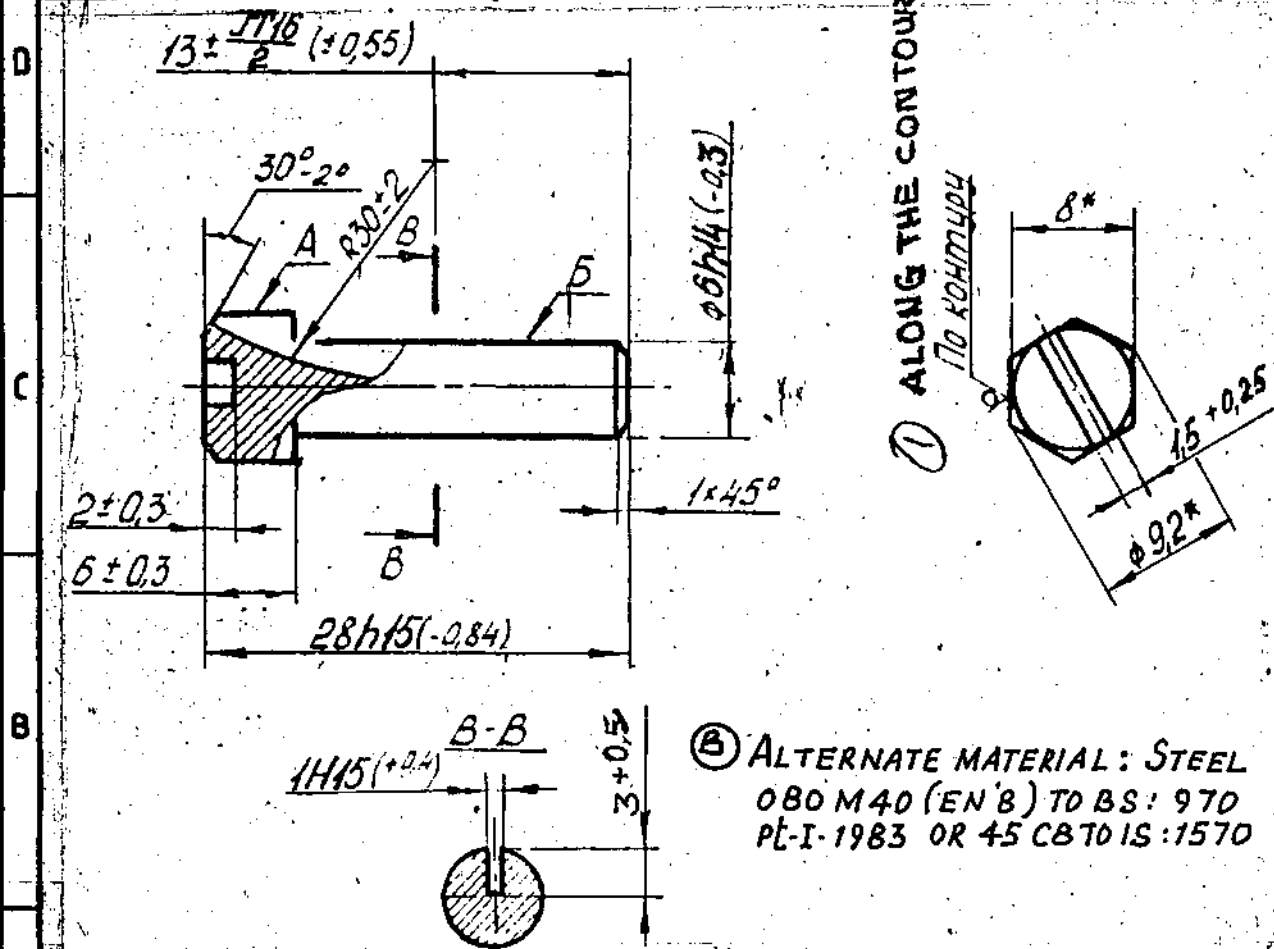
DRN	CHD	APPD	DATE	SCALE: 1:1	DIMENSIONS IN mm	TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS: 0.10-0.69	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER
									3342-49-2
MATERIAL - PIPE 20x1 GOST 8734-75 B.20 GOST 8733-87				CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI				TUBE	
USED ON: 58.3342-00-21				TITLE: TUBE				DRAWING NUMBER 3342-49-2	
6	30.10.08	NOTN NO: 2003-26 F-1158	ISSUE DATE NATURE OF AMENDMENTS						

DRG. INDIVANISED BASED ON RUSSIAN ORIGINAL ISSUE - 5

DRAWING NUMBER

3342 235

Rz 80 (✓)



1. MISALIGNMENT OF SURFACE "A" RELATIVE "B" SHOULD NOT EXCEED 0.3mm.
2. COATING: Zn 9, CHROMATIZING AS PER INSTRUCTIONS UJ1483-82
3. THE POSITION OF SLOT ON THE HEAD OF SHAFT RELATIVE TO THE SLOT OF THE SHANK-ARBITRARY.
4. * DIMENSIONS FOR REFERENCE.
5. IN TROPICAL DESIGN COATING Ed.9, CHROMATIZING, AS PER UJ-569-84, REMOVING HYDROGEN EMBRITTLEMENT.

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

A-10

		EST WT	TO BE STAMPED OR MARKED WHERE
		0.0066 Kg	INDICATED THIS * —
			(LETTERS)
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	
B	13-7-09	3 rd ALTERATION COMM. MINUTES	MATERIAL: HEXAGON BAR
A	16-4-90	POINT B, DATE 27-2-09	8-5 GOST 8560-78
ISSUE	DATE	NATURE OF AMENDMENTS	USED ON
DRN		SCALE: 2 : 1	CB 3342 00 8 CB
CHD		DIMENSIONS IN mm	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES)
TCD		TOLERANCE ON DIMNS UNLESS OTHERWISE STATED	AVADI
APPR		ALL THREADS CONFORM TO	TITLE
DATE		D S CAT NUMBER	SHAFT
SIZE	A4	DRAWING NUMBER	3342 235

BRAWING NUMBER

3342-251

EXPLANATORY NOTE :

3. MATERIAL QUOTED :- 40 Y12 - 0.7 (7) TY 005 5016-80

GROUP No - 40

TYPE OF HOSE - Y

INTERNAL DIAMETER - 12mm

OPERATING PRESSURE - 0.7 MPa (7 Kgf/cm²)

FABRIC REINFORCED HOSE CONSISTING OF INTERNAL RUBBER LAYER 2 LAYERS OF DOMESTIC FABRIC TO GOST 1104-69. AND EXTERNAL RUBBER LAYER. MINIMUM THICKNESS OF INTERNAL RUBBER LAYER SHOULD BE 1.5mm.

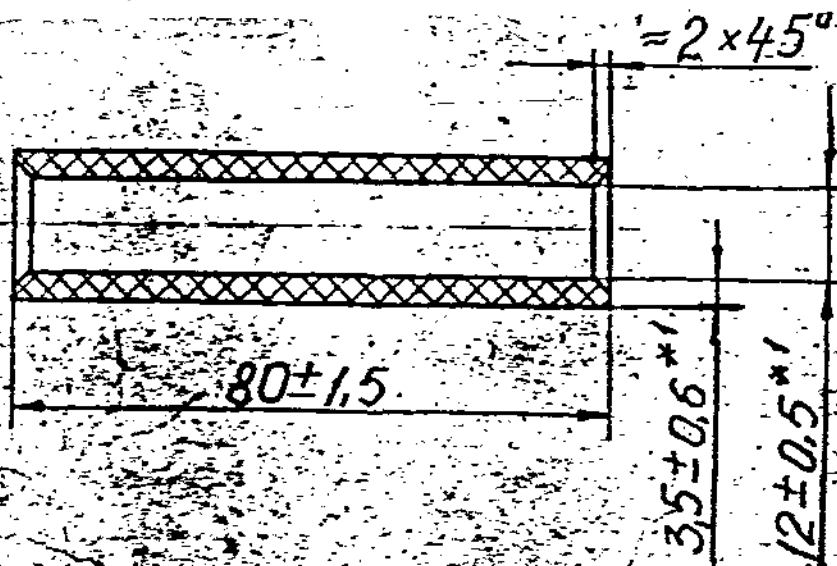
HOSE SHOULD BE SERVICEABLE IN ANY CLIMATIC CONDITIONS WITH OPERATING PRESSURE MENTIONED ABOVE.

MINIMUM PERMISSIBLE RADIUS OF BENDING IN OPERATING CONDITIONS } - 144 mm

MASS OF 1 METRE LENGTH OF HOSE - 0.260 Kg

RUBBER USED FOR INTERNAL AND EXTERNAL LAYERS OF HOSE SHOULD BE IN COMPLIANCE WITH THE FOLLOWING PARAMETERS:

- a) CONDITIONAL TENSILE STRENGTH ----- 90 Kgf/cm² (min)
- b) ELONGATION OF RUPTURE % ----- 250 (min)
- c) HARDNESS MEASURED BY DEVICE TWM - 2 ----- 10±4 Kgf/cm²
- d) BRITTLINESS TEMPERATURE ----- Not above than minus 55°C



1. * Рукав прокладочной конструкции
40Y12-0.7(7)TY 0056016-80

2. * Размеры для справок

1. * WRAPPED HOSE 40Y12-0.7 (7) TY 0056016-80

2. * DIMENSIONS FOR REFERENCE

KVD No: 78610

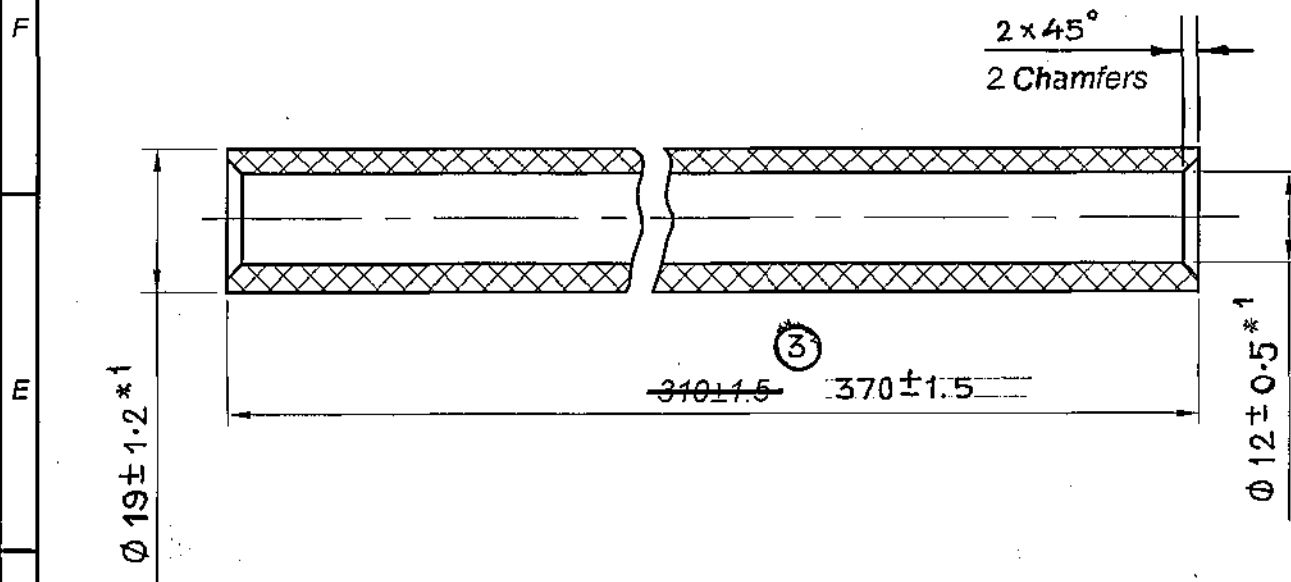
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION		DRN	<i>S. Krishna</i>	MATERIAL:-	USED ON
EST. WT.	TO BE STAMPED OR MARKED WHERE INDICATED THIS # (LETTERS)	CHD	<i>S. Krishna</i>	NOTE No:1 ABOVE	CB 3342-00-8 CB
0.016 Kg		TCD	<i>Narasimha Diji</i>		
		APPD			
		DATE	26-06-86	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	
		SCALE:-	1 : 1	AVADI	
		DIMENSIONS IN mm		TITLE	HOSE
		TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS:2102-69			
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.		ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
		A 24.8.92 Author's letter No. 83784/CBACVE/mg			3342-251
ISSUE	DATE	NATURE OF AMENDMENTS			

A 10
TE A3

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 2

DRAWING NUMBER
3342-252-3

SHEET No. 1 OF 1



1. *Hose is of gasket material 40Y12-7 TY 0056016-87.
2. In tropical construction, faces of parts should be coated with rubber glue of brand 23-C-A T Y 38-105290-81, part should be marked by yellow paint.
3. *1 Dimension is given for reference.

F-6
41
106

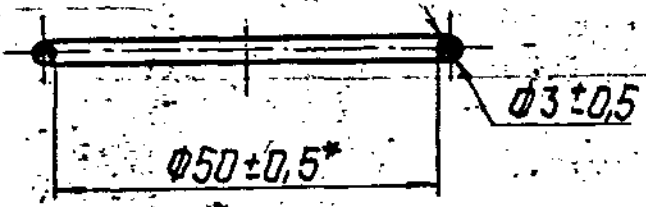
2A

ALT. MATL. : RUBBER GRADE BNC TO SPECN. CQA(HV)/NBR+CR

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

			EST. WT. (kg) 0.062 0.074 ③	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.	
			MATERIAL :- HOSE *	USED ON :- CB 3342-00-21
3	14.11.08	NOTN. NO: 2002-04 (F-158)		
2A	12-6-08	AUTHY: LT. No. TC/GEN/IND-III DT. 02-04-08.		
ISSUE	DATE	NATURE OF AMENDMENTS		
DRN		SCALE :- 1:1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
		DIMENSIONS IN mm		
CHD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69		TITLE :- HOSE
APPD		ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 3342-252-3
DATE	09.5.07			
SIZE	A4			

DRAWING NUMBER
3342-254



1. *Размер обеспечивается инструментом.
2. Маркировать на этикетке.
3. В пропускном исполнении - Т III Н 100 ГОСТ 15152-69.
4. Остальные требования по TY 005216-75

5. Допустимо изготовление в прессформе для детали 908.01.32.

1. *DIMENSIONS IS ENSURED BY TOOL.
2. TO BE MARKED ON A TAG.
3. TO BE MADE AS PER T III H 100, GOST 15152-69.
4. THE REST OF THE REQUIREMENTS AS PER TY 005216-75.

EXPLANATORY NOTE :

5. MATERIAL QUOTED : RUBBER 783-2-251231 TY 005216-75.
 CODE - 251231 - UNVULCANIZED OIL AND PETROL RESISTANT RUBBER.
 RUBBER GRADE : 783-2.
 OPERATING TEMPERATURE : -40 TO + 80°C.
 WORKING MEDIUM - OIL & PETROL.
 DURING ENDUSE IT SHOULD WITHSTAND A PRESSURE UPTO - 10 Kg/cm².

MECHANICAL PROPERTIES :

RUPTURE STRENGTH	=	125 Kg/cm ² (min)
ELONGATION AT RUPTURE	=	250 % (min)
HARDNESS TO TYP DEVICE %	=	65 - 80
DENSITY g/cm ³	=	1.21 ± 0.05

KVD No: 78613

PLOT 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 LETTERS!

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

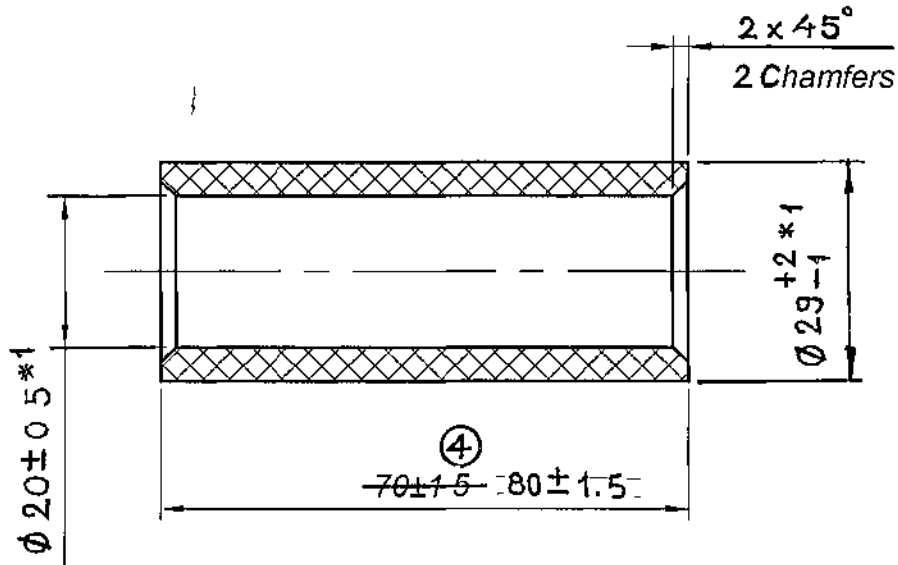
DRN	<i>[Signature]</i>	MATERIAL:-	USED ON
CHD	<i>[Signature]</i>	783-2-251231	CB 3342-00-8 CB
TCD	<i>[Signature]</i>	TY 005216-75	
APPD	<i>[Signature]</i>	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	
DATE	26-06-86	AVAD!	
SCALE:-	1 : 1	TITLE	
DIMENSIONS IN mm		RING	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS:2102-69		D S EAT NUMBER	
ALL THREADS TO CONFORM TO		DRAWING NUMBER	
ISSUE DATE	NATURE OF AMENDMENTS	3342-254	

A
10

DRG INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

DRAWING NUMBER
3342-256

SHEET No 1 OF 1



- 1 *Hose is of gasket material 40Y20-13 TY 0056016-87
- 2 In tropical construction, faces of parts should be coated with elastomeric adhesive of brand 23-C-A TY 38-105290-81, part should be marked by yellow paint
- 3 ^{*1} Dimension is given for reference

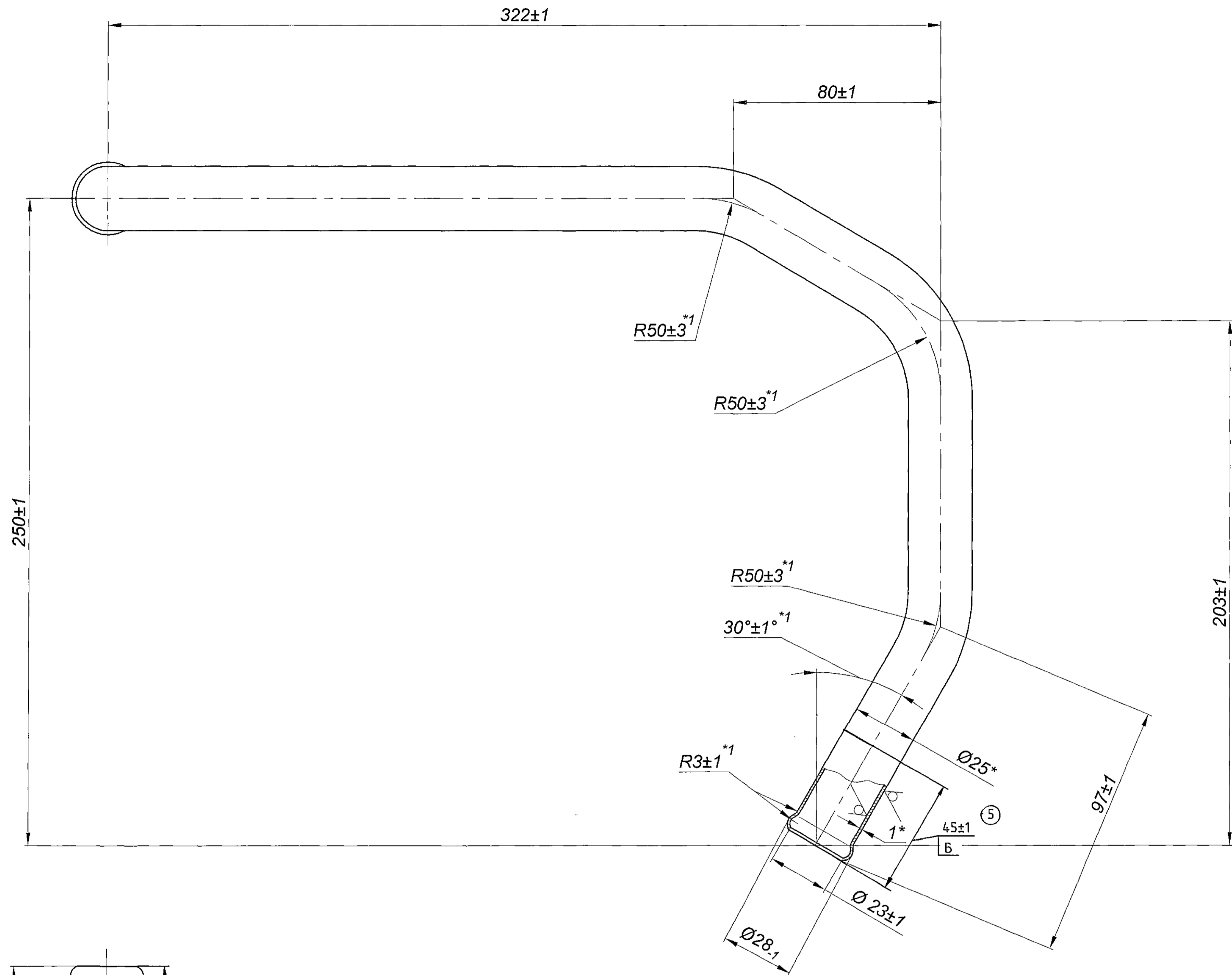
F-6
42
106

3A ALT. MATL. . RUBBER GRADE BNC TO SPECN. CQA(HV)/NBR+CR

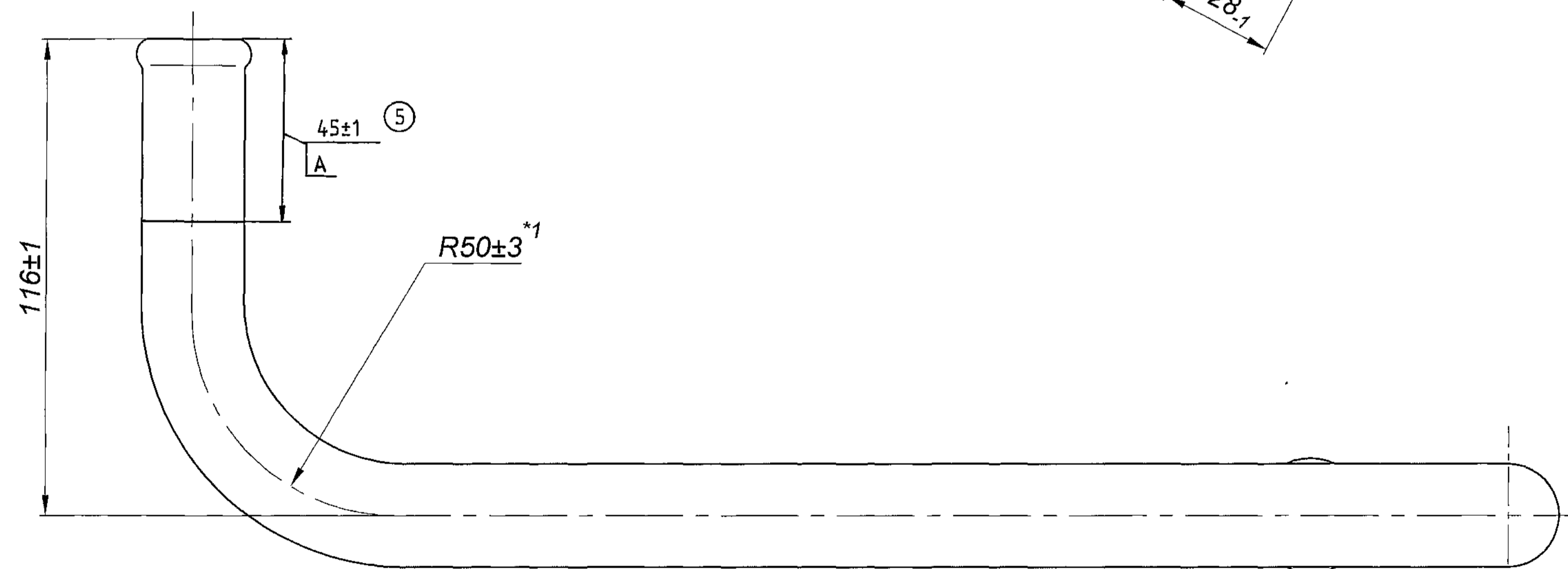
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

		EST WT (kg)	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)	
		0.022 0.025		
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.		
		MATERIAL -	USED ON -	
4	14.11.08	HOSE *	CB 3342-00-21	
3A	12-6-08	NOTN. NO 2002-04 (F-158)		
ISSUE	DATE	NATURE OF AMENDMENTS		
DRN		SCALE - 1 1		
CHD		DIMENSIONS IN mm		
APPD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69		
DATE		ALL THREADS TO CONFORM TO		
09 6 07		D S CAT NUMBER	DRAWING NUMBER	
SIZE A4			3342-256	

40/ (✓) (✓)



1. Straightened pipe length $L \approx 625$ mm.
2. Coating: is bakelite varnish as per instructions VIT-665-86.
Varnish ГФ-95 GOST 8018-70 as per VJT-628-86
3. Ovality tolerance at bent places is max 2 mm (semidifference of diameters).
4. *Dimensions are given for reference.
5. ^{*1}Dimensions are ensured by tool.
6. TRACES FROM BENDING TOOL, DENTS WITHOUT UNDERCUTS HAVING DEPTH UPTO 1MM IN QUANTITY UPTO 2 PIECES EXCEPT SECTION A AND B IS PERMITTED.



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

EST WT 0.48 TO BE STAMPED OR MARKED WHERE INDICATED THIS # (LETTERS)

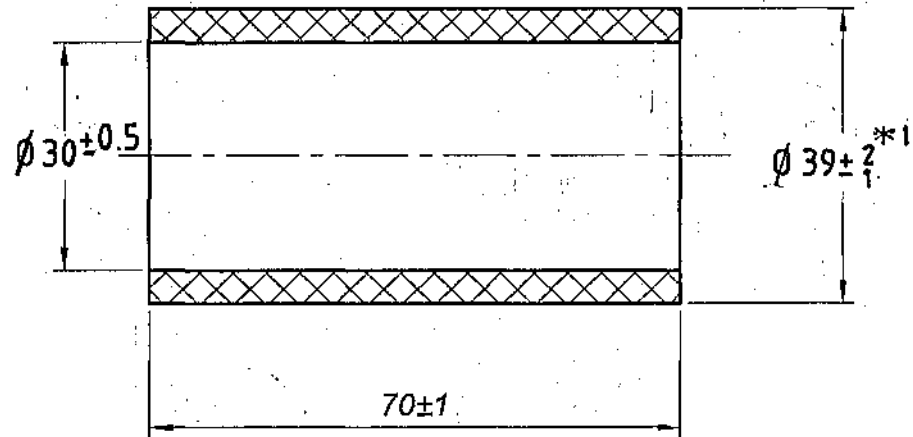
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

DRN	CHD	APPD	DATE	SCALE - 1:1	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69	ALL THREADS TO CONFORM TO	DRN	CHD	APPD	DATE	MATERIAL - PIPE	USED ON -
												25x1 GOST 8734-75 B 10 GOST 8733-87	Sb 3342-00-21
								CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)					
								AVADI					
								TITLE -		TUBE			
								D S CAT NUMBER		DRAWING NUMBER			
										3342-279			
5	23.10.08	NOTN NO: 2002-56 (F-158)											
ISSUE	DATE	NATURE OF AMENDMENTS											

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 2

DRAWING NUMBER
3342-298

SHEET No. 1 OF 1



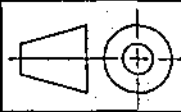
- *Hose is of gasket material 40Y30-7 TY 0056016-87.
- In tropical construction, faces of parts should be coated with elastomeric adhesive of brand 23-C-A TY 38-105290-81, part should be marked with yellow paint.
- *1 Dimension is given for reference.

F-6
56
106

(2A) ALT. MATL. : RUBBER GRADE BNC TO SPECN. CQA(HV)/NBR+CR

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

		EST. WT. 0.055	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.	
		MATERIAL :- HOSE*	USED ON :- Cb 3342-00-21
2A	12-6-08	AUTHY: LT. No. TC/GEN/IND-III DT. 02-04-08.	
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN		SCALE :- 1:1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI
		DIMENSIONS IN mm	
CHD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69	TITLE :- HOSE
APPD		ALL THREADS TO CONFORM TO	D S CAT NUMBER
DATE	10.5.07		
SIZE A4		DRAWING NUMBER 3342-298	

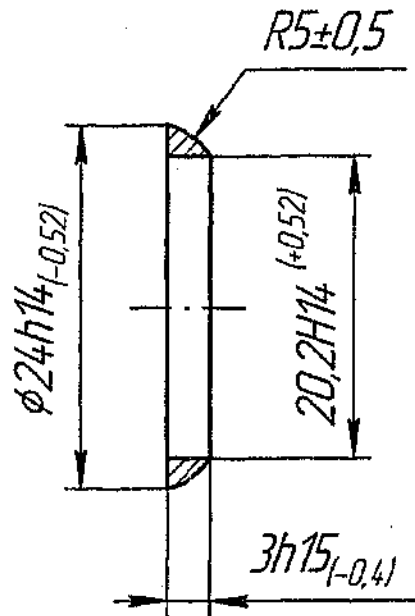


DRAWING NUMBER
3342 - 304

SHEET No. 1 OF 1

20 ✓

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE -NIL



Alternate material:- Steel 10kn, 35 GOST 1050-88.

F-158

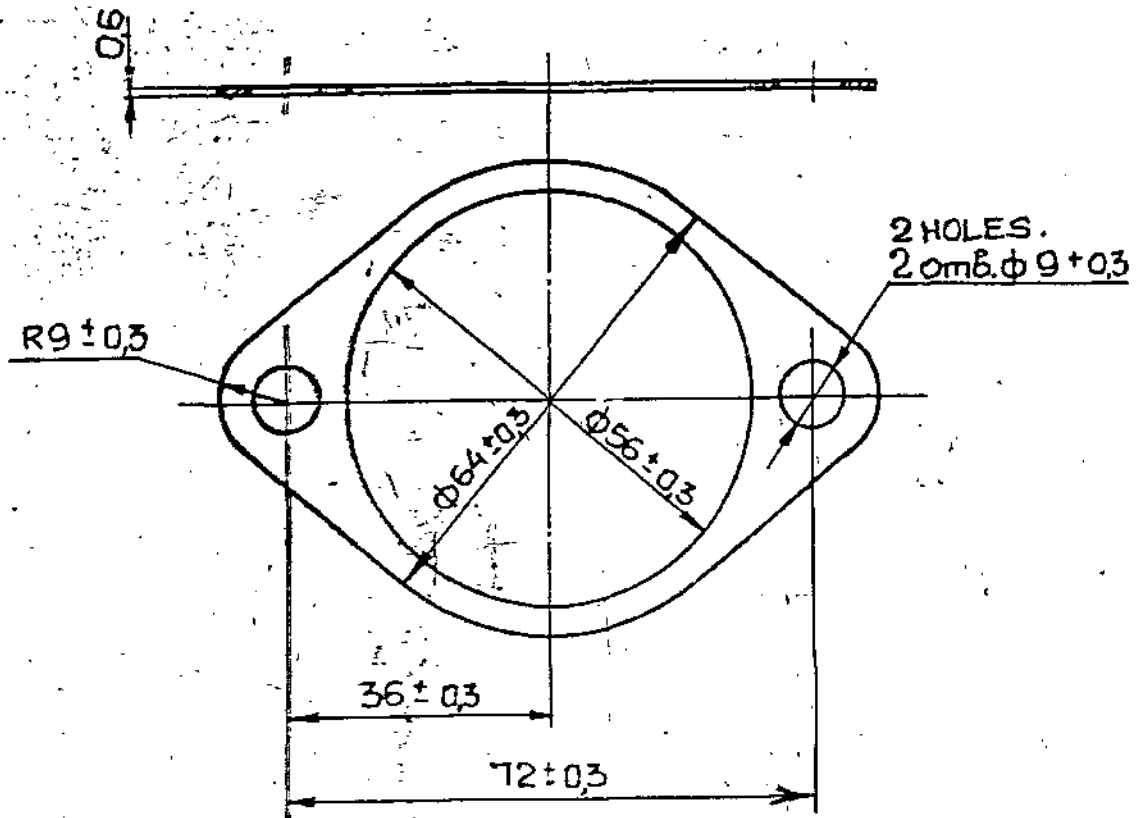
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

			EST. WT. (Kg) 0.0023	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.	
			MATERIAL :- STEEL 20 GOST 1050-88	USED ON :- 3342-49-2
ISSUE	DATE	NATURE OF AMENDMENTS		
DRN <i>B. Anand</i>		SCALE :- 2 : 1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
CHD <i>Prasanna</i>		DIMENSIONS IN mm		
APPD <i>R. Srinivasan</i>		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69		TITLE :- RING
DATE 4-12-08		ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 3342 - 304

SIZE A4

301-97-1

2



RUSSIAN ORIGINAL ISSUE - NIL

~~Допускается изготовление из паронита
РМБ 0,6 ГОСТ 481-80~~

① Заменитель материала паронит РМБ ГОСТ 481-80

Резин

1. Alternate material: Rubberized asbestos Fabric РМБ Т. GOST 481-80. [** RUBBERIZED ASBESTOS
2. IN TROPICAL DESIGN, TO BE MANUFACTURED FROM RUBBERIZED ASBESTOS FABRIC РМБ Т. GOST 481-80 AND LETTER 'T' IS TO BE MARKED WITH YELLOW PAINT.

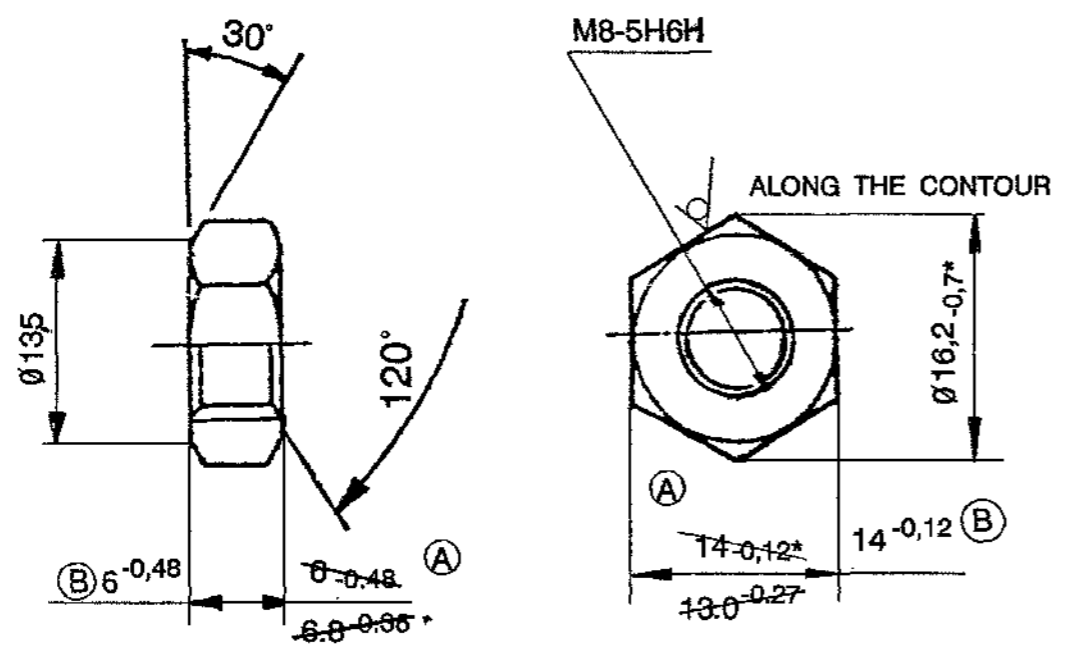
(A) PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

		EST. MASS 0.0009 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	
A	26.10.89	Authy. No. BK 86-195.	
ISSUE	DATE	NATURE OF AMENDMENTS	MATERIAL:- **SEE ABOVE USED ON:- СБ 3301-00-37 СБ 3342-00-8
DHN	<i>Ornifol</i>	SCALE: 1 : 1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI
CHD	<i>Ornifol</i>	DIMENSIONS IN mm	
TCD	<i>Ornifol</i>	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED	TITLE :- GASKET
APPD	<i>Ornifol</i>		
DATE 7-4-88	ALL THREADS TO CONFORM TO		D S CAT NUMBER
			DRAWING NUMBER 301-97-1

COMMON TO V-92S2 & UTD-20 ENGINES
DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - N/L
(B. JAYAVELU)
JTO (D)

DRAWING NUMBER
351 - 02

Rz40 (✓)



EXPLANATORY NOTE :

7. MATERIAL QUOTED :- HEXAGON BAR
14-4 GOST 8560-78
45-5 GOST 1051-73

BRIGHT STEEL OF HEXAGONAL CROSS SECTION 14mm ACROSS FLAT, ACCURACY CLASS - 4 TO GOST 8560-78. AND MANUFACTURED FROM COLD DRAWN SIZED STEEL OF GROUP B SURFACE QUALITY TO GOST 1051-73.
ALTERNATE MATERIAL QUOTED - STEEL GRADE 40 & 50 TO GOST 1050-74.

CHEMICAL COMPOSITION :

STEEL GRADE	C O N T E N T O F E L E M E N T S %							
	C	Si	Mn	Cr(max)	S	P	Ni	Cu
40	0.37-0.45	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15
45	0.42-0.50	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15
50	0.47-0.55	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15

MECHANICAL PROPERTIES :

STEEL GRADE	YIELD POINT Kgf/mm ² (min)	ULTIMATE TENSILE STRENGTH Kgf/mm ² (min)	PERCENTAGE ELONGATION (min)	REDUCTION OF AREA % (min)	IMPACT STRENGTH Kgf/cm ² (min)
40	34	58	19	45	6
45	36	61	16	40	5
50	38	64	14	40	4

- ROLLED STOCK OF GROUP B CLASS 4 GOST 1051-73 MAY BE USED TO ENSURE HIGH QUALITY OF COATING, IT IS ALLOWED TO ELIMINATE SURFACE DEFECTS OF ROLLED STOCK WITH DECREASE OF DIMENSIONS AS PER ACCURACY CLASS 5.
- ALTERNATE MATERIAL :- STEEL GRADES 40 AND 50 GOST 1050 - 74.
- THE REST OF THE TECHNICAL REQUIREMENTS AS PER STANDARD 82052 - 00.
- COATING :- Cd3, CHROMATIZING AS PER UUL-104 WITH ELIMINATION OF HYDROGEN EMBRITTELEMENT.
- *DIMENSIONS FOR REFERENCE.

Material: STEEL 709M40 (EN-19) TO BS-970 Pt-1-1983

- ** CQA(HV)S.06.606E
- CQA(HV)S.06.610E
- Cb 3312-90-9

Eb 20-01-00-8, Cb 20-06-12-6, Cb 20-06-13-6, Cb 20-09-07,
Cb 20-19-00-1, Cb 20-11-00-6, Cb 20-12-00-13, Cb 20-13-01-8,
Cb 20-20-00-10, Cb 20-22-00-7, Cb 20-08-00-7, Cb 3301-00-37,
Cb 306-01-20, Cb 306-02-20, Cb 306-03-3, Cb 306-04-2, Cb 321-04-4, Cb 447-01-1,
Cb 421-04-3, Cb 421-18-1, Cb 3301-00-44, Cb 3301-15-44, Cb 306-01-36,
Cb 306-02-36, Cb 3308-15-2, Cb 3312-90-14, Cb 419-00-20, Cb 3320-00-43,
Cb 315-663-33, Cb 3334-02-10, Cb 3336-00-11, Cb 337-100, Cb 3342-00-21.

USED ON:- **
Cb 406-12-44
Cb 406-13-44
Cb 20-27-00-4
Cb 20-15-663-4
Cb 3342-00-8cb
Cb334-73-1
Cb3334-02-3
Cb327-145-10
Cb327-145-15
Cb315-663-21

ISSUE	DATE	NATURE OF AMENDMENTS
G	04.01.22	USED ON NUMBER ADDED.
F	04.01.20	USED ON NUMBER DELETED.
E	15.7.15	Pt. 11, 7 th Alt. Comm. Meeting Dt. 11.4.12
D	18.5.09	Authy: Third Alt. Comm. Minutes Point: 5 Dated 27-02-2009.
C	25.8.08	USED ON NUMBER ADDED
B	24-12-07	ALT. COMMITTEE MEETING MINUTES. POINT No. 2.18 Dt. 18-12-2007.
A	15-03-04	AUTHY. Lt. No.110094/IND-III/577, Dt. 19-02-04.

DRN Sd/= CHD Sd/= TCD Sd/=

DATE 08-05-86

SCALE:- 2:1

DIMENSIONS IN mm

TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69

ALL THREADS TO CONFORM TO

MATERIAL :-
14-4 GOST 8560-78
45-5 GOST 1051-73

CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)
AVADI

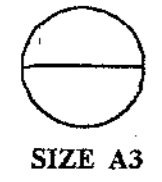
TITLE:-
NUT M8

D S CAT NUMBER DRAWING NUMBER
351 - 02

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

EST. WT. 0.0055 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

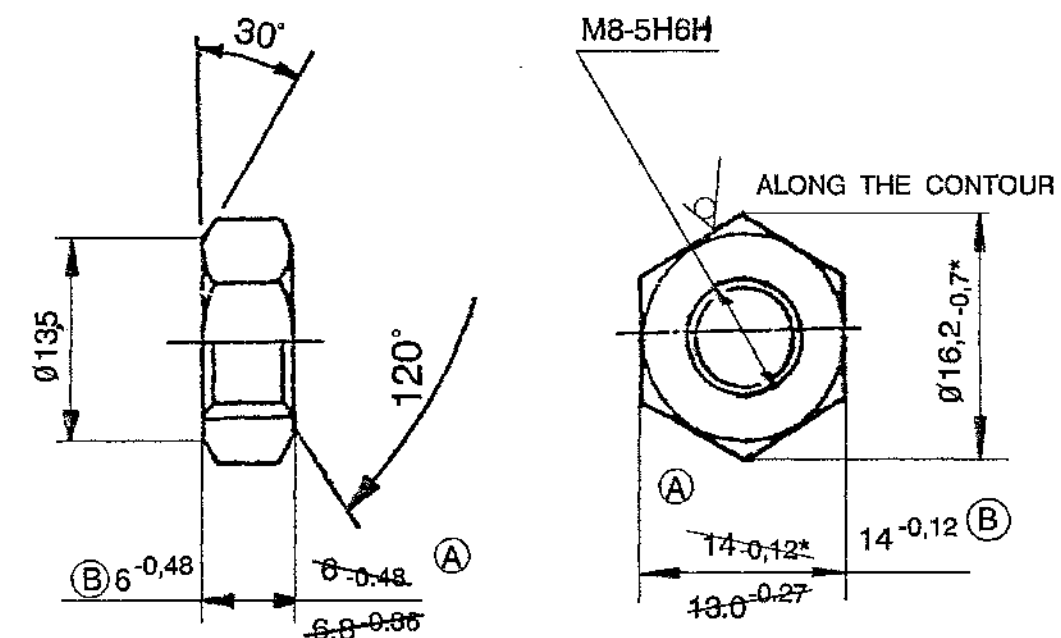
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.



COMMON TO V-92S2 & UTD-20 ENGINES
DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE -N/I/L
(B. JAYAVELU)
JTO (D)

DRAWING NUMBER
351 - 02

Rz40 ✓ (✓)



EXPLANATORY NOTE :

7. MATERIAL QUOTED :- HEXAGON BAR ^{14-4 GOST 8560-78}
_{45-5 GOST 1051-73}

BRIGHT STEEL OF HEXAGONAL CROSS SECTION 14mm ACROSS FLAT, ACCURACY CLASS - 4 TO GOST 8560-78. AND MANUFACTURED FROM COLD DRAWN SIZED STEEL OF GROUP B SURFACE QUALITY TO GOST 1051-73.
ALTERNATE MATERIAL QUOTED :- STEEL GRADE 40 & 50 TO GOST 1050-74.

CHEMICAL COMPOSITION :

STEEL GRADE	C O N T E N T O F E L E M E N T S %							
	C	Si	Mn	Cr(max)	S	P	Ni	Cu
40	0.37-0.45	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15
45	0.42-0.50	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15
50	0.47-0.55	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15

MECHANICAL PROPERTIES :

STEEL GRADE	YIELD POINT Kgf/mm ² (min)	ULTIMATE TENSILE STRENGTH Kgf/mm ² (min)	PERCENTAGE ELONGATION (min)	REDUCTION OF AREA % (min)	IMPACT STRENGTH Kgrm/cm ² (min)
40	34	58	19	45	6
45	36	61	16	40	5
50	38	64	14	40	4

- ROLLED STOCK OF GROUP B CLASS 4 GOST 1051-73 MAY BE USED TO ENSURE HIGH QUALITY OF COATING, IT IS ALLOWED TO ELIMINATE SURFACE DEFECTS OF ROLLED STOCK WITH DECREASE OF DIMENSIONS AS PER ACCURACY CLASS 5.
- ALTERNATE MATERIAL :- STEEL GRADES 40 AND 50 GOST 1050 - 74.
- THE REST OF THE TECHNICAL REQUIREMENTS AS PER STANDARD 82052 - 00.
- COATING :- Cd 3, CHROMATIZING AS PER UUL-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
- *DIMENSIONS FOR REFERENCE.

ⓓ Material: STEEL 709M40 (EN-19) TO BS-970 Pt-1-1983

**
ⓔ CQA(HV)5.06.606E
CQA(HV)5.06.610E

Eb 20-01-00-8, Cb 20-06-12-6, Cb 20-06-13-6, Cb 20-09-07,
Cb 20-19-00-1, Cb 20-11-00-6, Cb 20-12-00-13, Cb 20-13-01-8,
Cb 20-20-00-10, Cb 20-22-00-7, Cb 20-08-00-7, Cb 3301-00-37,
Cb 306-01-20, Cb 306-02-20, Cb 306-03-3, Cb 306-04-2, Cb 321-04-4, Cb 447-01-1,
Cb 421-04-3, Cb 421-18-1, Cb 3301-00-44, Cb 3301-15-44, Cb 306-01-36,
Cb 306-02-36, Cb 3308-15-2, Cb 3312-90-14, Cb 419-00-20, Cb 3320-00-43,
Cb 315-663-33, Cb 3334-02-10, Cb 3336-00-11, Cb 337-100, Cb 3342-00-21

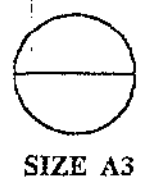
USED ON:- **
ⓔ Cb 406-12-44
Cb 406-13-44
Cb 20-27-00-4
Cb 20-15-663-4
Cb 3342-00-8cb
Cb 334-73-1
Cb 3334-02-3
Cb 327-145-10
Cb 327-145-15
Cb 315-663-21

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

EST. WT. TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
0,0055 Kg

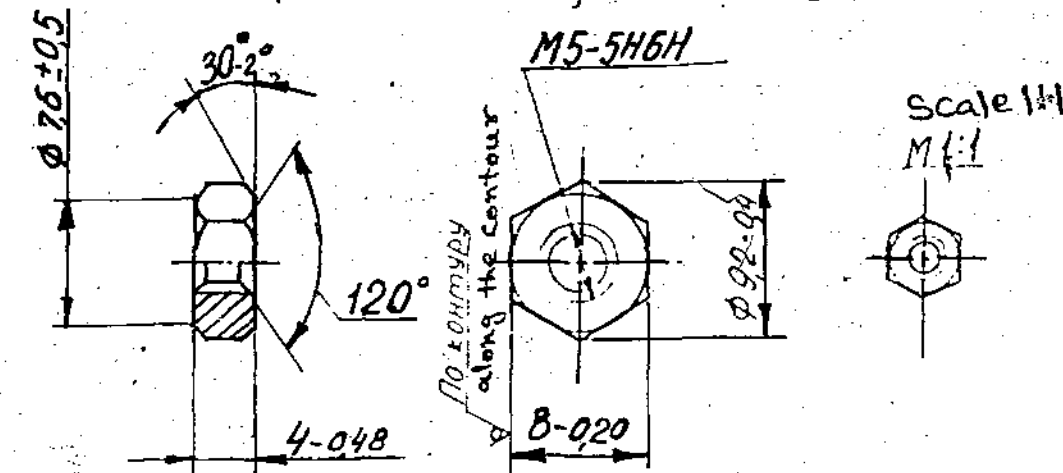
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	Sd/=	MATERIAL :-	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI
CHD	Sd/=	ⓓ 14-4 GOST 8560-78	
TCD	Sd/=	45-5 GOST 1051-73	
APPD	Sd/=	DATE	08-05-86
E	15.7.15	Pt. 11, 7 th Alt. Comm. Meeting Dt. 11.4.12	SCALE:- 2 : 1
D	18.5.09	Authy: Third Alt. Comm. Minutes Point: 5 Dated 27-02-2009.	DIMENSIONS IN mm
C	25.8.08	USED ON NUMBER ADDED	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69
B	24-12-07	ALT. COMMITTEE MEETING MINUTES. POINT No. 2.18 Dt. 18-12-2007.	TITLE :- NUT M8
A	15-03-04	AUTHY. Lt. No.110094/IND-III /577, Dt. 19-02-04.	
ISSUE	DATE	NATURE OF AMENDMENTS	D S CAT NUMBER
			DRAWING NUMBER 351 - 02



SIZE A3

rolled stock of group B class 4 GOST 1051-73 may be used. To ensure high quality of coating, it is allowed to eliminate surface defects of rolled stock with decrease of dimension as per accuracy class - 5.



- The component may be manufactured from Steel GOST 1050-74.
- Chamfer 120° should be made up to the major diameter of thread.
- Shift of hole axis up to 0.25 mm. is permitted.
- The thread may be checked before coating.
- Coating :- Cd 9, Chromating as per ugn-104 with elimination of Hydrogen embrittlement.
- The rest of the technical requirements as per standard 82052-00.
- Alternate material :- Steel, grades 40 and 50 GOST 1050-74.

EXPLANATORY NOTE

9. i) REFERENCE MATERIAL QUOTED:
GAUGED HEXAGONAL STEEL BAR CLASS OF ACCURACY 4, 0.01-0.100mm A/F TO GOST 8560-78 FROM HIGH GRADE SIZED STEEL SURFACE QUALITY 'B' TO GOST 1051-73 AND MANUFACTURED IN ACCORDANCE WITH QUALITY CARBON STRUCTURAL STEEL GRADE 45 TO GOST 1050-74
- ii) REFERENCE NOTE ON ALTERNATE MATERIAL : QUALITY CARBON STRUCTURAL STEEL GRADES 40 AND 50 TO GOST 1050-74
- a) CHEMICAL COMPOSITION : AS PER GOST 1050-74

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

RESIDUAL CONTENT OF COPPER AND NICKEL SHOULD NOT EXCEED 0.25% EACH

b) MECHANICAL PROPERTIES : AS PER GOST 1050-74

GRADE OF STEEL	ULTIMATE TENSILE STRENGTH Kg/mm ²	YIELD POINT Kg/mm ²	ELONGATION %	REDUCTION IN AREA %	IMPACT STRENGTH Kgfm/cm ²	HARDNESS BHN MAX	REMARKS
45	61	36	16	40	5	229	REF MATL
40	58	34	19	45	6	217	ALT MATL
50	64	38	14	40	4	241	ALT MATL

Handwritten notes:
rolled
CD 3335
18-5
15-5
18-5
15-5
18-5
15-5

Material: STEEL 709M40 (EN-19) TO BS-970 Pt-1-1983

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

EST. MASS 0.0012 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 OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

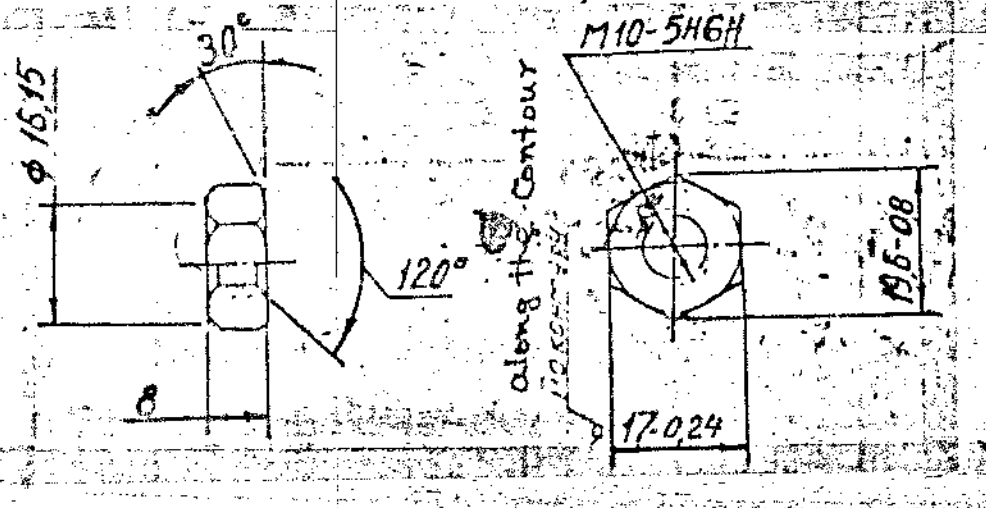
DRN	CHD	TCD	APPD	DATE	SCALE - 2 : 1	MATERIAL: HEXAGON BAR 45 GOST 1051-73	USED ON: CB 3335 00 24
						CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI	
						TITLE: NUT M5	
						D S CAT NUMBER	DRAWING NUMBER 351 13
ISSUE	DATE	NATURE OF AMENDMENTS	Authy: Third Alt. Comm. Minutes Point: 15 Dated 27-02-2009.		ALL THREADS CONFORM TO		

(A-1)

C A 2

DRAWING NUMBER

351-50



1. CHAMFER 120° SHOULD BE MADE UP TO THE MAJOR DIAMETER OF THREAD.
2. THE THREAD MAY BE CHECKED BEFORE COATING.
3. COATING : CADMIUM 9, CHROMATIZING AS PER 3431-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
4. THE REST OF THE TECHNICAL REQUIREMENTS - AS PER STANDARD 82052-00.
5. ALTERNATE MATERIAL : STEEL, GRADES 40 AND 50 GOST 1050-74.
6. ROLLED STOCK OF GROUP 'B' CLASS 4 GOST 1051-73 MAY BE USED. TO ENSURE HIGH QUALITY OF COATING, IT IS ALLOWED TO ELIMINATE SURFACE DEFECTS OF ROLLED STOCK WITH DECREASE OF DIMENSION AS PER ACCURACY CLASS 5.

ⓑ Material: STEEL 709M40 (EN-19) TO BS-970 Pt-1-1983

EXPLANATORY NOTE:

HEXAGONAL BAR: 17-4 GOST 8560-78 ⓑ
 45 GOST 1051-73
 ALTERNATE MATERIAL QUOTED: 40 & 50, GOST 1050-74
 BRIGHT, STEEL HEXAGONAL BAR 17mm ACROSS FLATS,
 CLASS OF ACCURACY-4, TO GOST 8560-78. GRADE, 45, GOST 1051-73
 ⓑ = WITH SURFACE QUALITY

Rz40/ (V)

(a) CHEMICAL COMPOSITION:

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

(b) MECHANICAL PROPERTIES

GRADE OF STEEL	TENSILE STRENGTH Kgf/mm ² (min)	YIELD POINT Kgf/mm ² (min)	ELONGATION % (min)	REDUCTION IN AREA % (min)	IMPACT STRENGTH Kgf/cm ² (min)
40	58	34	19	45	6
45	61	36	16	40	5
50	64	38	14	40	4

Ⓒ CQA(HV)5.06.605E
 CQA(HV)5.06.609E

Ⓐ CB 3335-00-9, EB 3336-00-11, CB 3342-00-21
 ** CB 20-13-00-9, CB 20-34-00-1, CB 3301-00-37, CB 3301-15-30, CB 3320-00-33, CB 3301-00-44, CB 3301-15-44, CB 3320-00-43, CB 329-75-1

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 # 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	15.7.15	Pt. 11, 7 th Alt. Comm. Meeting Dt. 11.4.12
CHD	18.5.09	Authy: Third Alt. Comm. Minutes Point: 5 Dated 27-02-2009.
TCD	25.8.08	USED ON NUMBER ADDED
APPD		
DATE	15-7-89	
SCALE	1:1	
DIMENSIONS IN mm		
TOLERANCE ON DIMS		
UNLESS OTHERWISE STATED IS: 2102-69		
ALL THREADS TO CONFORM TO		
ISSUE DATE		NATURE OF AMENDMENTS

MATERIAL: ⓑ
 17-4 GOST 8560-78
 45-6 GOST 1051-73
 USED ON: **
 CB 20-35-00-5
 CB 20-06-01-5, CB 306-04-2,
 CB 20-06-02-5, CB 20-06-04

CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)
 AVADI

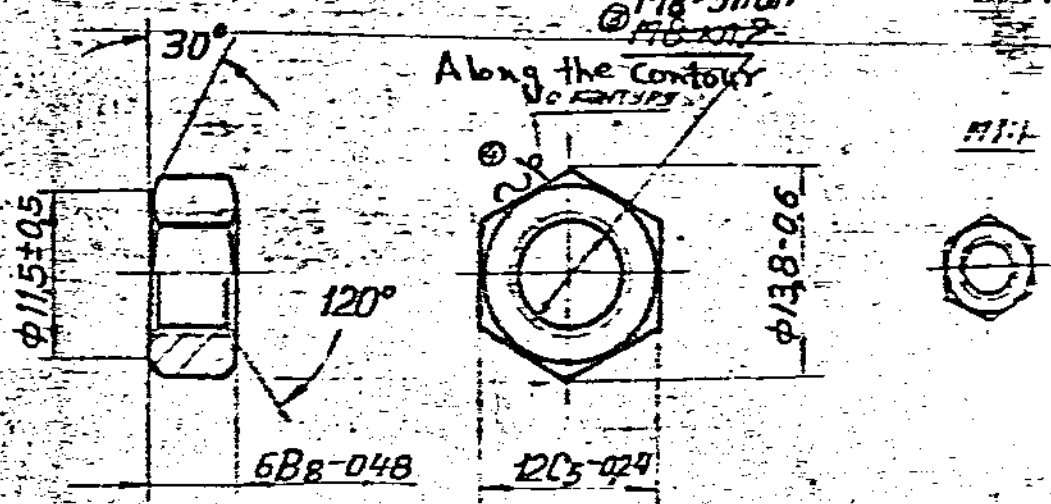
TITLE
NUT M10

D S CAT NUMBER
 DRAWING NUMBER
351-50

COMMON TO V-92S2 & UTD-20 ENGINES

A-11
 42
 SIZE A3

351-67



EXPLANATORY NOTE:

Material Quoted: Hexagon bar 12-5 GOST 8560-78
45 GOST 1051-73

Bright steel Hexagon bar from grade 45 to GOST 1050-74 with across flats 12 mm, of accuracy class 5.

Chemical composition

Carbon = 0.42-0.50 Chromium = 0.25 max.
 Silicon = 0.17-0.37 Sulphur = 0.040 max.
 Manganese = 0.50-0.80 Phosphorus = 0.035 max.
 Copper = 0.25 max. Nickel = 0.25 max.

Mechanical Properties:

yield point kgf/mm² = 36 (min)
 ultimate tensile strength = 61 (min)
 Elongation % = 16 (min)
 Reduction in area % = 40 (min)
 Impact strength kgf/cm² = 5 (min)

4. The thread may be checked before coating.
5. The rest of the technical requirements as per standard 82052-00.
6. Coating: - Cadmium & Chromating as per 434-104 with elimination of hydrogen embrittlement.

HEXAGON BAR 12-5 GOST 8560-78
45 GOST 1051-73

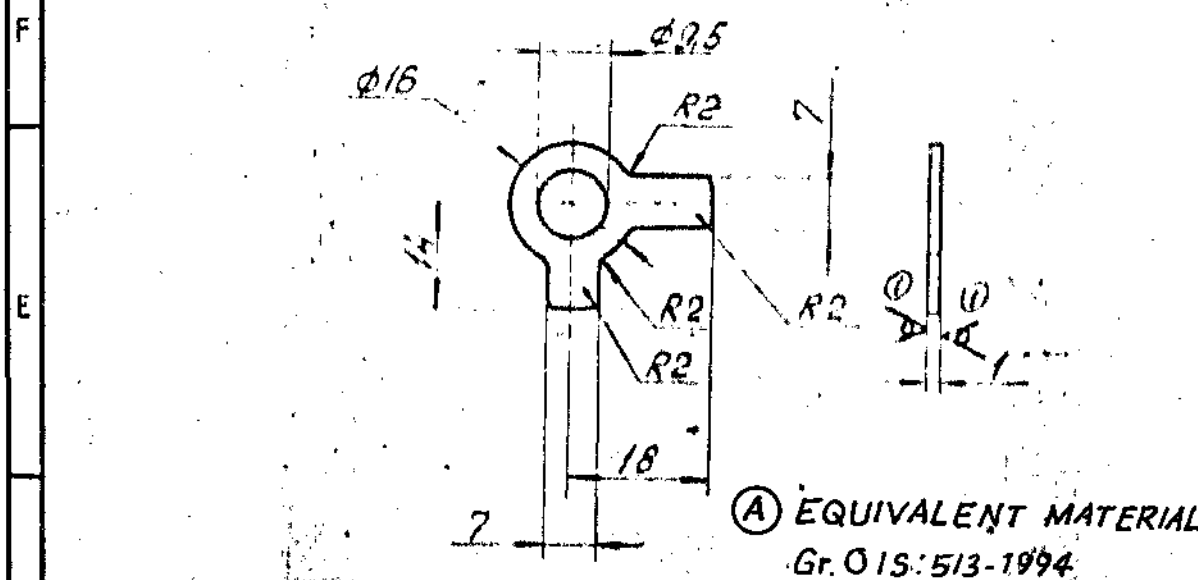
Ⓐ EQUIVALENT MATERIAL STEEL
 45C8 TO IS:1570

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

		EST. MASS	TO BE STAMPED OR MARKED WHERE INDICATED THIS #
		0.004 Kg	(LETTERS)
A	13.8.10	4 th Alt. Com. Meeting Minute Point No.11 Dt: 26-10-09	ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN		SCALE: 2:1	MATERIAL: * SEE ABOVE
CHD		DIMENSIONS IN mm	USED ON: C53338-401-10
TCB		TOLERANCE ON DIMS UNLESS OTHERWISE STATED	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AYAD
APPROV		ALL THREADS CONFORM TO	TITLE: NUT M8
DATE	15/57		D/S CAT NUMBER: DRAWING NUMBER: 351-67

DRAWING NUMBER
353-21

Rz80 (V)



(A) EQUIVALENT MATERIAL
Gr. OIS: 513-1994

2. Requirements for stamping - as per standard 82050-16
3. The component should be straightened after stamping.
4. Burrs are not allowed.
6. Coating :- Cd q. Chromating as per 1125A-10A with elimination of Hydrogen embrittlement.
7. Required finishing of surfaces being stamped should be ensured by tool.

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

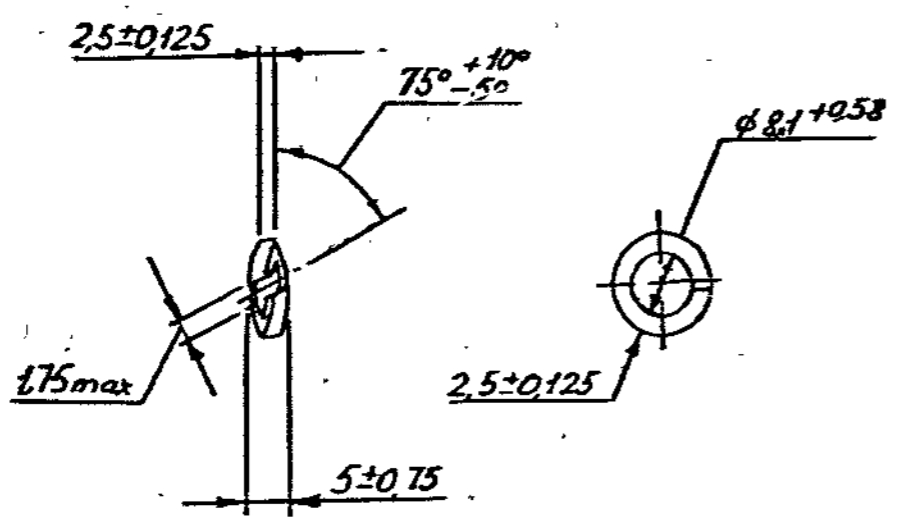
A-11
69

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

			EST. WT. 0.0016 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.	
B	15.7.15	Pt. 11, 7 th Alt. Comm. Meeting Dt. 11.4.12	MATERIAL :-	USED ON **
A	17-3-10	4 th Alt. Comm. Meet. Minutes Point No.1 Dt:26-10-09.	STRIP 08NC-M-2-1 POST 505-71	CB 306-01-20, CB 20-06-01-5 CB 306-02-20 CB 20-06-02-5
ISSUE	DATE	NATURE OF AMENDMENTS		
DRN	15-2-89	SCALE :- 1:1 DIMENSIONS IN mm		
CHD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS 2102 -69		
TCO		ALL THREADS CONFORM TO		
APPO		U S CAT NUMBER		DRAWING NUMBER
				353-21
SIZE A4				

DRAWING NUMBER
353-24

✓
0



2. COATING ; CADMIUM 9, CHROMATIZING, AS PER U U A-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
3. WASHER 8T 65Γ 09 GOST 6402-70 MAY BE USED.

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

EXPLANATORY NOTE:

MATERIAL QUOTED: WASHER 8T, 65Γ, 06 GOST 6402-70.
ALT. MAT. QUOTED: WASHER 8T, 65Γ, 09 GOST 6402-70.
 CORRESPONDS DESIGN AND DIMENSIONS OF SPRING (LOCK) WASHERS.
 06 = CONVENTIONAL SYMBOL OF FINISH. (PARKERISING FOLLOWED BY OILING).
 09 = ZINC PLATING
 T = HEAVY ; 65Γ = GRADE OF STEEL AS PER GOST 1050-74. (65G)

CHEMICAL COMPOSITION: AS PER GOST 1050-74.

CONTENT OF ELEMENTS %							
C	Si	Mn	Cr	S	P	Cu	Ni
MAXIMUM							
0.62-0.70	0.17-0.37	0.90-1.20	0.25	0.040	0.035	0.25	0.25

WEIGHT OF STEEL WASHERS AND THEIR RESILIENCE PROPERTIES AS PER GOST 6402-70.

THEORETICAL WEIGHT OF 1000 STEEL WASHERS IN kg = 1.638
 ESTIMATED RESILIENCE OF WASHERS FROM STEEL GRADE 65G = 66.4 IN kg

MECHANICAL PROPERTIES: AS PER GRADE 65G GOST 1050-74.

YIELD POINT kgf/mm² (MIN) = 44
 ULTIMATE TENSILE STRENGTH (MIN) = 75 kgf/mm²
 ELONGATION % (MIN) = 9

COMMON TO V-92S2 & UTD-20 ENGINES

(A-8)

(B) EQUIVALENT MATERIAL
 75 C6 TO IS:2507/EN42 J BS:970

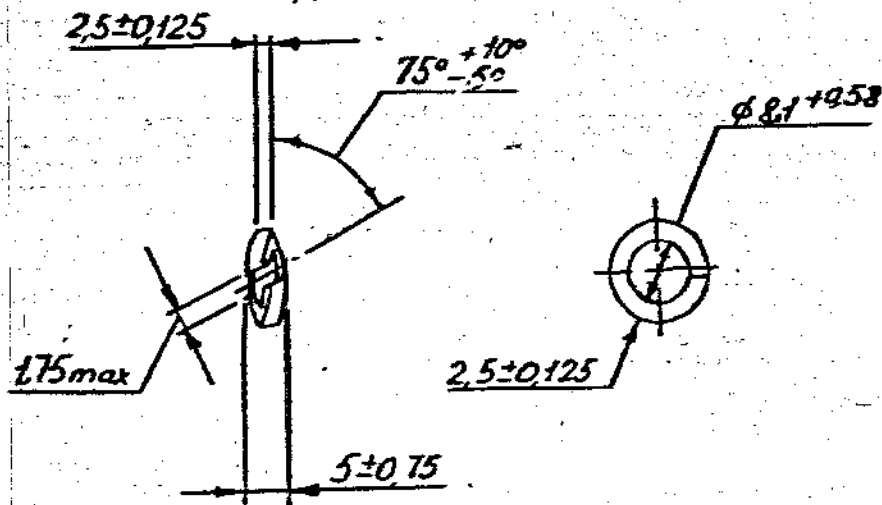
G	04.01.22	USED ON NUMBER ADDED.	EST WT 1.630 kg	TO BE STAMPED OR MARKED WHERE INDICATED THIS +
F	04.01.20	USED ON NUMBER ADDED	1000 PIECES	(LETTERS)
E	23.02.16	USED ON NUMBER ADDED	ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE	
D	15.7.15	Pt. 11, 7 th Alt. Comm. Meeting Dt. 11-4-12	MATERIAL 65Γ06	
C	18-3-15	Pt. 11 of 7th Alt Comm. Meeting Dt. 11-4-12	GOST 6402-70	
B	16.8.10	1 st Alt. Comm. Meeting Minutes Point No:12 Dt: 26-10-09	USED ON Cb 3342-00-8	
A	28-8-08	USED ON NUMBER ADDED	Cb 334-73-1, Cb 3334-02-3, Cb 3338-401-10	
ISSUE DATE	NATURE OF AMENDMENTS			
DRN	SCALE: 1:1			
CHKD	DIMENSIONS IN mm			
TCD	TOLERANCE ON DIMS UNLESS OTHERWISE STATED			
APPD	ALL THREADS CONFORM TO			
DATE	D S CAT NUMBER		DRAWING NUMBER	
SIZE A6			353-24	

- USED ON Cb 3342-00-8
- cb 303-00-16 (E)
 - cb 406-12-44
 - cb 345-00-4
 - cb 406-13-44
 - cb 3391-00-37
 - cb 447-00-1 (F)
 - cb 406-12-77 (A)
 - cb 406-13-77 (F)
 - cb 3301-15-30
 - cb 3308-00-47
 - cb 3312-90-9
 - cb 3320-00-33 (E)
 - cb 20-01-00-8
 - cb 20-01-08-7
 - cb 3321-00-16
 - cb 3301-15-30-01
 - cb 20-06-12-6
 - cb 20-06-13-6
 - cb 3301-00-44
 - cb 3301-15-44
 - cb 20-13-01-8
 - cb 20-19-00-1
 - cb 406-12-75
 - cb 406-13-75
 - cb 20-20-00-10
 - cb 20-22-00-7
 - cb 3308-15-2
 - cb 3312-00-22
 - cb 20-63-00-5
 - COA(HV) 5.06.001E (C)
 - cb 3320-00-43
 - cb 3321-00-26
 - cb 20-63-00-5
 - COA(HV) 5.06.606E (D)
 - cb 3334-00-47
 - cb 3334-02-10
 - cb 3336-00-11
 - cb 3342-00-21
 - COA(HV) 5.06.610E (D)

DRAWING NUMBER

353-24

✓



2. COATING ; CADMIUM 9, CHROMATIZING, AS PER UZ A-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
3. WASHER 8T 65Γ 09 GOST 6402-70 MAY BE USED.

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

COMMON TO V-92S2 & UTD-20 ENGINES

(A-B)

EXPLANATORY NOTE:

MATERIAL QUOTED: WASHER 8T, 65Γ, 06 GOST 6402-70.
 ALT. MAT. QUOTED: WASHER 8T, 65Γ, 09 GOST 6402-70.
 CORRESPONDS DESIGN AND DIMENSIONS OF SPRING (LOCK) WASHERS.
 06 = CONVENTIONAL SYMBOL OF FINISH. (PARKERISING FOLLOWED BY OILING).
 09 = ZINC PLATING
 T = HEAVY ; 65Γ = GRADE OF STEEL AS PER GOST 1050-74. (656)

CHEMICAL COMPOSITION: AS PER GOST 1050-74.

CONTENT OF ELEMENTS %							
C	Si	Mn	Cr	S	P	Cu	Ni
MAXIMUM							
0.62-0.70	0.11-0.37	0.90-1.20	0.25	0.040	0.035	0.25	0.25

WEIGHT OF STEEL WASHERS AND THEIR RESILIENCE PROPERTIES AS PER GOST 6402-70.

THEORETICAL WEIGHT OF 1000 STEEL WASHERS IN kg = 1.638
 ESTIMATED RESILIENCE OF WASHERS FROM STEEL GRADE 65G = 66-4 IN kg
 MECHANICAL PROPERTIES : AS PER GRADE 65G GOST 1050-74.
 YIELD POINT kgf/mm² (MIN) = 44
 ULTIMATE TENSILE STRENGTH (MIN) = 75 kgf/mm²
 ELONGATION % (MIN) = 9

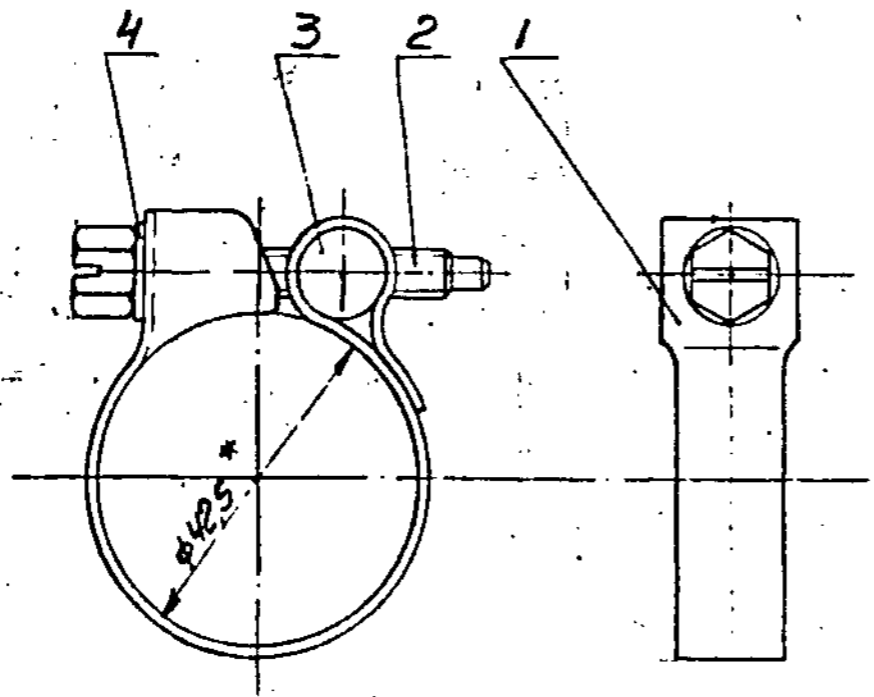
(B) EQUIVALENT MATERIAL
 75 C6 TO IS:2507/EN 42 J BS:970

		EST WT 1.630 Kg 1000 PIECES	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.	
D	15.7.15	Pt. 11, 7 th Alt. Comm. Meeting Dt. 11.4.12	MATERIAL 65Γ06 GOST 6402-70
C	18-3-15	Pt. 11 of 7 th Alt. Comm. Meeting Dt. 11.4-12	
B	16.8.10	4 th Alt. Comm. Meeting Minutes Point No:12 Dt:26-10-09	USED ON Cb 334-00-B Cb 303-00-16, Cb 406-12-44 Cb 406-13-44 Cb 3301-00-37 Cb 3301-15-30, Cb 3308-00-17 Cb 3312-90-9, Cb 3320-00-33 Cb 3321-00-16 Cb 3301-00-44, Cb 3301-15-44 Cb 406-12-75, Cb 406-13-75 Cb 3308-15-2, Cb 3312-00-22 Cb 3320-00-43, Cb 3321-00-26 Cb 3334-00-47, Cb 3334-02-10 Cb. 3336-00-11, Cb 3342-00-21
A	28-9-08	USED ON NUMBER ADDED	Cb 334-73-1, Cb 3334-02-3 Cb 3338-401-10 Cb 345-00-4 Cb 447-00-1
ISSUE DATE	NATURE OF AMENDMENTS		VARIOUS ASSEMBLIES OF UTD-20 Cb 20-01-00-8, Cb 20-01-08-7 Eb 20-06-12-6, Cb 20-06-13-6 Eb 20-13-01-8, Cb 20-19-00-1 Cb 20-20-00-10, Cb 20-22-00-7 Cb 20-63-00-5 CQA(HV)5.06.001E (C)
DRN	SCALE : 1 : 1		CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI
CHKD	DIMENSIONS IN mm		TITLE WASHER 8 T
TLD	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED		
APPD	ALL THREADS CONFORM TO		D S CAT NUMBER
DATE			DRAWING NUMBER 353-24

SIZE A4

DRAWING NUMBER
CB 421-18-2CB

DRG REPLACES CB 421-18-1CJ
 INTRODUCED VIDE N OF A BK 84-800



- FOR ASSEMBLY UNITS IN TROPICALIZED MAKE, COMPONENTS HAVING THE DESIGNATION "TM" IN THE PARTS LIST OF GIVEN DRAWING (IN COLUMN 'REMARKS') SHOULD HAVE PROTECTIVE COATING AS SPECIFIED IN THE WORKING DRAWINGS FOR COMPONENTS.

* DIMENSION FOR REFERENCE.

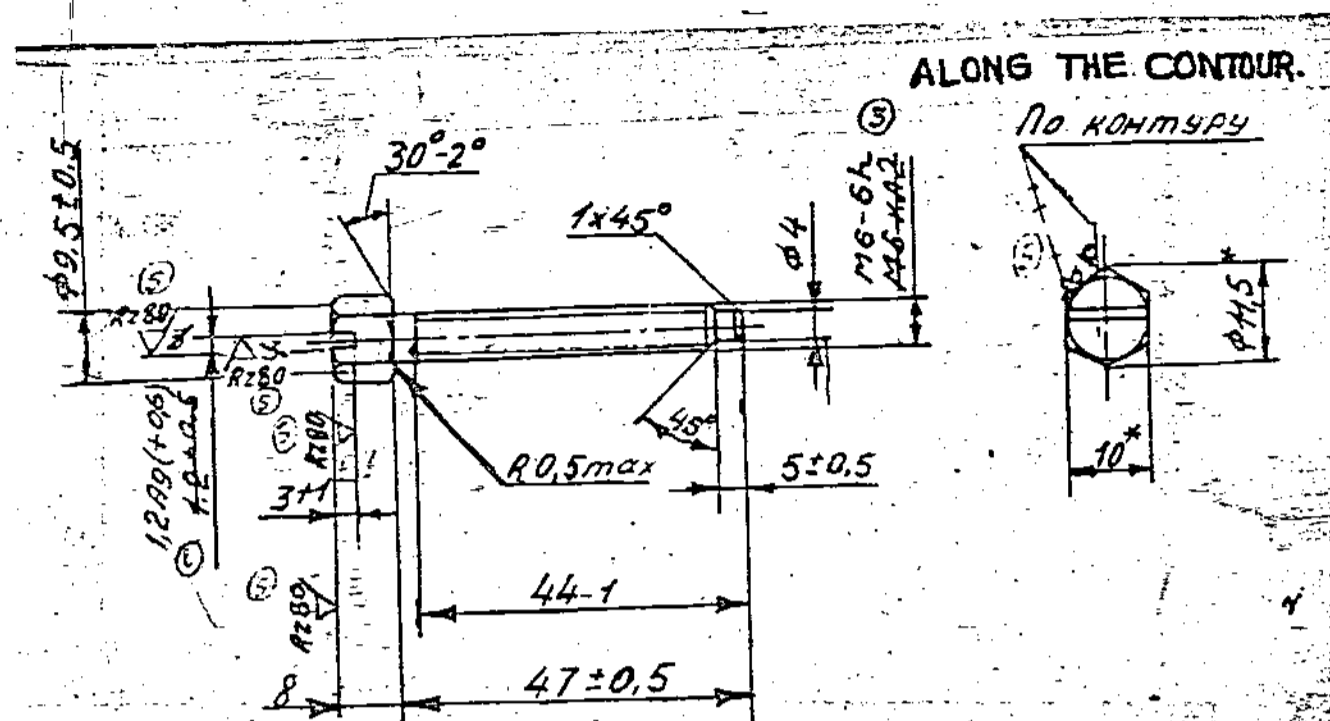
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

EST. WT. **0.062 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>sh</i>	MATERIAL:-	USED ON
			CHD	<i>sh</i>		CB 3321-00-16
			TCD	<i>sh</i>		
			APPD	<i>K.J.W</i>		
			DATE	24-12-98	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	AVADI.
			SCALE:-	1:1		
			DIMENSIONS IN mm			TITLE
			TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102-69.			CLIP ASSY
			ALL THREADS TO CONFORM TO		D'S CAT NUMBER	DRAWING NUMBER
						CB 421-18-2CB
8	7	6	ISSUE	DATE	NATURE OF AMENDMENTS	

SIZE A3



EXPLANATORY NOTE :-

14. MATERIAL QUOTED : 10-5 GOST 8560-78
45 GOST 1051-73

ALTERNATE MATERIAL QUOTED : STEEL GRADES 40 & 50 TO GOST 1050-74.

10.5 GOST 8560-78

40 GOST 1051-73

10 = ACCROSS FLATS OF HEXAGONAL BAR.

5 = CLASS OF ACCURACY.

40,45,50= GRADE OF STEEL : BRIGHT STEEL.

a) CHEMICAL COMPOSITION :- AS PER GOST 1050-74.

GRADE OF STEEL	C O N T E N T OF E L E M E N T S %								
	C	Si	Mn	Cr	S	P	Ni	Cu	
40	0.37-0.45	0.17-0.37	0.50-0.80	M A X I M U M					
				0.25	0.040	0.035	0.10	0.15	
45	0.42-0.50	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15	
50	0.47-0.55	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15	

b) MECHANICAL PROPERTIES :- AS PER GOST 1050-74.

GRADE OF STEEL	YIELD POINT	RELATIVE ELONGATION %	REDUCTION OF AREA %	IMPACT STRENGTH	ULTIMATE TENSILE STRENGTH	HARDNESS
	Kgf/mm ²			Kgf/mm ²	Kqf/cm ²	B H N
	M I N I M U M					MAX
40	34	19	45	6	58	217
45	36	16	40	5	61	229
50	38	14	40	4	64	241

(B) EQUIVALENT MATERIAL STEEL
45C8 TO IS:1570

2. TECHNICAL REQUIREMENTS FOR THREAD IN ACCORDANCE WITH STANDARD 82021-00.
3. TOLERANCE UNLESS OTHERWISE STATED FOR FEMALE COMPONENTS AS PER A7, FOR MALE COMPONENTS AS PER B7.
4. SHARP EDGES ARE NOT ALLOWED.
6. DIMENSIONS SHOULD BE CHECKED BEFORE COATING.
7. *DIMENSIONS FOR REFERENCE.
8. RADIUS FROM CUTTER $R \geq 30\text{mm}$ IS PERMISSIBLE AFTER CUTTING SLOT FOR SCREWDRIVER.
9. MAY BE MANUFACTURED FROM HEXAGON BAR 10.5 GOST 8560.78
40 GOST 1051-73
10. MAY BE MANUFACTURED BY HEADING. INCREASE OF SHANK BY 0.2 mm ON A LENGTH OF 3mm FROM THE HEAD IS PERMISSIBLE.
11. THREADS MAY BE FORMED BY ROLLING WITH DIAMETER OF NON-CUT PORTION WITHIN PITCH DIAMETER OF THREAD.
12. COATING: Cd 9, CHROMATIZING IN ACCORDANCE WITH $\mu\mu 104$ WITH SUBSEQUENT ELIMINATION OF HYDROGEN EMBRITTLEMENT.
13. ALTERNATE MATERIAL: STEEL, GRADES 40 AND 50 GOST 1050-74.

PLOT 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 OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	

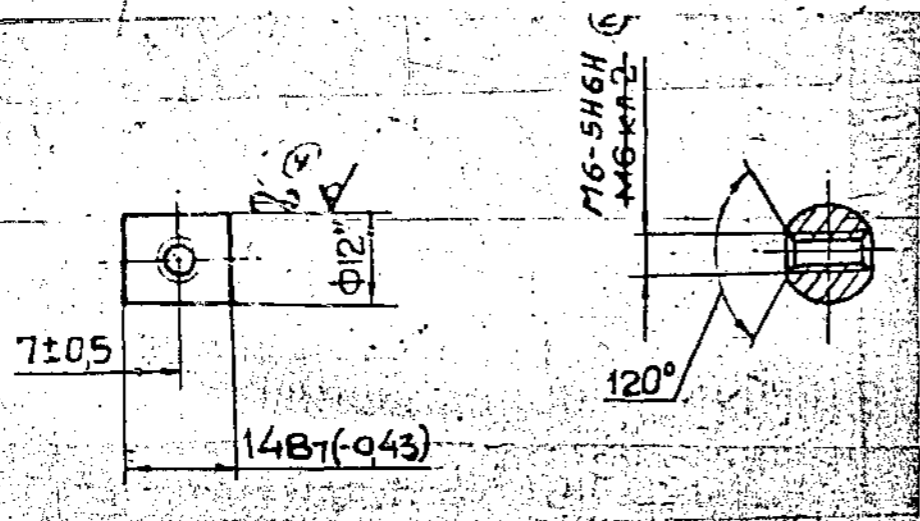
DRN	<i>Shankar</i>	MATERIAL	10-5 GOST 8560-78 45 GOST 1051-73	USED ON :-	CB 3321-05-3 (A) CS 421-18-2
CHD	<i>Shankar</i>	HEXAGON BAR			
TCD	<i>Narayan Prasad</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)			
APPD	<i>Shankar</i>	A V A D I			
DATE	26-06-86				
SCALE	1 : 1				
DIMENSIONS IN mm.		TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69		TITLE	
				BOLT CLAMP	
ISSUE	DATE	NATURE OF AMENDMENTS	D S CAT NUMBER	DRAWING NUMBER	
B	12-8-10	4 th Alt. Comm. Meeting Minutes		321-17-3	
A		Point No.11 Dt: 26-10-09	ALL THREADS TO CONFORM TO		
		AUTHY NOTN BK 85-361			

DRAWING NUMBER

321-18-2

EXPLANATORY NOTE :-

Rz40 ✓



7. MATERIAL QUOTED : 12.5 GOST 7417-75
45 GOST 1050-74

(B)

ALTERNATE MATERIAL QUOTED : ROUND BAR 12.5 GOST 7417-75
40 GOST 1051-73

STEEL ROUND SIZED 12.5 DIAMETER.

GRADE OF STEEL = 45 & 40 TO GOST 1050-74.

a) CHEMICAL COMPOSITION :- AS PER GOST 1050-74.

ELEMENTS %	45	40
CARBON	0.42 - 0.50	0.37 - 0.45
SILICON	0.17 - 0.37	0.17 - 0.37
MANGANESE	0.50 - 0.80	0.50 - 0.80
CHROMIUM	0.25 (max)	0.25 (max)
SULPHUR	0.040 (max)	0.040 (max)
PHOSPHORUS	0.035 (max)	0.035 (max)
NICKEL	0.10 (max)	0.10 (max)
COPPER	0.15 (max)	0.15 (max)

b) MECHANICAL PROPERTIES :-

	45	40
YIELD POINT Kgf/mm ²	36 (min)	34 (min)
ULTIMATE TENSILE STRENGTH Kgf/mm ²	61 (min)	58 (min)
ELONGATION %	16 (min)	19 (min)
REDUCTION OF AREA %	40 (min)	45 (min)
IMPACT STRENGTH Kgf/mm ²	5 (min)	6 (min)

(B)

Material: STEEL 709M40 (EN-19) TO BS-970 Pt-1-1983

2. SHIFT OF THREAD AXIS RELATIVE TO THE BAR AXIS SHOULD NOT EXCEED 0.3 mm.

4. * DIMENSION FOR REFERENCE.

5. THE COMPONENT MAY BE MANUFACTURED FROM ROUND BAR
12.5 GOST 7417-75
40 GOST 1051-73

6. COATING : Cd 9, CHROMATIZING IN ACCORDANCE WITH U.S. 103 WITH SUBSEQUENT ELIMINATION OF HYDROGEN EMBRITTLEMENT.

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

EST. WT. 0.009 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 SIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

GRN	<i>G. N. S.</i>	MATERIAL:-	(B)	USED ON	4 (A)
CHKD	<i>K. S. S.</i>	12.5 GOST 7417-75		CB 3321-05-2	CB
TCD	<i>N. S. S.</i>	45 GOST 1051-73			
APPD	<i>S. S.</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)			
DATE	30-06-86	AVADI			
SCALE:-	1:1	TITLE			
DIMENSIONS IN mm		NUT CLAMP			
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		D S CAT NUMBER			
ALL THREADS TO CONFORM TO		DRAWING NUMBER			
ISSUE DATE		321-18-2			
NATURE OF AMENDMENTS					

A
7

SIZE A3

DRAWING NUMBER
353-04-2

Rz80 ✓ ✓ φ

EXPLANATORY NOTE :-

10, MATERIAL QUOTED STRIP 10-BH-2-1.5
GOST 503-81

ALTERNATE MATERIAL QUOTED : STEEL GRADE 15 TO GOST 1050-74.
STRIP = COLD ROLLED STRIP (LOW CARBON) WITH TRIMMED EDGES.

10 & 15 = GRADE OF STEEL.

B H = HIGHLY COLD WORKED.

2 = GROUP OF SURFACE QUALITY. 1.5 = THICKNESS.

a) CHEMICAL COMPOSITION :-

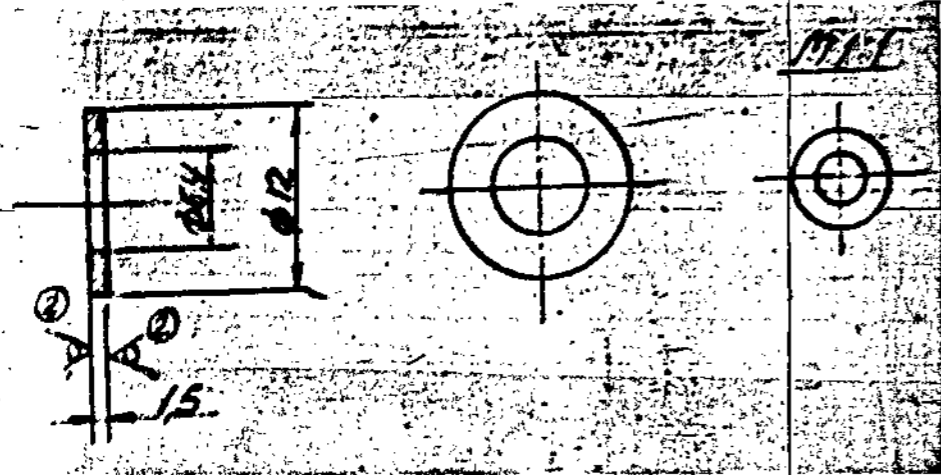
GRADE OF STEEL	C O N T E N T O F E L E M E N T S %							
	C	Si	Mn	Cr	P	S	Cu	Ni
10	0.07-0.14	0.17-0.37	0.35-0.65	M A X I M U M				
				0.15	0.035	0.040	0.25	0.25
15	0.12-0.19	0.17-0.37	0.35-0.65	0.15	0.035	0.040	0.25	0.25

b) MECHANICAL PROPERTIES :- TO GRADE 10 AS PER GOST 503-81.

ULTIMATE TENSILE STRENGTH Kgf/mm² (min) = 55

c) MECHANICAL PROPERTIES :- TO GRADE 15 AS PER GOST 1050-74.

TENSILE STRENGTH Kgf/mm ²	YIELD POINT Kgf/mm ²	ELONGATION %	REDUCTION IN AREA %	IMPACT STRENGTH Kgf/cm ²
M I N I M U M				
38	23	27	55	



1. DIMENSIONS WITH UNSPECIFIED TOLERANCES SHOULD BE OBTAINED WITH ACCURACY ±0.3mm.
2. THE COMPONENT SHOULD BE STRAIGHTENED AFTER STAMPING.
3. BURRS ARE NOT ALLOWED.
4. COATING : Zn 15, Cr AS PER U/A- 483 - 82 WITH HYDROGEN EMBRITTLEMENT REMOVAL.
5. COATING WITH ZINC BY THERMAL DIFFUSION METHOD IS ALLOWED AS PER U U. (-1181.
6. COATING :- CADMIUM 9, CHROMATIZING AS PER U U. (-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
7. ALTERNATE MATERIAL : STEEL GRADE 15, GOST 1050-74.
8. REQUIRED FINISHING OF SURFACES BEING STAMPED SHOULD BE ENSURED BY TOOL.

Add washer
CS
406-12-414
13-411

EQUIVALENT MATERIAL
Gr. 0 IS:513-1994

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

EST. WT. 0.0009 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 INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	<i>Approved</i>	MATERIAL:-	USED ON CB 3321-05-34 CB
EN	<i>Approved</i>	STRIP 10-BH-2-1.5	CB 3338-401-10 (A)
TD	<i>Narain Dutt</i>	GOST 503-81	
APPD	<i>set</i>	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	
DATE	02-05-87	AVAGE	
SCALE:-	2 : 1		
DIMENSIONS IN mm		TITLE	BRIGHT WASHER 6
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS:2102-69			
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
B 19-5-10 4 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09			353-04-2
A AUTHY NOTN BK 85-361			
ISSUE DATE	NATURE OF AMENDMENTS		

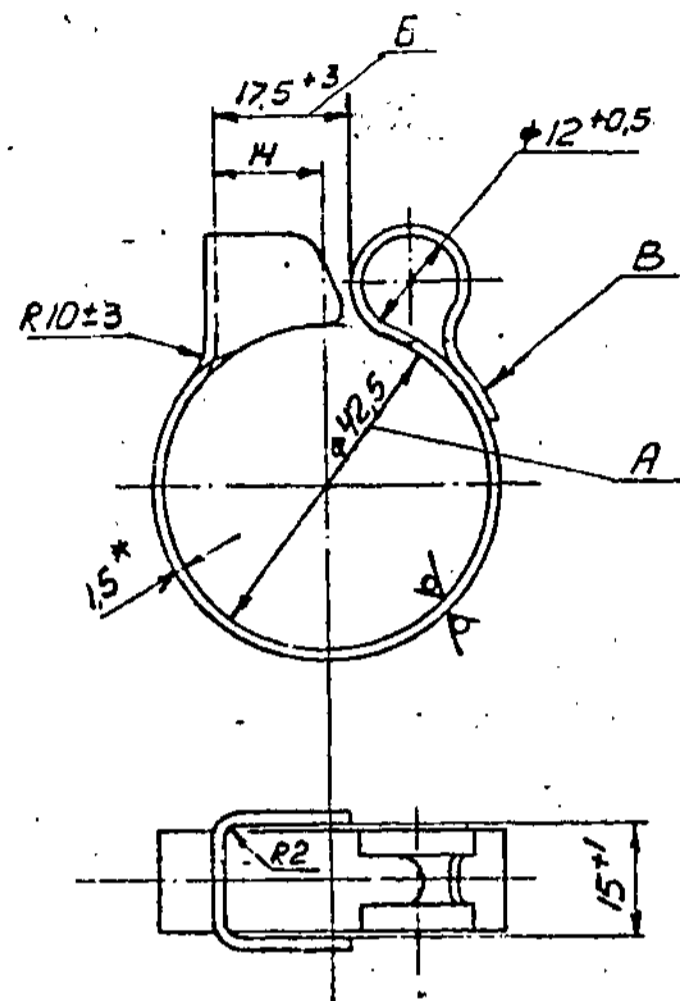
KVD No. - 78673

A
11

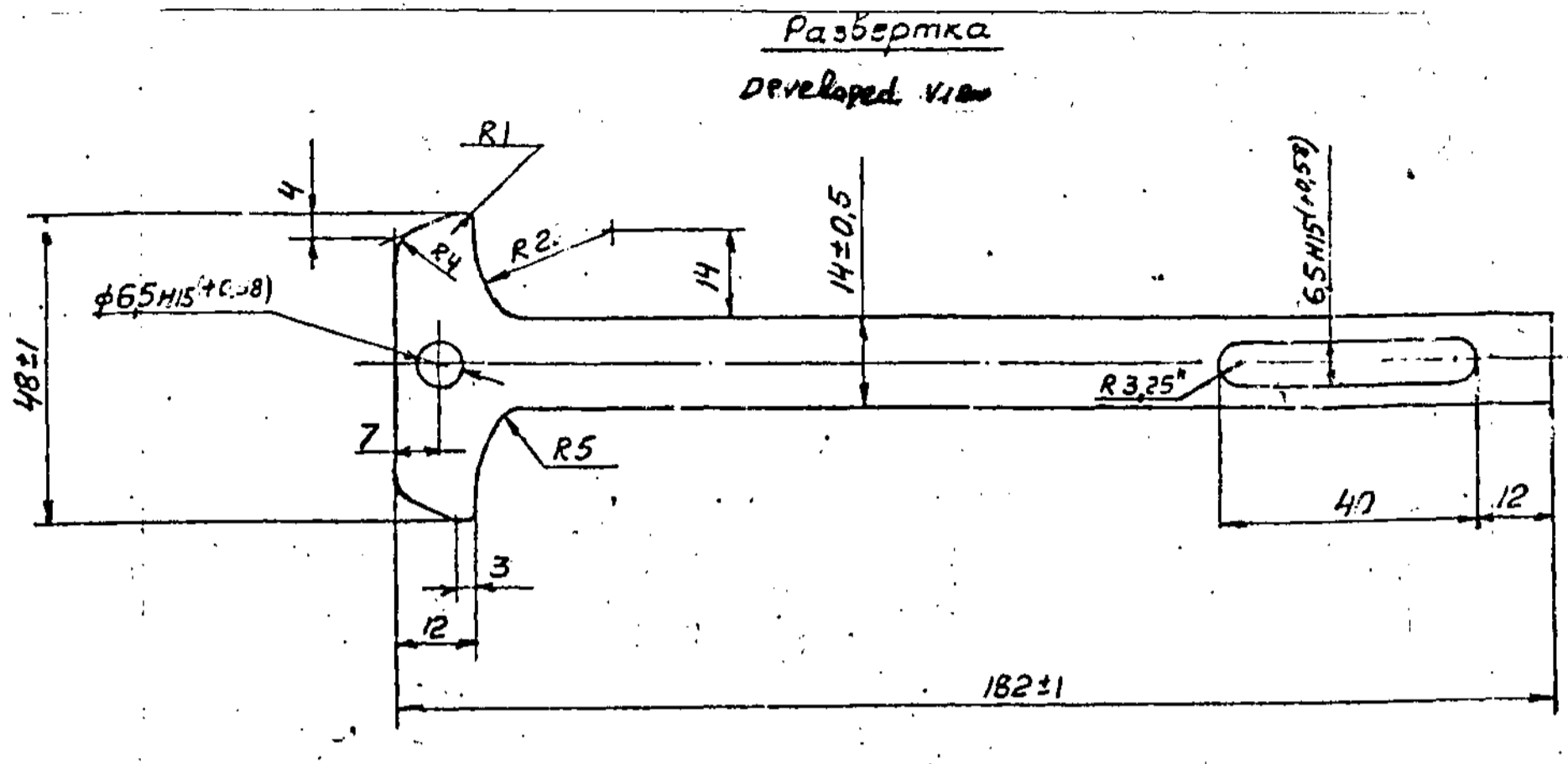
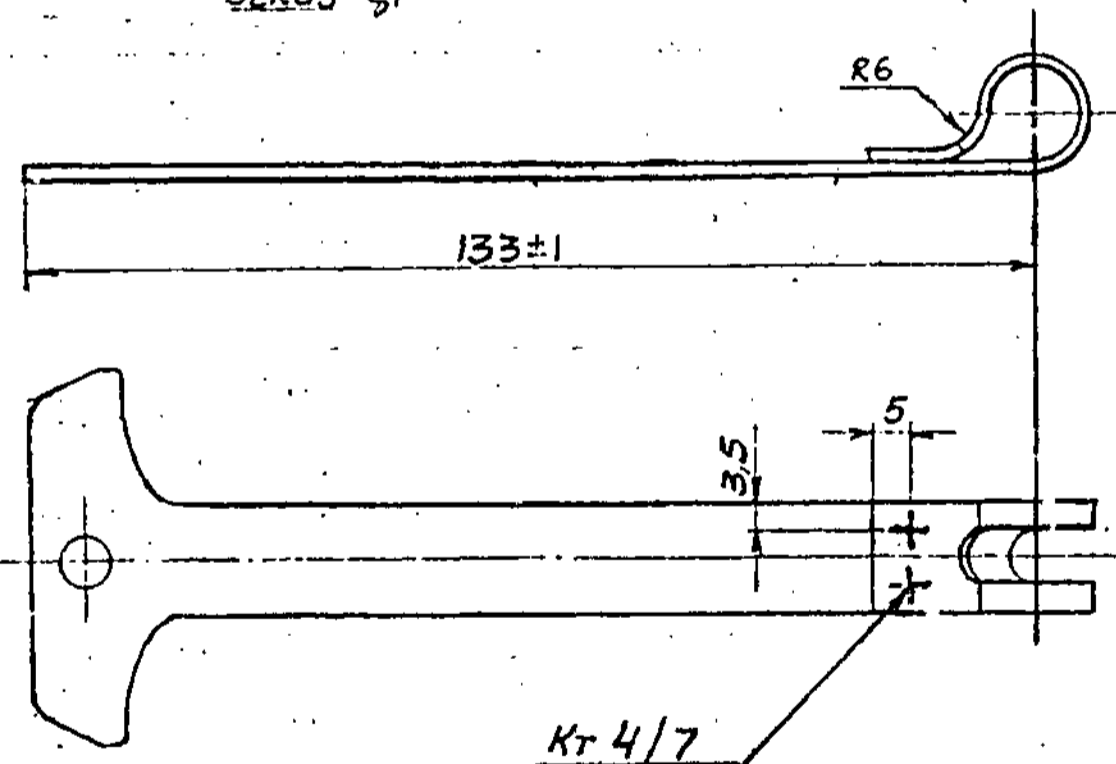
SIZE A3

DRAWING NUMBER
421-17-1

80/ (✓)



(10) sketch
ЗЕКУЗ sketch



1. ALTERNATE MATERIAL IS STEEL 10 K11 GCST 15523-70 OF ANY GROUP EXCEPT GROUP IV.
2. UNSPECIFIED TOLERANCES ON DIMENSIONS ARE ± 0.5 mm.
3. FISSURES, CRACKS, AND BURRS ARE NOT ALLOWED.
4. COMPONENT IS SUBJECTED FOR HIGH TEMPERATURE TEMPERING.
5. COATING IS Zn 9, Cr AS PER UJL-483-82 OR Cd 9, Cr AS PER UJL-104 WITH SUBSEQUENT REMOVAL OF HYDROGEN EMBRITTLEMENT.
6. * DIMENSION FOR REFERENCE.
7. DIMENSIONS A AND B ARE TO BE CHECKED ON THE MAN REL $\phi 42.5$ mm
8. IN TROPICALIZED MAKE, COATING IS Cd 9 Cr AS PER UJL-104 WITH SUBSEQUENT REMOVAL OF HYDROGEN EMBRITTLEMENT
9. END B IS TO BE MADE AS PER SKETCH

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

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

EST. WT. C-032 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	CHD	TCD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2102 - 69	ALL THREADS TO CONFORM TO
				24-12-98	-1:1			
MATERIAL - SHEET A 1.5 GOST 19904-74 II 10K11GOST 16523-0					USED ON - Cd 421-18-2			
CONTROLLER OF QUALITY ASSURANCE (HEAVY VEHICLES) SVADI					TITLE: CLIP BAND			
ISSUE DATE					NATURE OF AMENDMENTS		D S CAT NUMBER	
A 29.04.10					6th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09		DRAWING NUMBER 4-21-17-1	

DRG REPLACES 421-17 INTRODUCED VIDE NOFA BK 84-800.

SIZE A2

USED ON

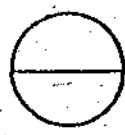
ITEM	DRAWING NUMBER	D S CAT NUMBER	DESCRIPTION	No. OFF	REMARKS
	CB 3321-05-3 CB & ITEM LIST		CLIP ASSY		
1	3321-08-3		CLIP STRIP	1	TI
2	321-17-3		CLIP BOLT	1	TI
3	321-18-2		CLIP NUT	1	TI
4	421-48-1		COVER PLATE	1	TI
6	353-04-2		BRIGHT WASHER 6	1	TI

Drg. Reinstated vide 5th Alt. Comm. Mtg. Minutes. Point. No. 20
 ITEM LIST CREATED BASED ON RUSSIAN ORIGINAL ISSUE No: 1 (BK 82-517)

CB 3321-00-16

SUPERSEDED BY CB 3321-05-4 CB VIDE NOTN No. BK 85-361

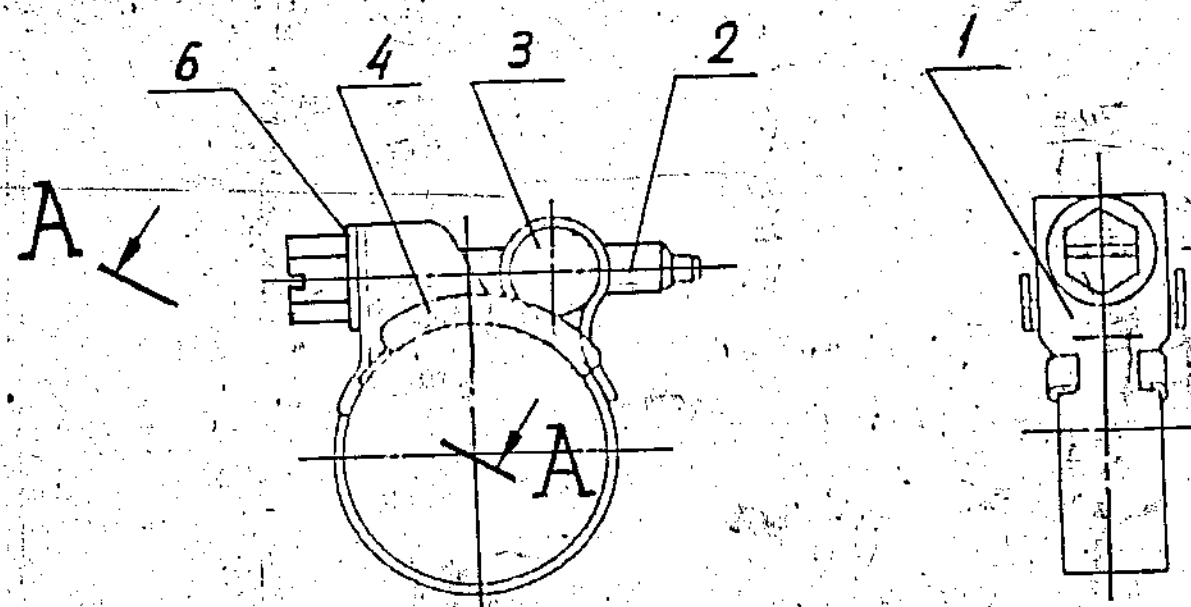
1A	20.12.10	5 th Alt. Comm. Mtg. Minutes Point. No. 20			
ISSUE	DATE	NATURE OF AMENDMENTS	ISSUE	DATE	NATURE OF AMENDMENTS
DRN	<i>G. Suresh A.</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI			
CHD	<i>Shankar</i>	TITLE: CLIP ASSY			
TCO	<i>Narain Pulis</i>				
APPO	<i>TOP</i>				
DATE	29-3-88	SHT. No. 1 OF 1	D S CAT NUMBER	ITEM LIST FOR CB 3321-05-3 CB	



1A

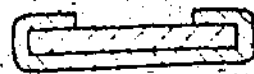
DRAWING NUMBER
CB 3321-05-3 CB

ЕСКА



A-A TURNED
повернуто

SCALE 1:2



1. Загнутые кромки в сечении А-А должны обеспечивать свободное перемещение накладки, дет. поз. 4, по ленте, дет. поз. 1.

2. Детали, имеющие в спецификации данного чертежа, в графе "Примечание", условное обозначение "ТИ", должны иметь тропическое исполнение, предусмотренное рабочими чертежами, для сборочных единиц в тропическом исполнении.

1. BENT EDGES AS SHOWN IN SECTION A - A SHOULD ENSURE FREE MOVEMENT OF COVERPLATE 4, ALONG STRIP 1.
2. COMPONENTS MARKED WITH DESIGNATION "TI" IN COLUMN "REMARKS" OF THE PARTS LIST OF GIVEN DRAWING SHOULD BE OF TROPICALIZED CONSTRUCTION, AS SPECIFIED IN THE DRAWINGS FOR ASSEMBLY UNITS IN TROPICAL DESIGN.

1	КОН	БК 82 517	ИИИ	2.12.09
КОН	ИИИ	БК 82 517	ИИИ	2.12.09

DRN	M. Amurat	MATERIAL:-	USED ON
CHD	Sh. P. Amurat		CB 3321-00-16
TCD	Norain Bilal		
APPD	301	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	
DATE	29-3-88	AVADI	
SCALE:-	1:1	TITLE	CLIP ASSY
DIMENSIONS IN mm			
TOLERANCE ON DIMNS. UNLESS OTHERWISE STATED IS-2102-69		D S CAT NUMBER	DRAWING NUMBER
ALL THREADS TO CONFORM TO			
1A	20.12.09	CB 3321-05-3 CB	
ISSUE DATE	NATURE OF AMENDMENTS		

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

EST. WT. 0.064 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

Drg. Reinstated vide 5th Alt. Comm. Mfg. Minutes. Point. No. 20
DRG INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE No:1 (BK 82-517)

KVD No: 78239

~~DRG. SUPERSEDED BY CB 3321-05-4 CB VIDE NOTN. No BK-85-361~~

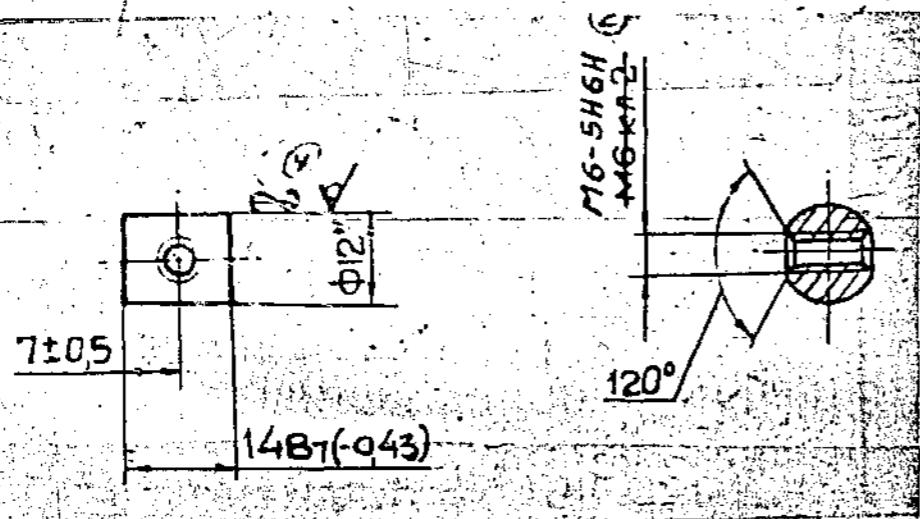
1A
SIZE A3

DRAWING NUMBER

321-18-2

EXPLANATORY NOTE :-

Rz40 ✓



7. MATERIAL QUOTED : 12.5 GOST 7417-75
45 GOST 1050-74

(B)

ALTERNATE MATERIAL QUOTED : ROUND BAR 12.5 GOST 7417-75
40 GOST 1051-73

STEEL ROUND SIZED 12.5 DIAMETER.

GRADE OF STEEL = 45 & 40 TO GOST 1050-74.

a) CHEMICAL COMPOSITION :- AS PER GOST 1050-74.

ELEMENTS %	45	40
CARBON	0.42 - 0.50	0.37 - 0.45
SILICON	0.17 - 0.37	0.17 - 0.37
MANGANESE	0.50 - 0.80	0.50 - 0.80
CHROMIUM	0.25 (max)	0.25 (max)
SULPHUR	0.040 (max)	0.040 (max)
PHOSPHORUS	0.035 (max)	0.035 (max)
NICKEL	0.10 (max)	0.10 (max)
COPPER	0.15 (max)	0.15 (max)

b) MECHANICAL PROPERTIES :-

	45	40
YIELD POINT Kgf/mm ²	36 (min)	34 (min)
ULTIMATE TENSILE STRENGTH Kgf/mm ²	61 (min)	58 (min)
ELONGATION %	16 (min)	19 (min)
REDUCTION OF AREA %	40 (min)	45 (min)
IMPACT STRENGTH Kgf/mm ²	5 (min)	6 (min)

(B)

Material: STEEL 709M40 (EN-19) TO BS-970 Pt-1-1983

2. SHIFT OF THREAD AXIS RELATIVE TO THE BAR AXIS SHOULD NOT EXCEED 0.3 mm.

4. * DIMENSION FOR REFERENCE.

5. THE COMPONENT MAY BE MANUFACTURED FROM ROUND BAR
12.5 GOST 7417-75
40 GOST 1051-73

6. COATING : Cd 9, CHROMATIZING IN ACCORDANCE WITH U.S. 103 WITH SUBSEQUENT ELIMINATION OF HYDROGEN EMBRITTLEMENT.

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

EST. WT. 0.009 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 SIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

GRN	<i>G. N. S.</i>	MATERIAL :-	(B)	USED ON	4 (A)
CHKD	<i>K. S. S.</i>	12.5 GOST 7417-75		CB 3321-05-2 CB	
TCD	<i>K. S. S.</i>	45 GOST 1051-73			
APPD	<i>[Signature]</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)			
DATE	30-06-86	AVADI			
SCALE	1 : 1	TITLE			
DIMENSIONS IN mm		NUT CLAMP			
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		D S CAT NUMBER			
ALL THREADS TO CONFORM TO		DRAWING NUMBER			
ISSUE DATE		321-18-2			
NATURE OF AMENDMENTS					

A
7

SIZE A3

DRAWING NUMBER
353-04-2

Rz80 ✓ ✓ φ

EXPLANATORY NOTE :-

10, MATERIAL QUOTED STRIP 10-BH-2-1.5
GOST 503-81

ALTERNATE MATERIAL QUOTED : STEEL GRADE 15 TO GOST 1050-74.
STRIP = COLD ROLLED STRIP (LOW CARBON) WITH TRIMMED EDGES.

10 & 15 = GRADE OF STEEL.

B H = HIGHLY COLD WORKED.

2 = GROUP OF SURFACE QUALITY. 1.5 = THICKNESS.

a) CHEMICAL COMPOSITION :-

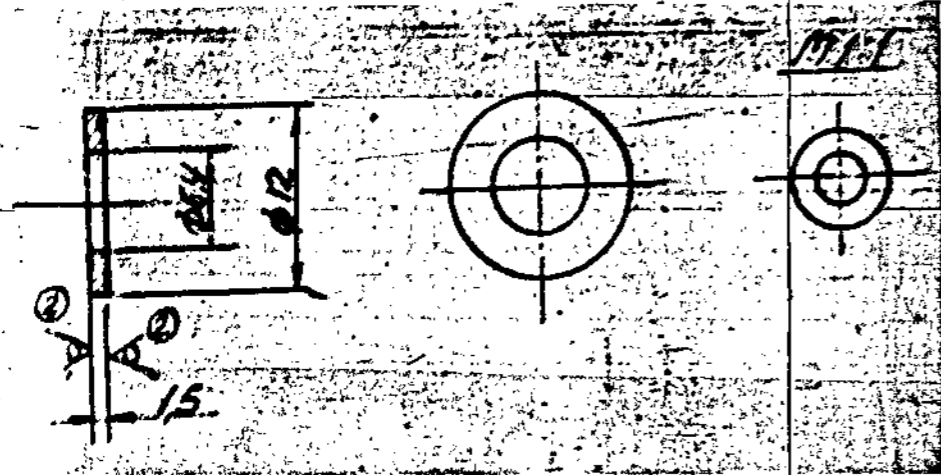
GRADE OF STEEL	C O N T E N T O F E L E M E N T S %							
	C	Si	Mn	Cr	P	S	Cu	Ni
10	0.07-0.14	0.17-0.37	0.35-0.65	M A X I M U M				
				0.15	0.035	0.040	0.25	0.25
15	0.12-0.19	0.17-0.37	0.35-0.65	0.15	0.035	0.040	0.25	0.25

b) MECHANICAL PROPERTIES :- TO GRADE 10 AS PER GOST 503-81.

ULTIMATE TENSILE STRENGTH Kgf/mm² (min) = 55

c) MECHANICAL PROPERTIES :- TO GRADE 15 AS PER GOST 1050-74.

TENSILE STRENGTH Kgf/mm ²	YIELD POINT Kgf/mm ²	ELONGATION %	REDUCTION IN AREA %	IMPACT STRENGTH Kgf/cm ²
M I N I M U M				
38	23	27	55	



1. DIMENSIONS WITH UNSPECIFIED TOLERANCES SHOULD BE OBTAINED WITH ACCURACY ±0.3mm.
2. THE COMPONENT SHOULD BE STRAIGHTENED AFTER STAMPING.
3. BURRS ARE NOT ALLOWED.
4. COATING : Zn 15, Cr AS PER U.A- 483 - 82 WITH HYDROGEN EMBRITTLEMENT REMOVAL.
5. COATING WITH ZINC BY THERMAL DIFFUSION METHOD IS ALLOWED AS PER U.U. 1-1181.
6. COATING :- CADMIUM 9, CHROMATIZING AS PER U.U. 1-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
7. ALTERNATE MATERIAL : STEEL GRADE 15, GOST 1050-74.
8. REQUIRED FINISHING OF SURFACES BEING STAMPED SHOULD BE ENSURED BY TOOL.

Add washer
CR 406-12-414
13-414
EQUIVALENT MATERIAL
Gr. 0 IS:513-1994

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

EST. WT. 0.0009 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 INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	<i>Approved</i>	MATERIAL:-	USED ON CB 3321-05-34 CB
EN	<i>Approved</i>	STRIP 10-BH-2-1.5	CB 3338-401-10 (A)
TD	<i>Narain Dutt</i>	GOST 503-81	
APPD	<i>set</i>	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	
DATE	02-05-87	AVAGE	
SCALE:-	2 : 1		
DIMENSIONS IN mm		TITLE	BRIGHT WASHER 6
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS:2102-69			
B	19-5-10	D S CAT NUMBER	DRAWING NUMBER
A	4 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09		353-04-2
AUTHY NOTN BK 85-361			
ISSUE DATE	NATURE OF AMENDMENTS		

KVD No. - 78673

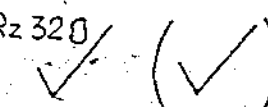
A
11

SIZE A3

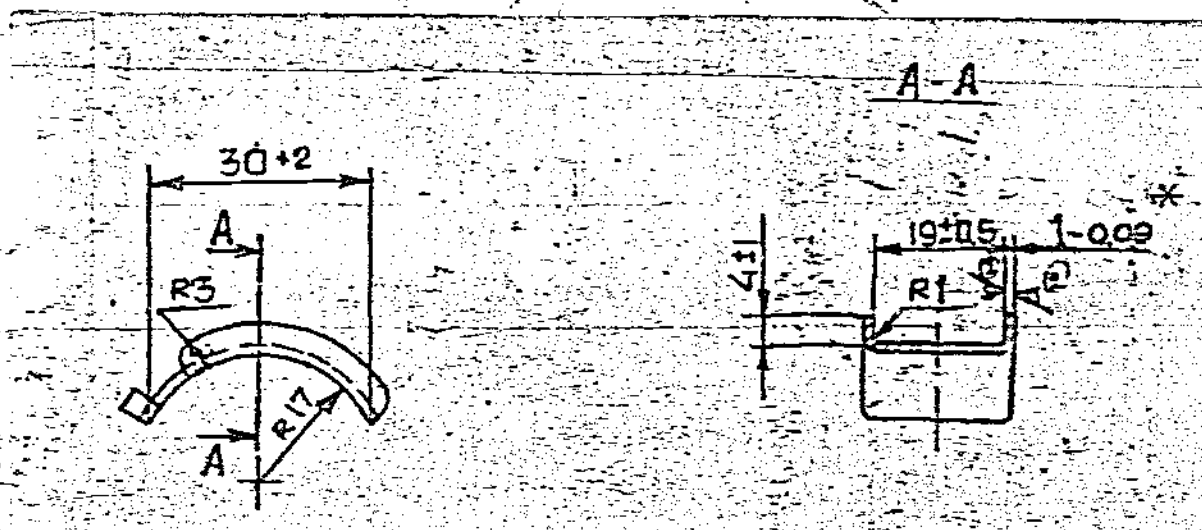
DRAWING NUMBER

421-48-1

Rz 320

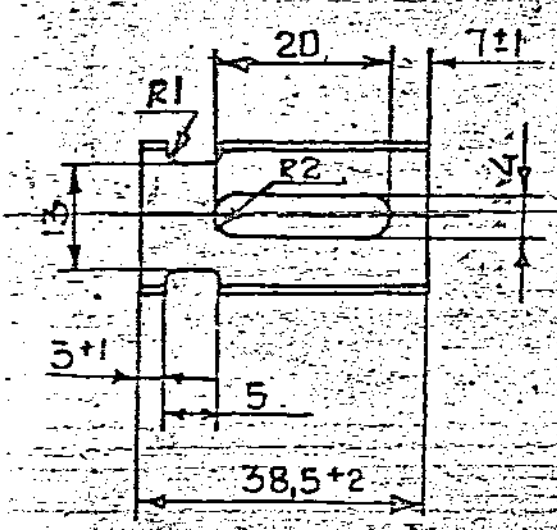


A) CANCELLED VIDE NOTN NO. BK 85-361 DRG REINSTATED VIDE 5th ALT COMM MEETING MINUTES POINT NO.20



LENGTH OF DEVELOPED COMPONENT

Развёрнутая длина



- 1) Группа контроля У по ТУ-11 (У 9 хр по н.ч. 493-82)
 Покрытие цинк-хром по н.ч. 154 или кад-хром по н.ч. 104
 с последующим удалением водородной хрупкости
- 2) *Размер для справок
3. Размеры без допусков на штамповку выполнять с точностью $\pm 0,5$ мм.
4. Допускается изготовление детали из стали марок 08кп, 10кп любой группы точности ГОСТ 16523-70 или ГОСТ 9045-79
5. *Размер для справок
6. В водородной среде покрытие кад-хром по н.ч. 104 с последующим удалением водородной хрупкости.
3. Dimensions with unspecified tolerances for stamping should be maintained with accuracy ± 0.5 mm.
4. The component may be manufactured from steel grades 08KП, 10KП of any group of accuracy GOST 16523 or GOST 9045-80.
5. *Dimension for reference.
6. Coating: Cd 9, chromating in accordance with н.ч. 104 with subsequent elimination of hydrogen embrittlement.

EXPLANATORY NOTE :-

7. MATERIAL QUOTED : 08nc-M-2=0-1
 GOST 503-81

ALTERNATE MATERIAL QUOTED : STEEL, GRADES 08Kп, 10Kп OF ANY GROUP OF ACCURACY TO GOST 16523 OR 9045-80.

08nc = STEEL GRADE SEM-KILLED - LOW CARBON STEEL

M = SOFT

2 = GROUP OF SURFACE QUALITY.

1 = THICKNESS.
 WITH TRIMMED EDGES.

a) CHEMICAL COMPOSITION :- AS PER GOST 1050-74.

GRADE OF STEEL	CONTENT OF ELEMENTS %							
	C	Si	Mn	Cr	S	Ph	Cu	Ni
08nc	0.05-0.11	0.06-0.17	0.35-0.60	0.10	0.040	0.035	0.25	0.25
08Kп	0.05-0.11	0.03 (max)	0.25-0.50	0.10	0.040	0.035	0.25	0.25
10Kп	0.07-0.14	0.07-max	0.25-0.50	0.15	0.040	0.035	0.25	0.25

b) MECHANICAL PROPERTIES :- AS PER GOST 503-81.

GRADE OF STEEL	ULTIMATE TENSILE STRENGTH Kgf/mm ²	RELATIVE ELONGATION % (minimum)
08nc	32 - 45	17
08Kп	32 - 45	17
10Kп	32 - 45	17

PLOT 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. OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	DRG	TCD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2:102-69	MATERIAL :- STRIP 08nc-M-2-0-1 GOST 503-81	USED CH :- CB 3321-05-3 CB
				26-06-86				CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) A V A D I	
								TITLE	
								GUIDE CLAMP BAND	
								D S CAT NUMBER	DRAWING NUMBER
									421-48-1

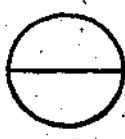
USED ON

Ⓐ CB 3342 00 8 CB

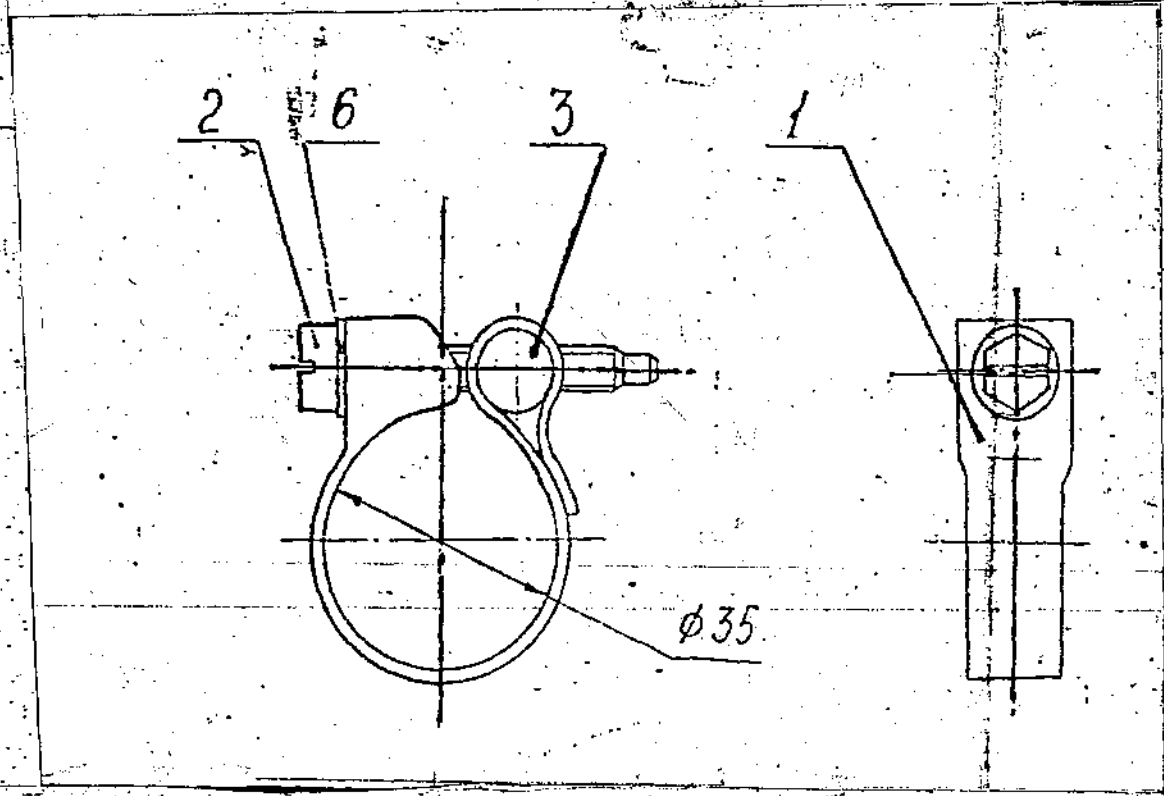
~~CB 3321 00-16~~

ITEM	DRAWING NUMBER	D S CAT NUMBER	DESCRIPTION	No. OFF	REMARKS
	CB 3321-05-4CB		CLIP ASSY		
	& ITEM LIST				
1	3321-08-3		CLIP STRIP	1	TV
2	321-17-3		CLIP BOLT	1	TV
3	321-18-2		CLIP NUT	1	TV
6	353-04-2		BRIGHT WASHER 6	1	TV

A	20.12.10	5 th Alt.Comm.Mtg.Minutes Point, No.20					
ISSUE	DATE	NATURE OF AMENDMENTS		ISSUE	DATE	NATURE OF AMENDMENTS	
DRN.	<i>Jalsal</i>		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI				
CHD.	<i>Ujwal</i>						
TCD.	<i>Jalsal</i>						
APPD.	<i>K. J. R.</i>		TITLE :		CLIP ASSY		
DATE	02 JAN 99		SHT. No. 1 OF 1		D S CAT NUMBER		ITEM LIST FOR
							CB 3321-05-4CB



DRAWING NUMBER
CB 3321-05-4CB



1. DIMENSION FOR REFERENCE.
2. COMPONENTS SHOWN WITH, CONVENTIONAL DESIGNATION "TM" IN THE PARTS LIST OF GIVEN DRAWING IN "REMARKS" COLUMN SHOULD HAVE TROPICALIZED MAKE AS SPECIFIED IN THE WORKING DRAWING.

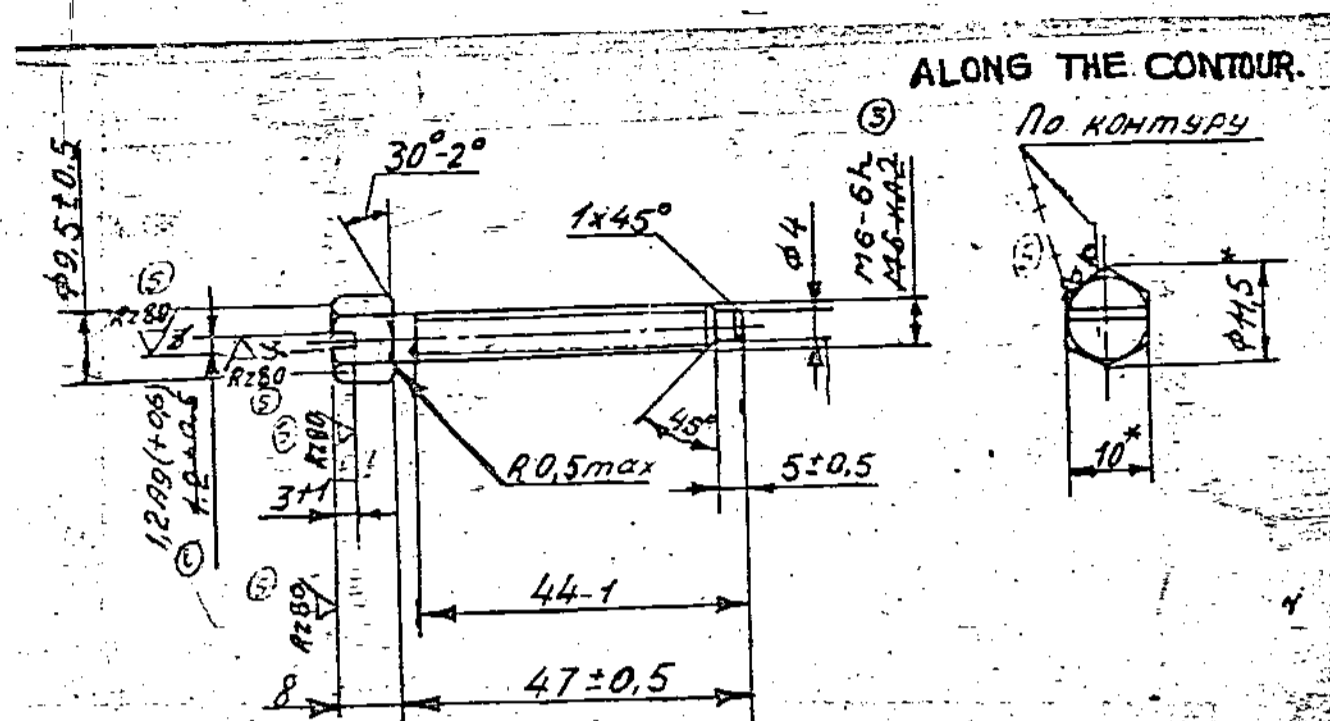
PLOT SAMPLE SHOULD BE APPROVED BY A HSW BEFORE BULK PRODUCTION

EST. WT. **0.056 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: OUT SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

			DRN <i>ASW</i>	MATERIAL:-	USED ON CB 3342 00-8 CB
			CHD <i>ASW</i>		CB 3321-00-16 (A)
			TCD <i>ASW</i>		
			APPD <i>KT</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
			DATE 02 JAN 99	AVADI	
			SCALE:- 1:1	TITLE	CLIP ASSY
			DIMENSIONS IN mm		
			TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102-69.	D S CAT NUMBER	DRAWING NUMBER CB 3321-05-4CB
			ALL THREADS TO CONFORM TO		
A	20.12.10	5 TH Alt. Comm. Mtg. Minufes Point. No. 20	ISSUE	DATE	NATURE OF AMENDMENTS

SIZE A3



EXPLANATORY NOTE :-

14. MATERIAL QUOTED : 10-5 GOST 8560-78
45 GOST 1051-73

ALTERNATE MATERIAL QUOTED : STEEL GRADES 40 & 50 TO GOST 1050-74.

10.5 GOST 8560-78

40 GOST 1051-73

10 = ACCROSS FLATS OF HEXAGONAL BAR.

5 = CLASS OF ACCURACY.

40,45,50= GRADE OF STEEL : BRIGHT STEEL.

a) CHEMICAL COMPOSITION :- AS PER GOST 1050-74.

GRADE OF STEEL	C O N T E N T OF E L E M E N T S %								
	C	Si	Mn	Cr	S	P	Ni	Cu	
40	0.37-0.45	0.17-0.37	0.50-0.80	M A X I M U M					
				0.25	0.040	0.035	0.10	0.15	
45	0.42-0.50	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15	
50	0.47-0.55	0.17-0.37	0.50-0.80	0.25	0.040	0.035	0.10	0.15	

b) MECHANICAL PROPERTIES :- AS PER GOST 1050-74.

GRADE OF STEEL	YIELD POINT	RELATIVE ELONGATION %	REDUCTION OF AREA %	IMPACT STRENGTH	ULTIMATE TENSILE STRENGTH	HARDNESS
	Kgf/mm ²			Kgf/mm ²	Kqf/cm ²	B H N
	M I N I M U M					MAX
40	34	19	45	6	58	217
45	36	16	40	5	61	229
50	38	14	40	4	64	241

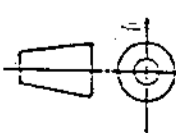
(B) EQUIVALENT MATERIAL STEEL
45C8 TO IS:1570

2. TECHNICAL REQUIREMENTS FOR THREAD IN ACCORDANCE WITH STANDARD 82021-00.
3. TOLERANCE UNLESS OTHERWISE STATED FOR FEMALE COMPONENTS AS PER A7, FOR MALE COMPONENTS AS PER B7.
4. SHARP EDGES ARE NOT ALLOWED.
6. DIMENSIONS SHOULD BE CHECKED BEFORE COATING.
7. *DIMENSIONS FOR REFERENCE.
8. RADIUS FROM CUTTER $R \geq 30\text{mm}$ IS PERMISSIBLE AFTER CUTTING SLOT FOR SCREWDRIVER.
9. MAY BE MANUFACTURED FROM HEXAGON BAR 10.5 GOST 8560.78
40 GOST 1051-73
10. MAY BE MANUFACTURED BY HEADING. INCREASE OF SHANK BY 0.2 mm ON A LENGTH OF 3mm FROM THE HEAD IS PERMISSIBLE.
11. THREADS MAY BE FORMED BY ROLLING WITH DIAMETER OF NON-CUT PORTION WITHIN PITCH DIAMETER OF THREAD.
12. COATING: Cd 9, CHROMATIZING IN ACCORDANCE WITH $\text{u}4.104$ WITH SUBSEQUENT ELIMINATION OF HYDROGEN EMBRITTLEMENT.
13. ALTERNATE MATERIAL: STEEL, GRADES 40 AND 50 GOST 1050-74.

PLOT 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 OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	<i>Shankar</i>	MATERIAL	10-5 GOST 8560-78	USED ON :-	
CHO	<i>Shankar</i>	HEXAGON BAR	45 GOST 1051-73	CB 3321-05-3 (A)	
TCD	<i>Narayan Prasad</i>			CS 421-18-2	
APPD	<i>Shankar</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)			
DATE	26-06-86	A V A D I			
SCALE	1 : 1	TITLE			
DIMENSIONS IN mm.		 BOLT CLAMP			
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69					
B	12-8-10	4 th Alt. Comm. Meeting Minutes	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER
A		Point No.11 Dt: 26-10-09			
ISSUE	DATE	AUTHY NOTN BK 85-361	NATURE OF AMENDMENTS		321-17-3

DRAWING NUMBER

321-18-2

EXPLANATORY NOTE :-

Rz40 ✓

7. MATERIAL QUOTED : 12.5 GOST 7417-75
45 GOST 1050-74

(B)

ALTERNATE MATERIAL QUOTED : ROUND BAR 12.5 GOST 7417-75
40 GOST 1051-73

STEEL ROUND SIZED 12.5 DIAMETER.

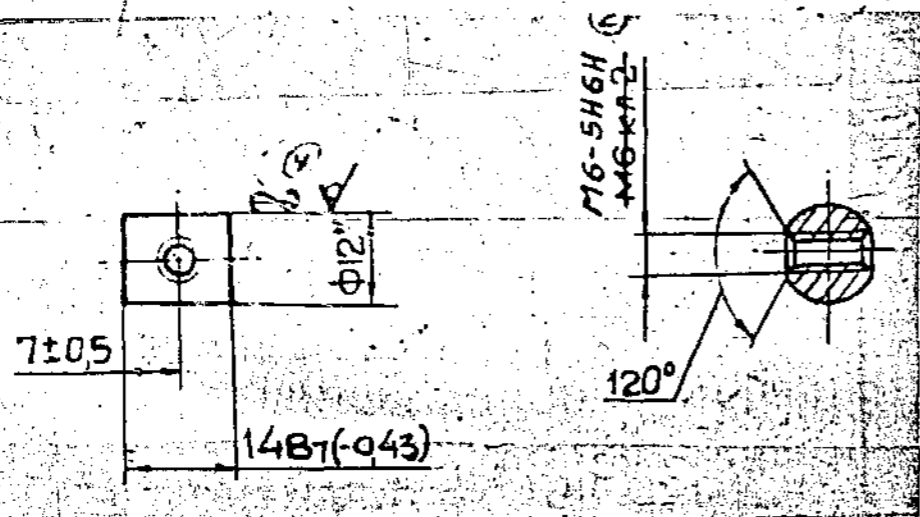
GRADE OF STEEL = 45 & 40 TO GOST 1050-74.

a) CHEMICAL COMPOSITION :- AS PER GOST 1050-74.

ELEMENTS %	45	40
CARBON	0.42 - 0.50	0.37 - 0.45
SILICON	0.17 - 0.37	0.17 - 0.37
MANGANESE	0.50 - 0.80	0.50 - 0.80
CHROMIUM	0.25 (max)	0.25 (max)
SULPHUR	0.040 (max)	0.040 (max)
PHOSPHORUS	0.035 (max)	0.035 (max)
NICKEL	0.10 (max)	0.10 (max)
COPPER	0.15 (max)	0.15 (max)

b) MECHANICAL PROPERTIES :-

	45	40
YIELD POINT Kgf/mm ²	36 (min)	34 (min)
ULTIMATE TENSILE STRENGTH Kgf/mm ²	61 (min)	58 (min)
ELONGATION %	16 (min)	19 (min)
REDUCTION OF AREA %	40 (min)	45 (min)
IMPACT STRENGTH Kgf/mm ²	5 (min)	6 (min)



2. SHIFT OF THREAD AXIS RELATIVE TO THE BAR AXIS SHOULD NOT EXCEED 0.3 mm.

4. * DIMENSION FOR REFERENCE.

5. THE COMPONENT MAY BE MANUFACTURED FROM ROUND BAR
12.5 GOST 7417-75
40 GOST 1051-73

6. COATING : Cd 9, CHROMATIZING IN ACCORDANCE WITH U.S. 103 WITH SUBSEQUENT ELIMINATION OF HYDROGEN EMBRITTLEMENT.

(B) Material: STEEL 709M40 (EN-19) TO BS-970 Pt-1-1983

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

EST. WT. 0.009 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 SIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

GRN	<i>G. Nagesh</i>	MATERIAL:-	(B) 12.5 GOST 7417-75 45 GOST 1051-73	USED ON	4 (A) CB 3321-05-2 CB
CHKD	<i>K. S. S. S.</i>	DATE	30-06-86	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
TCD	<i>K. S. S. S.</i>	SCALE:-	1 : 1	AVADI	
APPD	<i>[Signature]</i>	DIMENSIONS IN mm		TITLE	
		TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		NUT CLAMP	
		ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
					321-18-2
B	18.5.09	Authy: Third Alt. Comm. Minutes Point: B - Dated 27-02-2009.			
A		AUTHY: NOTN BK 85-361			
		ISSUE DATE			
		NATURE OF AMENDMENTS			

A
7

SIZE A3

DRAWING NUMBER
353-04-2

Rz80 ✓ ✓ φ

EXPLANATORY NOTE :-

10, MATERIAL QUOTED STRIP 10-BH-2-1.5
GOST 503-81

ALTERNATE MATERIAL QUOTED : STEEL GRADE 15 TO GOST 1050-74.
STRIP = COLD ROLLED STRIP (LOW CARBON) WITH TRIMMED EDGES.

10 & 15 = GRADE OF STEEL.

B H = HIGHLY COLD WORKED.

2 = GROUP OF SURFACE QUALITY. 1.5 = THICKNESS.

a) CHEMICAL COMPOSITION :-

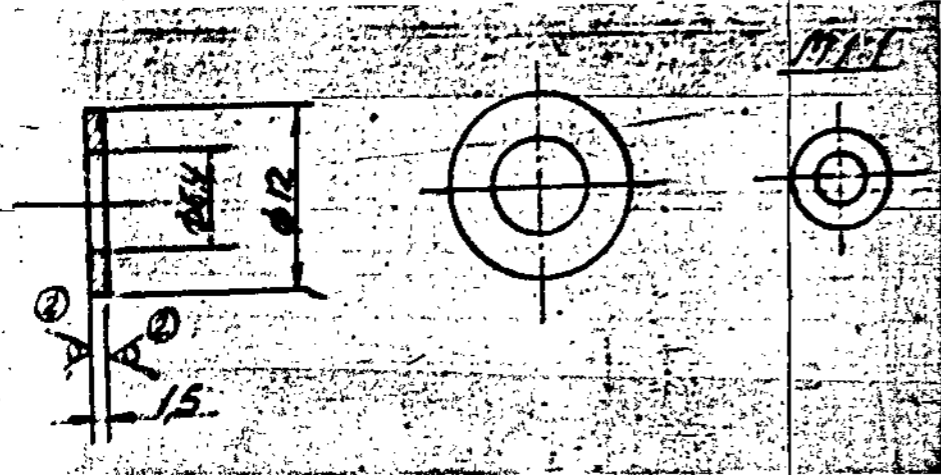
GRADE OF STEEL	C O N T E N T O F E L E M E N T S %							
	C	Si	Mn	Cr	P	S	Cu	Ni
10	0.07-0.14	0.17-0.37	0.35-0.65	M A X I M U M				
				0.15	0.035	0.040	0.25	0.25
15	0.12-0.19	0.17-0.37	0.35-0.65	0.15	0.035	0.040	0.25	0.25

b) MECHANICAL PROPERTIES :- TO GRADE 10 AS PER GOST 503-81.

ULTIMATE TENSILE STRENGTH Kgf/mm² (min) = 55

c) MECHANICAL PROPERTIES :- TO GRADE 15 AS PER GOST 1050-74.

TENSILE STRENGTH Kgf/mm ²	YIELD POINT Kgf/mm ²	ELONGATION %	REDUCTION IN AREA %	IMPACT STRENGTH Kgf/cm ²
M I N I M U M				
38	23	27	55	



-
- DIMENSIONS WITH UNSPECIFIED TOLERANCES SHOULD BE OBTAINED WITH ACCURACY ±0.3mm.
- THE COMPONENT SHOULD BE STRAIGHTENED AFTER STAMPING.
- BURRS ARE NOT ALLOWED.
- COATING : Zn 15, Cr AS PER U/A- 483 - 82 WITH HYDROGEN EMBRITTLEMENT REMOVAL.
- COATING WITH ZINC BY THERMAL DIFFUSION METHOD IS ALLOWED AS PER U U. (-1181.
- COATING :- CADMIUM 9, CHROMATIZING AS PER U U. (-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
- ALTERNATE MATERIAL : STEEL GRADE 15, GOST 1050-74.
- REQUIRED FINISHING OF SURFACES BEING STAMPED SHOULD BE ENSURED BY TOOL.

Add washer
CR 406-12-414
13-414

EQUIVALENT MATERIAL
Gr. 0 IS:513-1994

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

EST. WT. 0.0009 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 INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	<i>Approved</i>	MATERIAL:-	USED ON CB 3321-05-34 CB
EN	<i>Approved</i>	STRIP 10-BH-2-1.5	CB 3338-401-10 (A)
TD	<i>Narain Dutt</i>	GOST 503-81	
APPD	<i>set</i>	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	
DATE	02-05-87	AVAGE	
SCALE:-	2 : 1		
DIMENSIONS IN mm		TITLE	BRIGHT WASHER 6
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS:2102-69			
B	19-5-10	D S CAT NUMBER	DRAWING NUMBER
A	4 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09		353-04-2
AUTHY NOTN BK 85-361			
ISSUE DATE	NATURE OF AMENDMENTS		

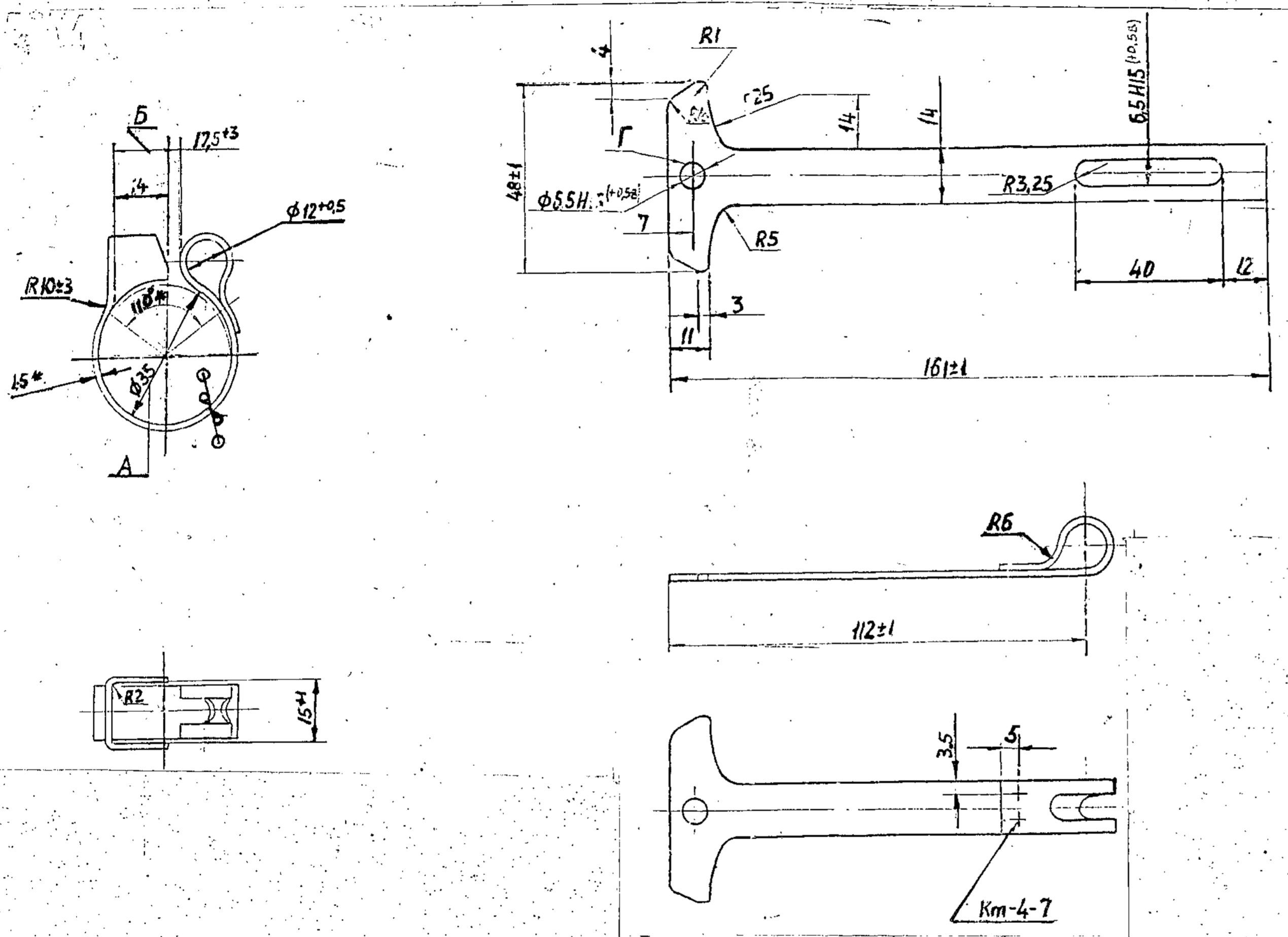
KVD No. - 78673

A
11

SIZE A3

DRAWING NUMBER
3321-08-3

DEVELOPED VIEW



1. ALTERNATIVE MATERIAL: SHEET I OR II GROUP OF SURFACE FINISH
2. COMPONENT IS SUBJECTED TO HIGH TEMPERING
3. UNSPECIFIED TOLERANCES ON DIMENSIONS: $\pm 0.5 \text{ mm}$
4. DIMENSIONS A AND B ARE TO BE CHECKED ON THE MANDREL $\phi 35 \text{ mm}$ WITH CONSIDERATION OF PLATE 1.0 mm THICK ALONG AN ARC OF 110° AS SHOWN IN DOTTED LINE.
5. EXPANSION OF HOLE F DURING BENDING IS ALLOWED, IF SO, THE BOLT SHOULD FREELY PASS THROUGH THE HOLE.
6. FISSURES, CRACKS AND BUIRS NOT ALLOWED.
7. COATING: Zn6, CY AS PER UA-483-32 OR Cd9, CY AS PER UA 569-84 WITH SUBSEQUENT REMOVAL OF HYDROGEN BRITTLENESS.
8. COATING: Cd9, CY AS PER UA 569-84 WITH SUBSEQUENT REMOVAL OF HYDROGEN BRITTLENESS FOR TROPICALIZED MAKE
- 9.* DIMENSIONS FOR REFERENCE

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

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

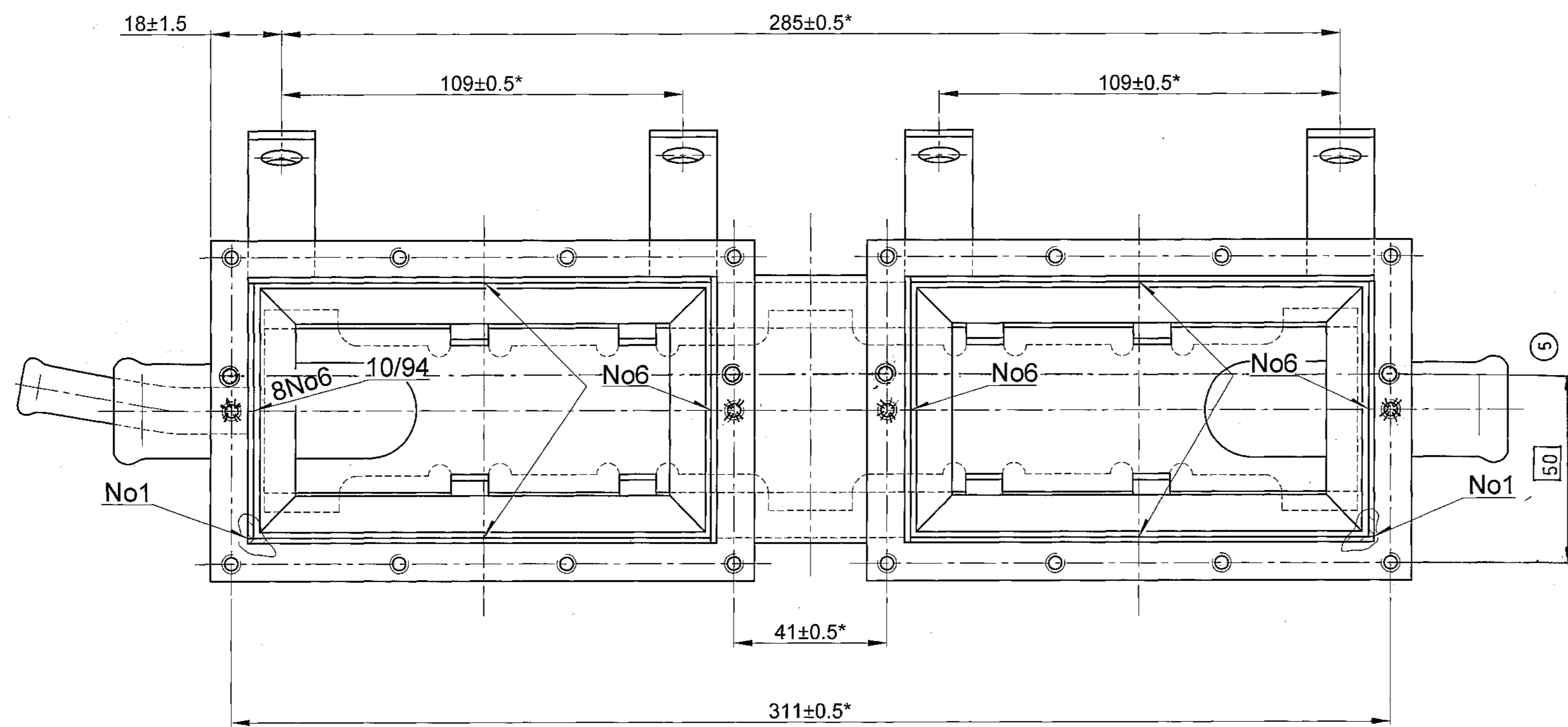
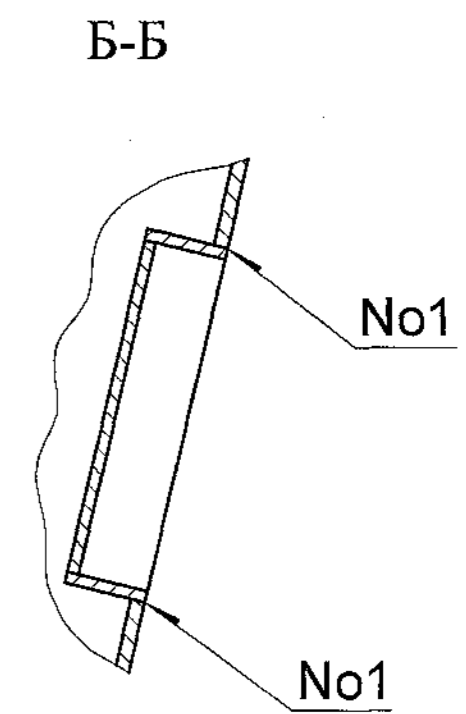
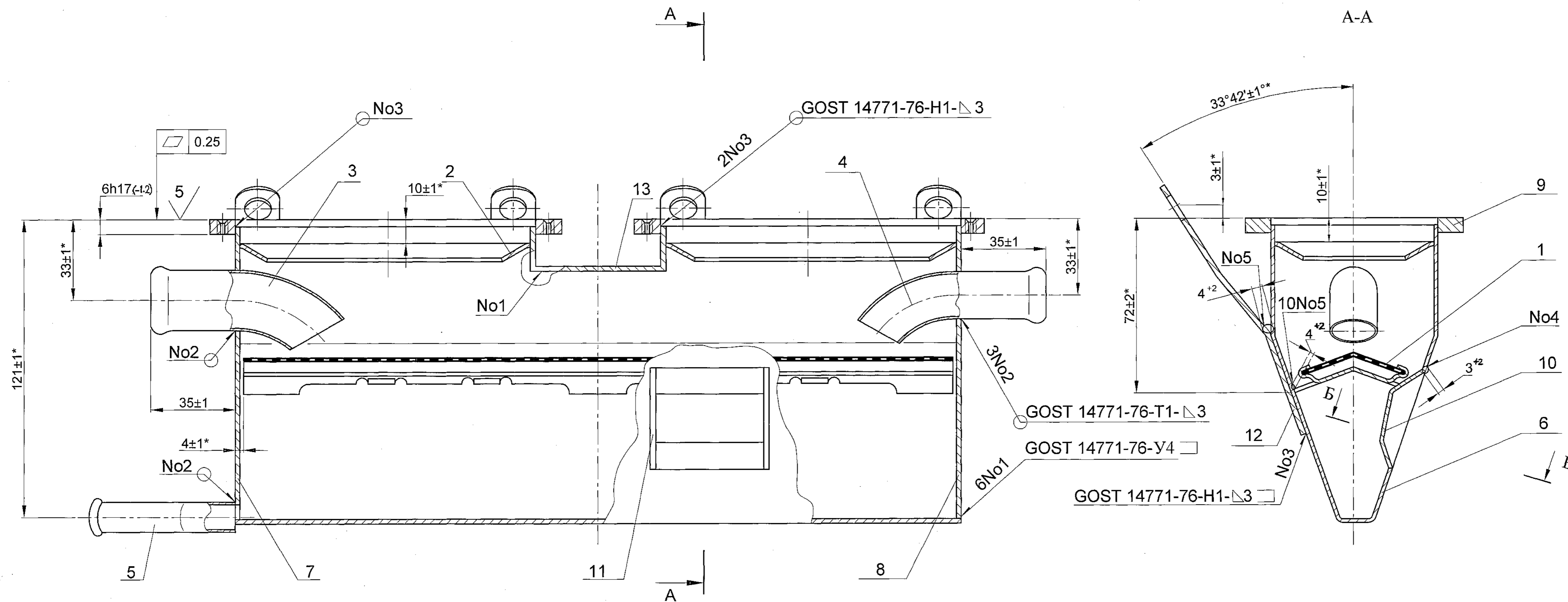
EST. WT. 0.03 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE & INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	

DRN	CHD	TCD	APPD	DATE	SCALE	DIMENSIONS	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2:02 - 69	A' L THREDS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER
				02 JAN 99	1:1	mm				3321-08-3
MATERIAL SHEET			USED ON			CONTROL RATE OF QUALITY ASSURANCE (HEAVY VEHICLES AVADI)		CLIP STRIP		
A1'S GOST 19904-74			ES 3321-05-4C8			4.15 ALT. COMM. Mfg. MINUTES		POINT No. 2 DT. 26-10-09		
II TO KN GOST 16523-70						NOTN: BK 86-361				
ISSUE	DATE	NATURE OF AMENDMENTS								
B	1-7-10									
A	29-1-99									

SIZE A2

USED ON	ITEM No.	DRAWING NUMBER	D S CAT NUMBER	DESCRIPTION	QTY	REMARKS																																	
Cb.3342-81-1		Cb.3342-16		OIL SEPARATOR HOUSING																																			
		ITEM LIST		ASSY																																			
	1	Cb.3342-186-4 & I/L		CONE ASSY	1																																		
	2	3342-17		CONE	2																																		
	3	3342-18		PIPE	1																																		
	4	3342-19		PIPE	1																																		
	5	3342-20		PIPE	1																																		
	6	3342-21		BODY	1																																		
	7	3342-22		SIDE- FRAME	1																																		
	8	3342-23		SIDE- FRAME	1																																		
	9	3342-24		FLANGE	2																																		
	10	3342-25		INSERT	1																																		
	11	3342-26		SHEET	2																																		
12	3342-281		BRACKET	4																																			
13	3342-282		SPACER	1																																			
I/L CREATED BASED ON RUSSIAN ORIGINAL ISSUE -- 2																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ISSUE</th> <th>DATE</th> <th>NATURE OF AMENDMENTS</th> <th>ISSUE</th> <th>DATE</th> <th>NATURE OF AMENDMENTS</th> </tr> </thead> <tbody> <tr> <td>DRN</td> <td></td> <td></td> <td colspan="4" style="text-align: center;">CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.</td> </tr> <tr> <td>CHD</td> <td></td> <td></td> <td colspan="4" style="text-align: center;">TITLE : OIL SEPARATOR HOUSING ASSY</td> </tr> <tr> <td>APPD</td> <td></td> <td></td> <td colspan="4"></td> </tr> <tr> <td>DATE</td> <td>17.5.07</td> <td>SHT. NO. 1 OF 1</td> <td colspan="2">D S CAT NUMBER</td> <td>ITEM LIST FOR Cb.3342-16</td> </tr> </tbody> </table>							ISSUE	DATE	NATURE OF AMENDMENTS	ISSUE	DATE	NATURE OF AMENDMENTS	DRN			CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.				CHD			TITLE : OIL SEPARATOR HOUSING ASSY				APPD							DATE	17.5.07	SHT. NO. 1 OF 1	D S CAT NUMBER		ITEM LIST FOR Cb.3342-16
ISSUE	DATE	NATURE OF AMENDMENTS	ISSUE	DATE	NATURE OF AMENDMENTS																																		
DRN			CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.																																				
CHD			TITLE : OIL SEPARATOR HOUSING ASSY																																				
APPD																																							
DATE	17.5.07	SHT. NO. 1 OF 1	D S CAT NUMBER		ITEM LIST FOR Cb.3342-16																																		

F - 6
6/106



1. Varnish coating ГФ-95 Gost 8018-70 to be carried out as per instruction ИЛ-628-86.
2. Pressure testing should be carried out in water at a pressure of $(50^{+2.5})$ kPa [$(0.5^{+0.25})$ kgf/cm²]. Airleak is not allowed. At the places of air leak, backup welding and retesting are allowed. Test for airtightness by capillary method (by soaking in kerosene) is allowed as per Gost 3242-79.
3. It is allowed to increase limit deviations for dimensions of mutual position of parts during welding from ± 1 mm to 2 mm.
4. It is allowed to correct the parts during assembly for welding.
5. Joints No. 4...6 are carried out by electric arc welding in medium of protective gases.
6. Welded joints should correspond to ТТ 23.108-43-74.
7. It is allowed to solder with wire Л63 Gost 12920-67 at leaking spots, after airtightness test.
8. * Dimensions are ensured by tool.

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

EST. WT. 2.165 TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

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

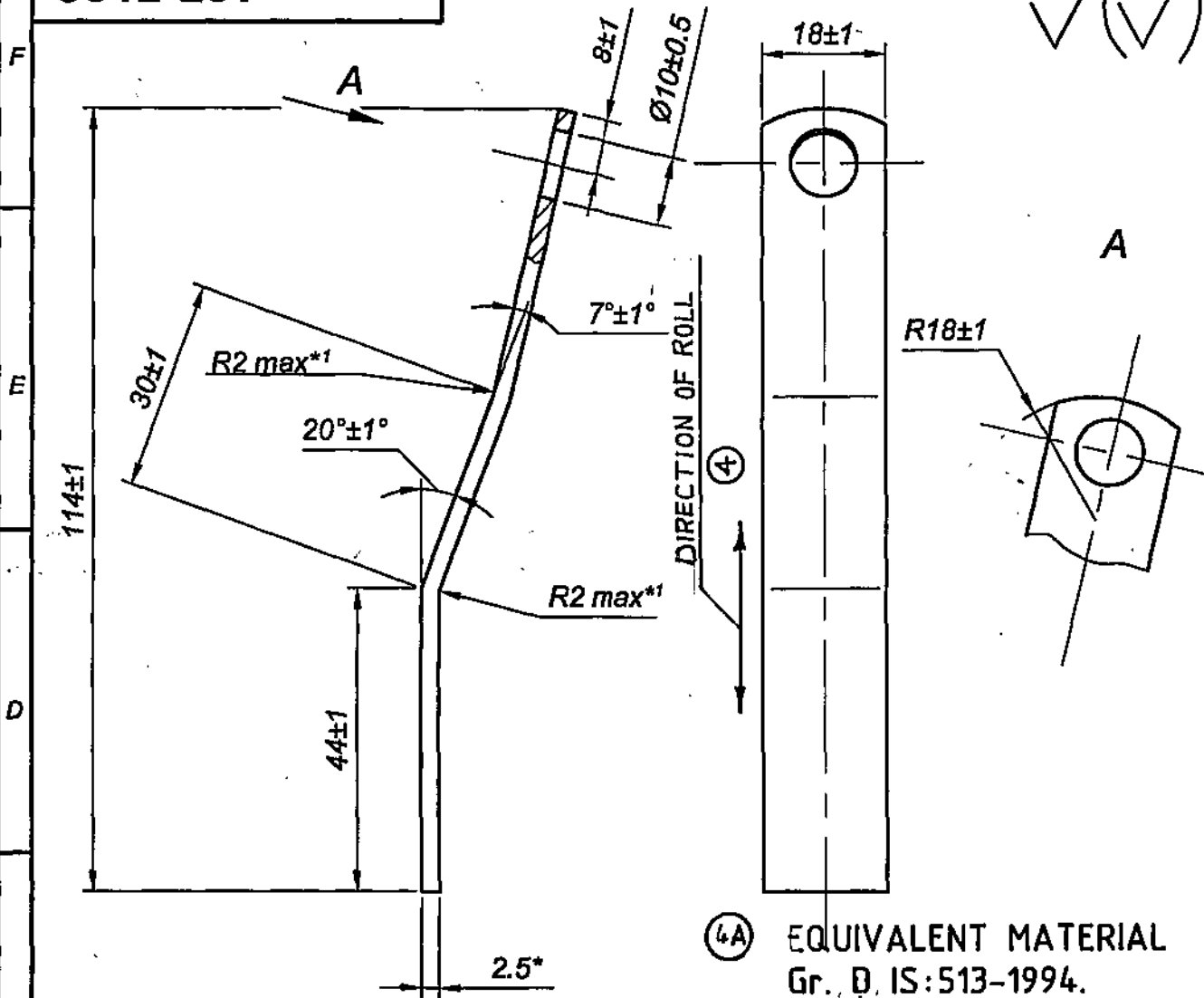
DRN	CHD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS : 2102-69	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER	
			10.5.07	1:1					Cb.3342-16	
MATERIAL -								USED ON -	Sb 3342-81-1	
CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI								TITLE -		OIL SEPARATOR HOUSING ASSY
5 10.11.08 NOTN. NO: 2002-202 (F-158)								D S CAT NUMBER		
ISSUE DATE NATURE OF AMENDMENTS										

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

DRAWING NUMBER
3342-281

SHEET No. 1 OF 1

80/ (✓) (✓)



F-6
45
106

1. *Dimension is given for reference.
2. *1 Dimension is ensured by tool.

(4A) EQUIVALENT MATERIAL
Gr. D IS: 513-1994.

(4) ** SHEET
A-3.0 GOST 19903-74
K 270B5-III-F-10-Cb GOST 16523-97

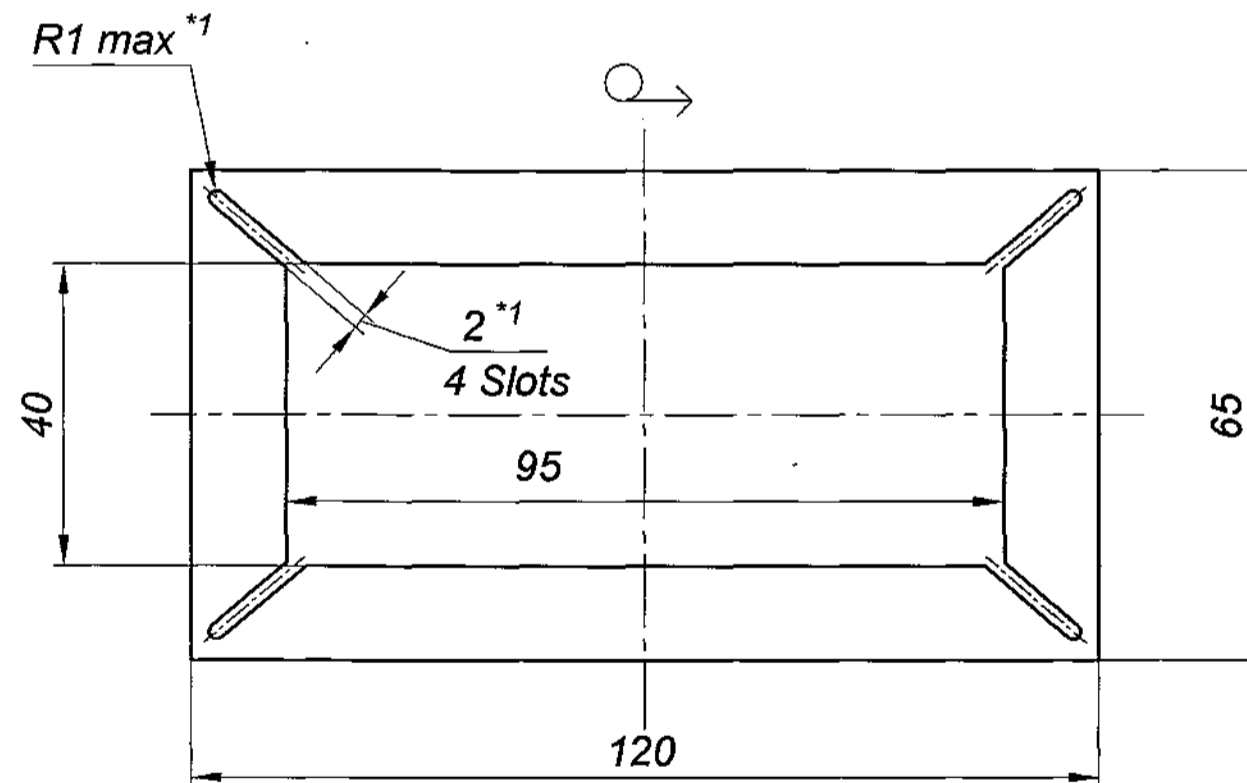
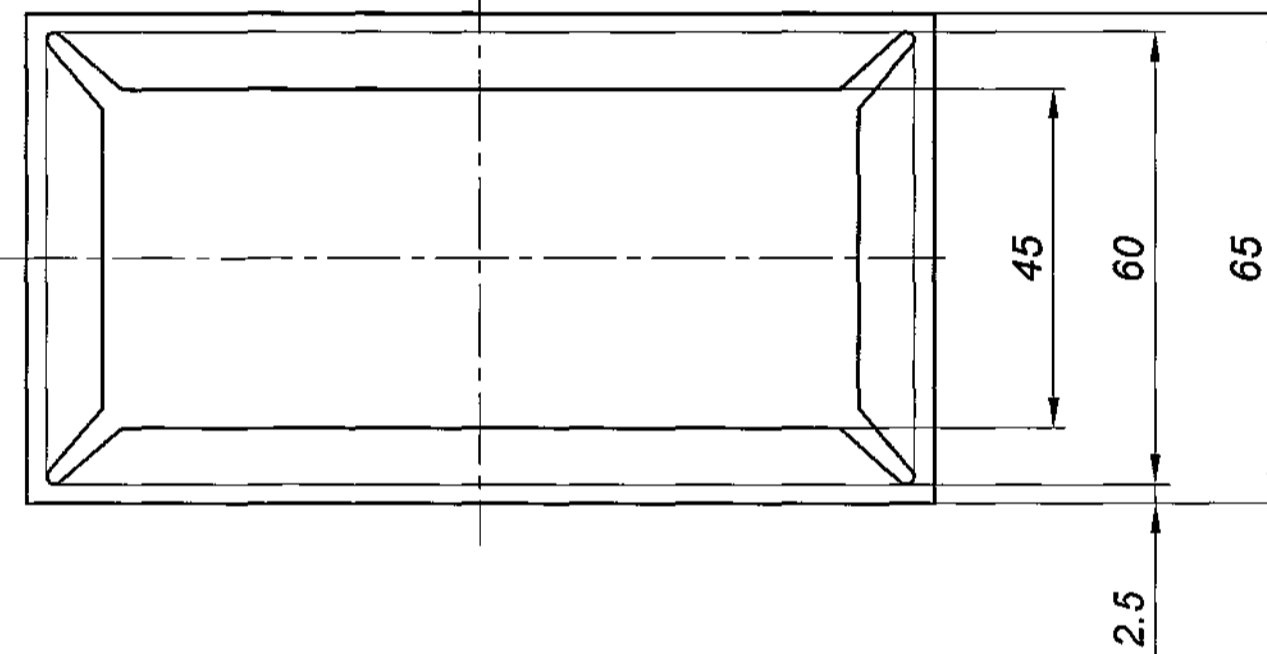
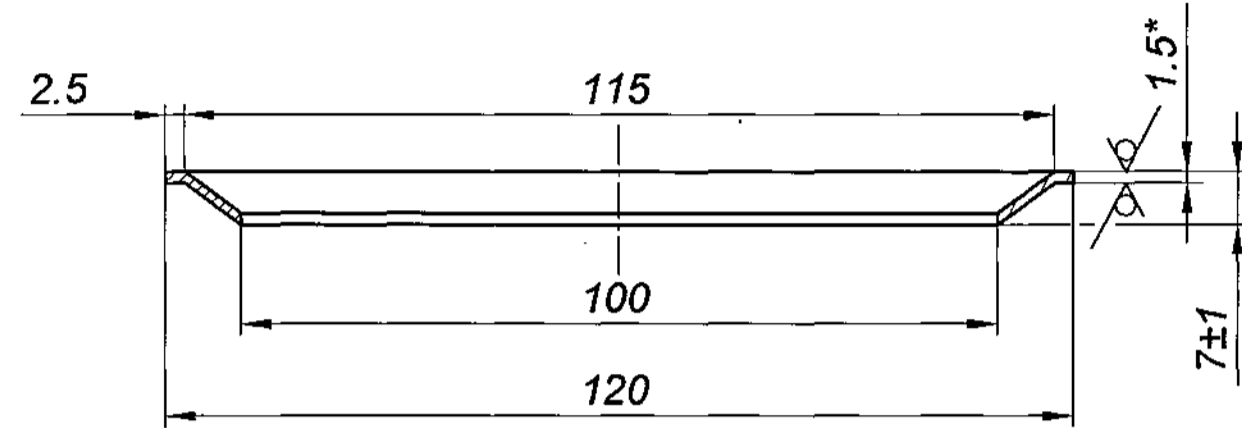
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

		EST. WT. (Kg) 0.06	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.			
4A	19-5-10	4 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09	MATERIAL :- SHEET (4) ** A 2.5 GOST 19903-74 USED ON :- Cb 3342-16
4	14.11.08	NOTN. NO: 2002-220 (F-158).	K270B6-III-F-10-Cb GOST 16523-89
ISSUE DATE	NATURE OF AMENDMENTS		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI
DRN	SCALE :- 1:1		TITLE :- BRACKET
CHD	DIMENSIONS IN mm		
APPD	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69		D S CAT NUMBER
DATE	ALL THREADS TO CONFORM TO		DRAWING NUMBER 3342-281
SIZE A4			

DRAWING NUMBER
3342-17

SHEET No. 1 OF 1

20/ (✓)



1. Unspecified limit deviations of dimensions $\pm 0.5\text{mm}$ is allowed to increase limit deviations upto $\pm 1\text{mm}$.
2. Allowed to manufacture from the parts.
3. *Dimension is given for reference.
4. *1 Dimension is ensured by tool.

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

3A EQUIVALENT MATERIAL
Gr. D IS: 513-1994.

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

EST. WT. 0.043	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
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ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT - SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	CHD	APPD	DATE	SCALE: 1:1	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69	ALL THREADS TO CONFORM TO
			10-5-07				
				MATERIAL :- SHEET AT-1.5 GOST 19904-90 K270B6-II-F-10-cb GOST 16523-89		USED ON :- Cb 3342-16	
				CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI		TITLE :- CONE	
				D S CAT NUMBER		DRAWING NUMBER 3342-17	
3A	29.04.10	4 th A.H. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09					
ISSUE	DATE	NATURE OF AMENDMENTS					

F-6
20
106

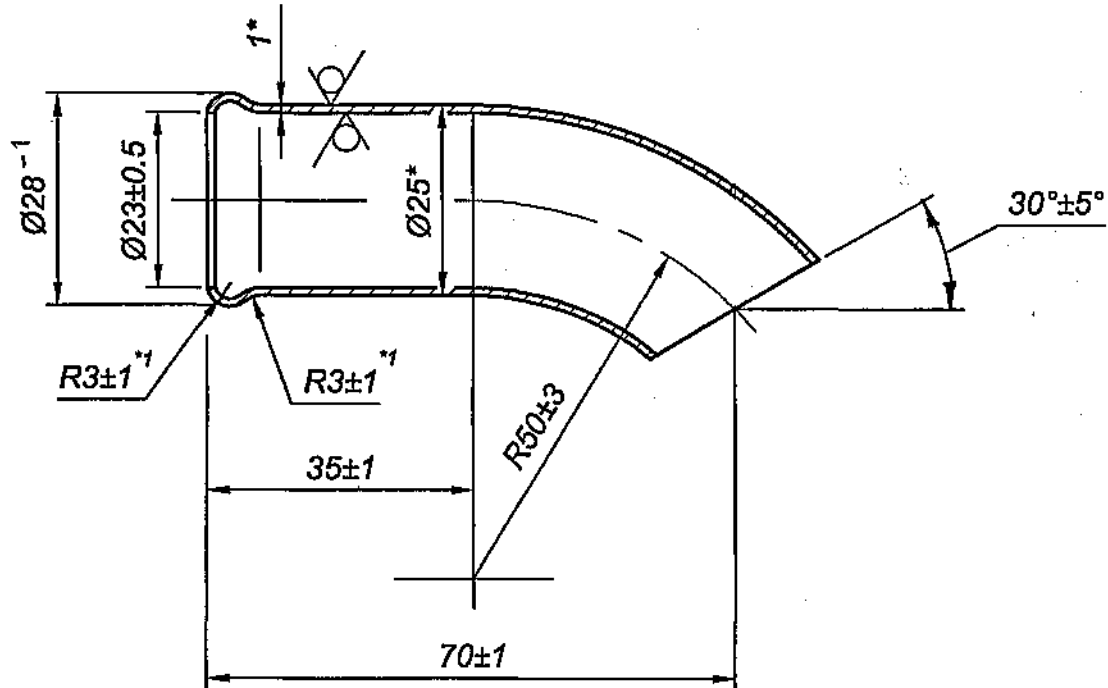
SIZE A2

DRAWING NUMBER
3342-18

SHEET No. 1 OF 1

40/ (✓) (✓)

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3



1. Straightened pipe length $L \approx 77$ mm
2. *Dimension is given for reference.
3. *1 Dimension is ensured by tool.

F-6
21
106

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

		EST. WT. (kg) 0.07	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.	
		MATERIAL :- PIPE <u>25x1 GOST 8734-75</u> B 10 GOST 8733-87	USED ON :- CB 3342-16
ISSUE DATE	NATURE OF AMENDMENTS		
DRN <i>[Signature]</i>	SCALE :- 1:1 DIMENSIONS IN mm	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
CHD <i>[Signature]</i>	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69		TITLE :- PIPE
APPD <i>[Signature]</i>	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 3342-18
DATE 09.5.07			
SIZE A4			

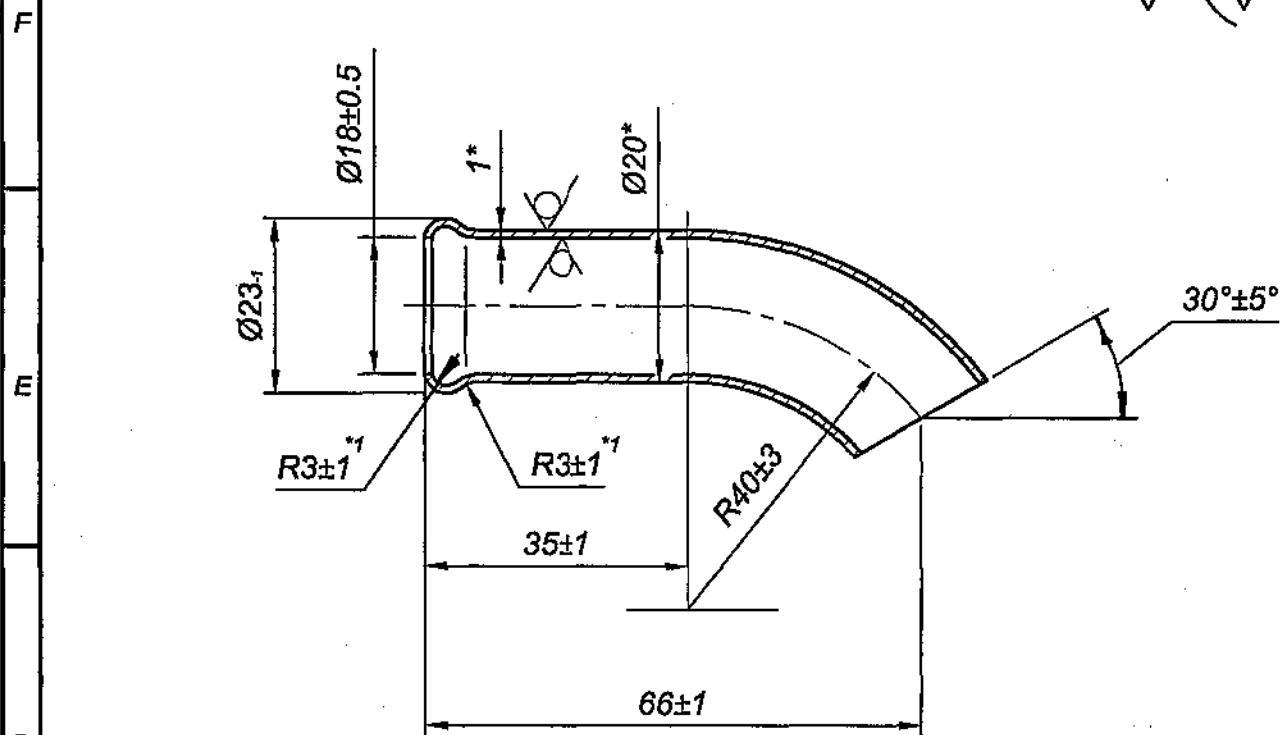
DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

F-6
22
106

DRAWING NUMBER
3342-19

SHEET No. 1 OF 1

40/ (✓) (✓)



1. Straightened pipe length $L \approx 72\text{mm}$.
2. *Dimension is given for reference.
3. ¹Dimension is ensured by tool.

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

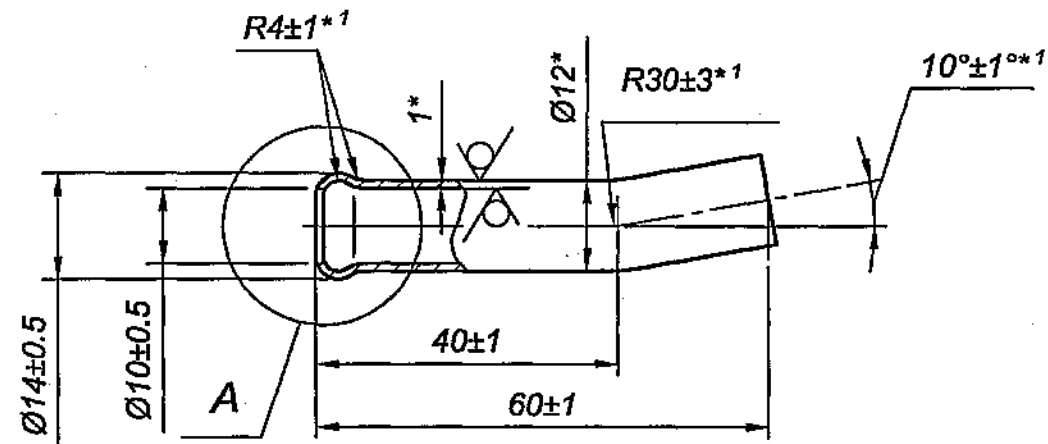
		EST. WT. (Kg) 0.036	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	
		MATERIAL :- PIPE 20x1 GOST 8734-75 B 20 GOST 8733-87	USED ON :- Cb 3342-16
ISSUE DATE	NATURE OF AMENDMENTS		
DRN	SCALE :- 1:1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
CHD	DIMENSIONS IN mm		
APPD	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69		TITLE :- PIPE
DATE	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 3342-19
09.5.07			

SIZE A4

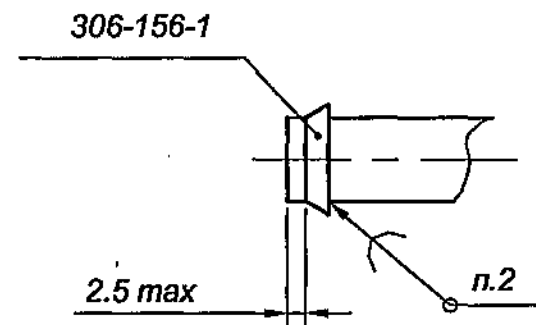
DRAWING NUMBER
3342-20

SHEET No. 1 OF 1

80/ (✓)



ALTERNATE-A



1. Straightened pipe length $L \approx 62\text{mm}$.
2. Wire Л63 GOST 12920-67 .
3. *Dimension is given for reference.
4. *1 Dimension is ensured by tool.

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 5

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

EST. WT. (Kg) **0.023** 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		MATERIAL :- PIPE	USED ON :-
			CHD		12x1 GOST 8734-75	Cb 3342-16
			APPD		B10 GOST8733-87	
			DATE	09.5.07	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
			SCALE:-	1:1	AVADI	
			DIMENSIONS IN mm			TITLE :-
			TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69			PIPE
			ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
			ISSUE	DATE		3342-20
				NATURE OF AMENDMENTS		

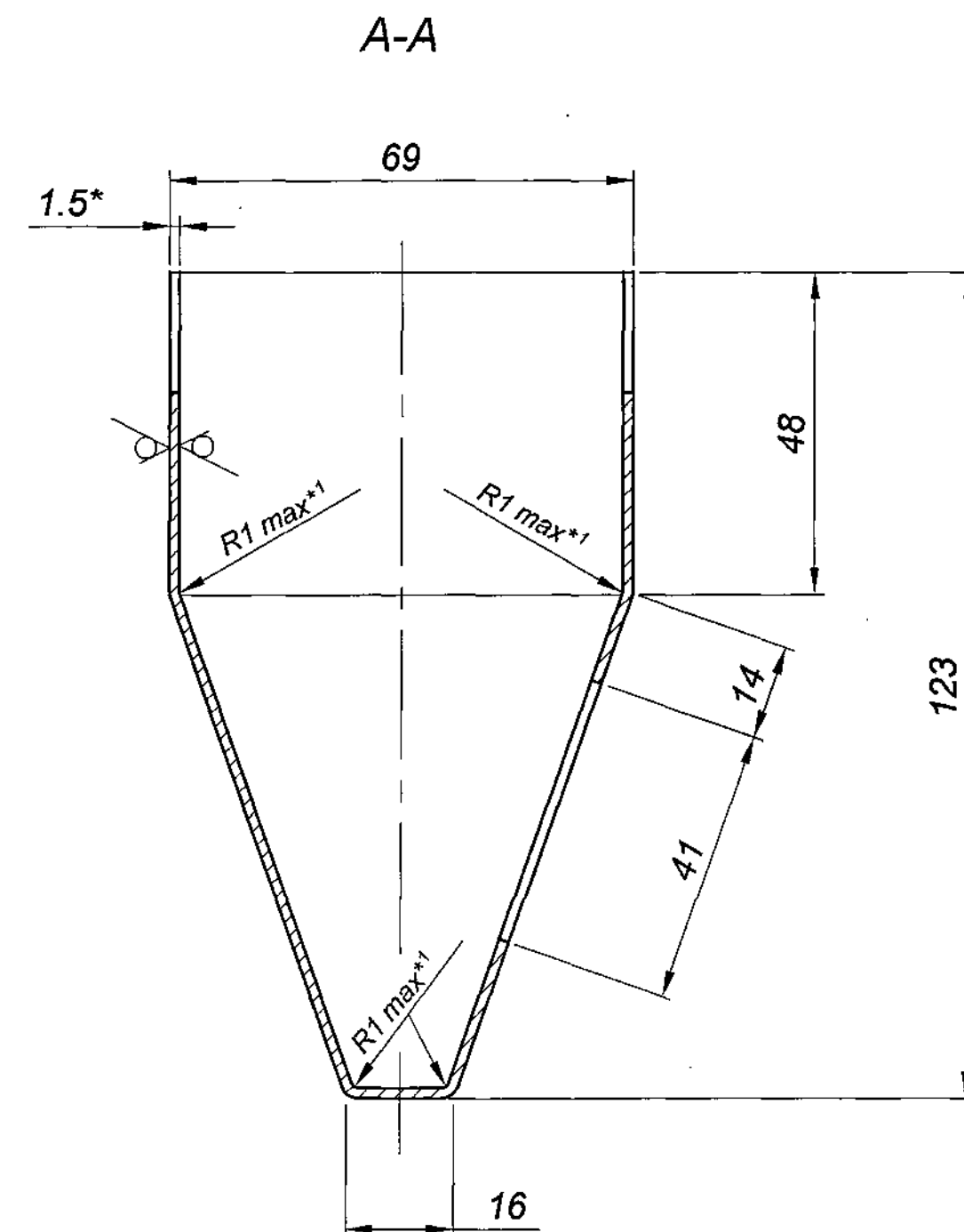
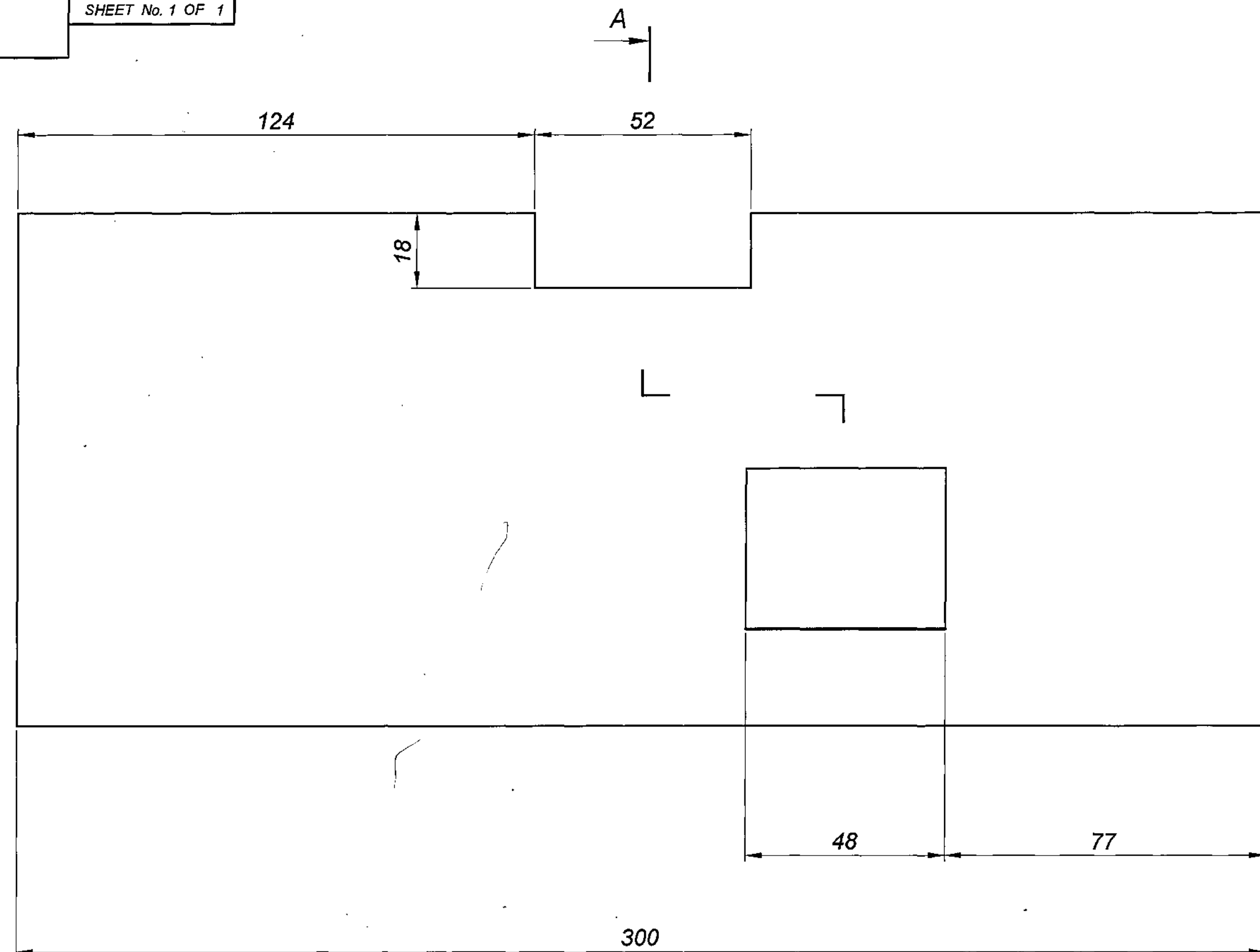
F-6
23
106

SIZE A3

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

DRAWING NUMBER
3342-21

SHEET No. 1 OF 1



1. Unspecified limit deviations are $\pm 0.5\text{mm}$, allowed to increase limit deviations upto $\pm 1\text{mm}$.
2. *Dimension is given for reference.
3. *1Dimensions are ensured by tool.

20/ (✓)

3A EQUIVALENT MATERIAL
Gr. DD IS:513-1994

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)
0.96

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

DRN	CHD	APPD	DATE	MATERIAL :- SHEET AT-1.5 GOST 19904-90 K270B6-II-F-10-cb GOST 16523-89	USED ON :- CE 3342-16
SCALE:- 1:1				CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DIMENSIONS IN mm				TITLE :- BODY	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69				D S CAT NUMBER	
ALL THREADS TO CONFORM TO				DRAWING NUMBER 3342-21	
3A	21.5.10	4 th Alt.Comm.Mt.Minutes Pt.No.2 Dt.26.10.09			
ISSUE	DATE	NATURE OF AMENDMENTS			

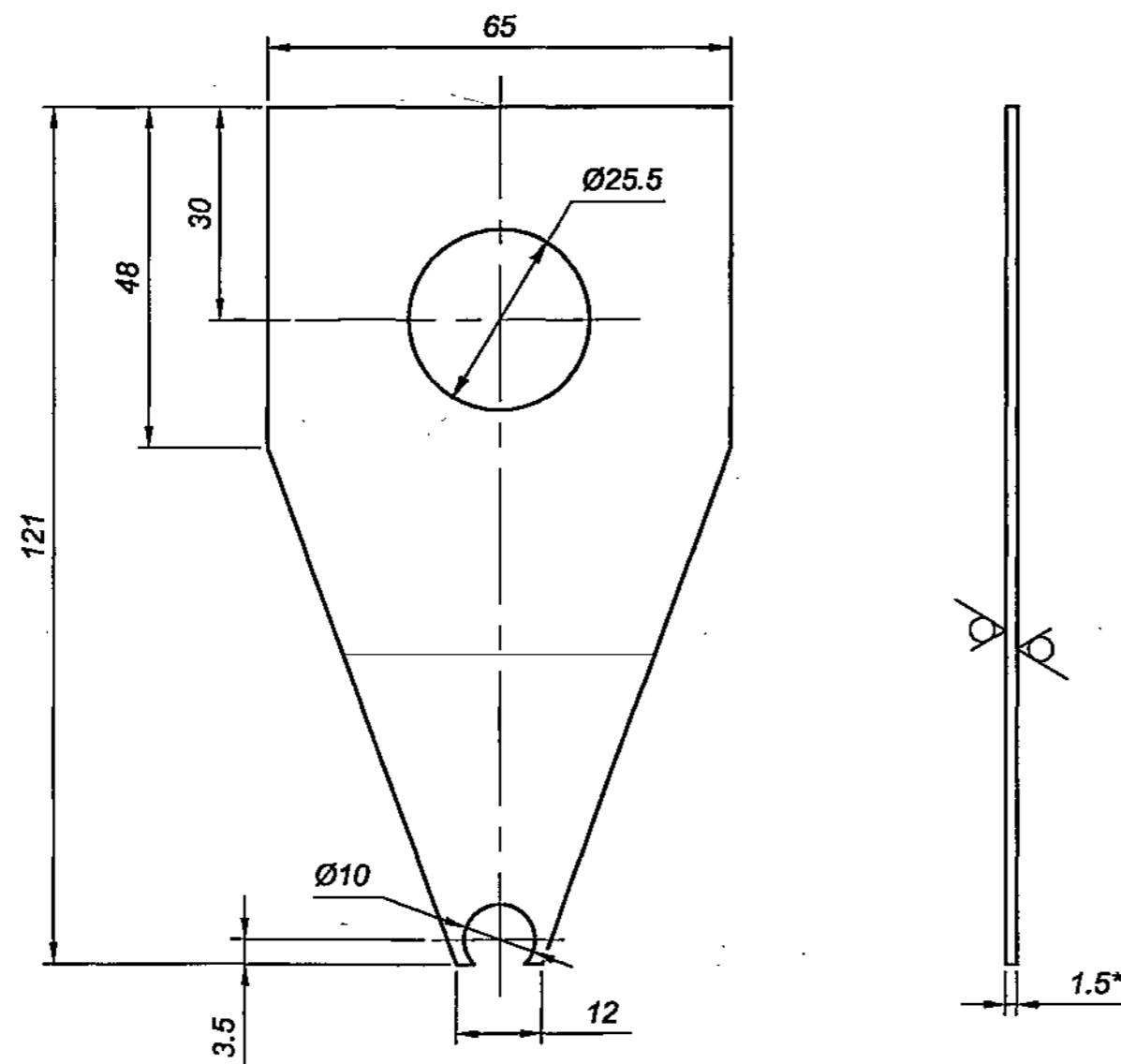
F-6
24
105

SIZE A4x4

DRAWING NUMBER
3342-22

SHEET No. 1 OF 1

80/ (✓)



1. Unspecified limit deviations of dimension for cold stamping are $\pm 0.5\text{mm}$
2. *Dimension is given for reference.

(3A) EQUIVALENT MATERIAL
Gr. 0 IS:513-1994

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

EST. WT. (Kg) **0.06** 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	CHD	APPD	DATE	SCALE:- 1:1	MATERIAL :- SHEET AT-1.5 GOST 19904-90	USED ON:- Sb 3342-16
			09.5.07	DIMENSIONS IN mm	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
				TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69	TITLE :- SIDE FRAME	
				ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 3342-22
3A	21.5.10	4 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09				
ISSUE	DATE	NATURE OF AMENDMENTS				

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

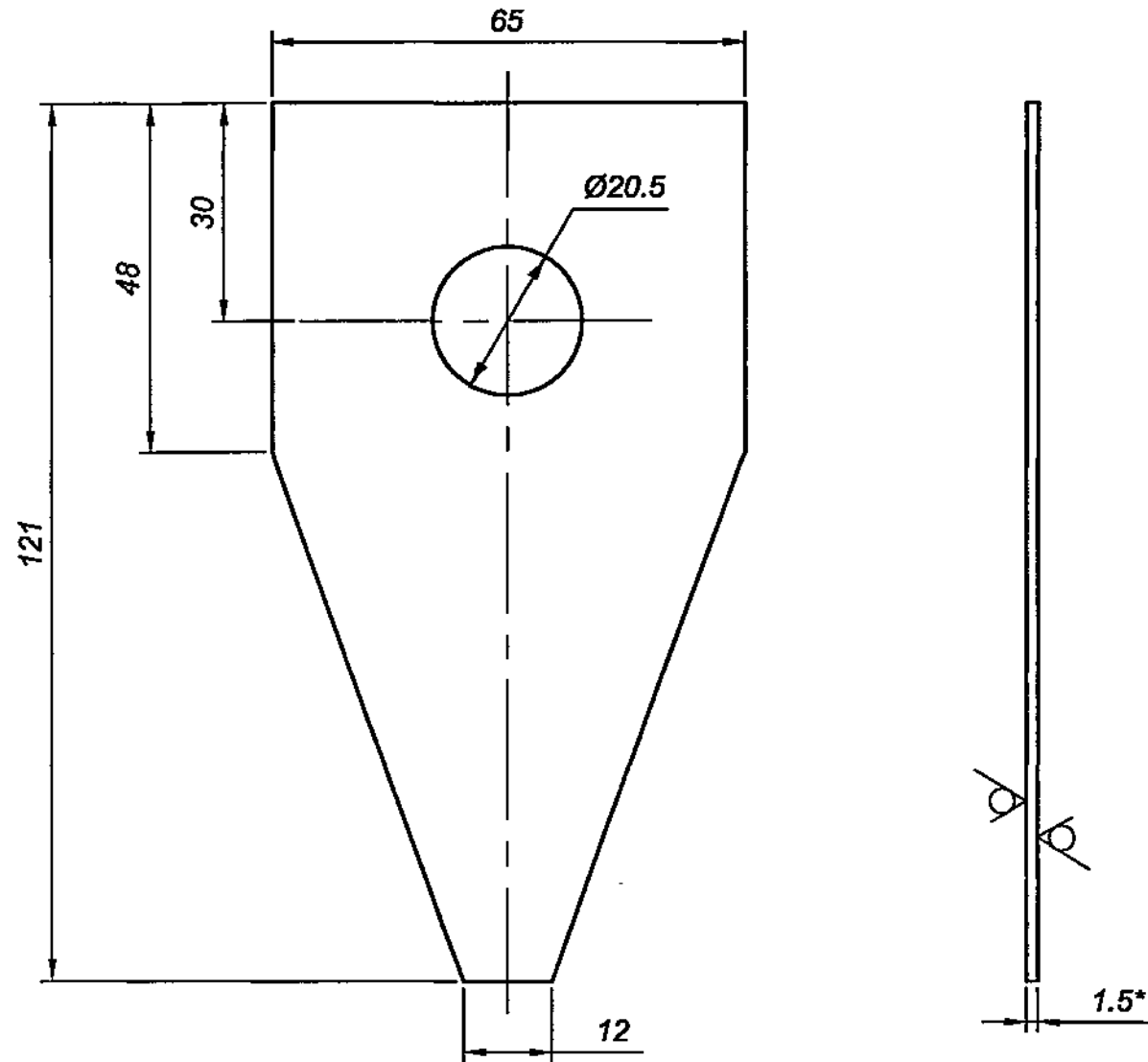
F-6
25
106

SIZE A3

DRAWING NUMBER
3342-23

SHEET No. 1 OF 1

80/ (✓)



1. Unspecified limit deviations of dimension for cold stamping are $\pm 0.5\text{mm}$
2. *Dimension is given for reference.

(3A) EQUIVALENT MATERIAL
Gr. 0 IS:513-1994

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

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

EST. WT. (Kg) **0.064** 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.

F-6
26
106

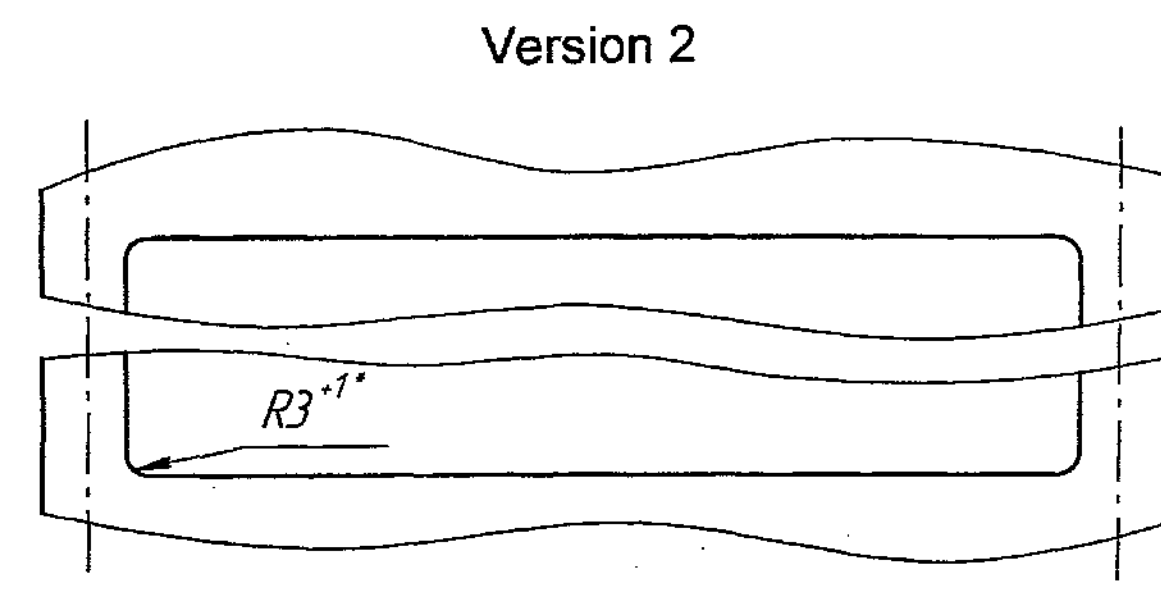
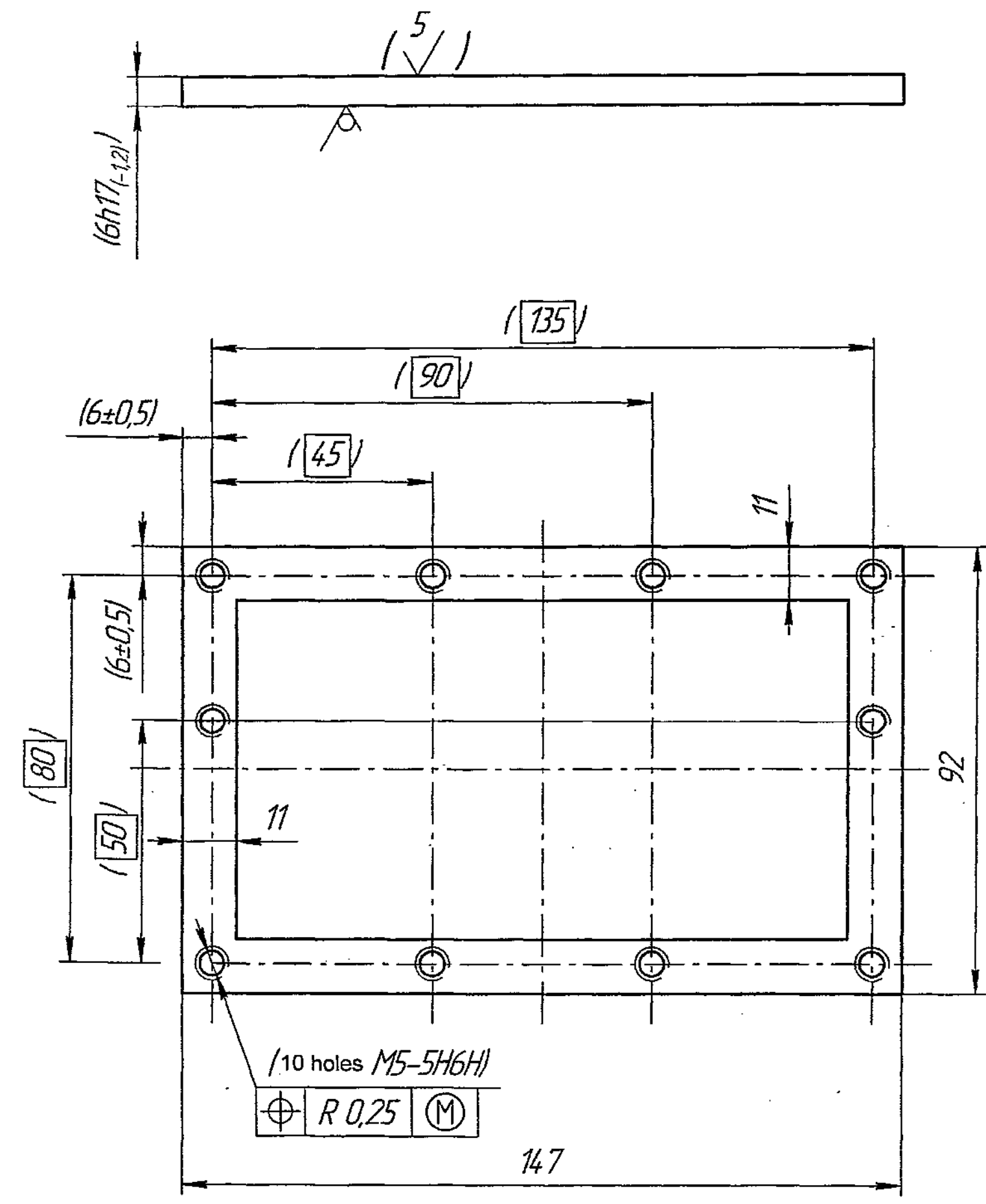
SIZE A3

			DRN		MATERIAL :- SHEET	USED ON :-
			CHD		AT-1.5 GOST 19904-90	Sb 3342-16
			APPD		K270B6-II-Г-10-сб GOST 16523-89	
			DATE	09.5.07	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
			SCALE:-	1:1	AVADI	
			DIMENSIONS IN mm		TITLE :-	SIDE - FRAME
			TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69			
			ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
			3A	21.5.10		3342-23
			ISSUE	DATE	NATURE OF AMENDMENTS	
					4 th Alt. Comm. Mt. Minutes Pt.No.2 Dt.26.10.09	

DRAWING NUMBER
3342 - 24

SHEET No. 1 OF 1

20 ✓ (✓)



1. Alternate material steel 20, 10kn GOST 1050 - 88, steel 10 GOST 4041-71
2. Dimension in brackets is after assembling.
3. Unspecified limit deviations of dimensions is ± 0.5 mm.
4. * Dimension is ensured with tool.

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 6
DRG. REPLACES 3342-24 ISSUE-4 VIDE NOTN. NO: 2002-202

6A
EQUIVALENT MATERIAL
040 A 04 (EN 2A) BS:970

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

EST. WT. (Kg) 0.183	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.	

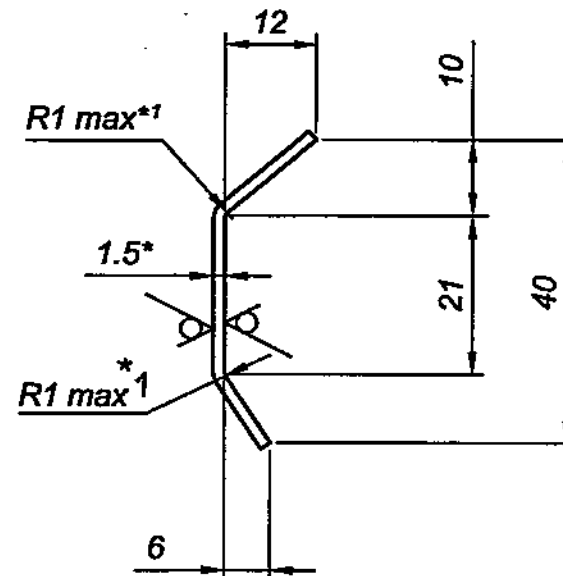
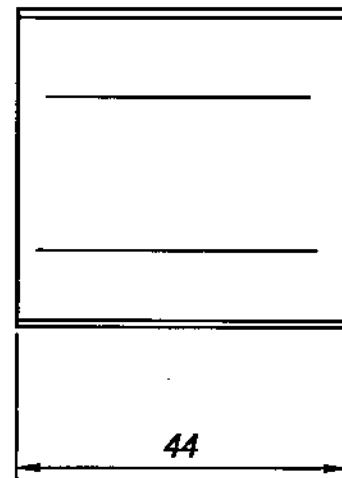
DRN	B. A. / Bal	MATERIAL :-	USED ON :-
CHD		STEEL 10 GOST 1050-88	Cb 3342-16
APPD		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DATE	4-12-08	TITLE :-	
SCALE:-	1 : 1	FLANGE	
DIMENSIONS IN mm		D S CAT NUMBER	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69		DRAWING NUMBER	
ALL THREADS TO CONFORM TO		3342 - 24	
6A	21.5.10	6 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09	
ISSUE	DATE	NATURE OF AMENDMENTS	

F-158
SIZE A2

DRAWING NUMBER
3342-25

SHEET No. 1 OF 1

20/ (✓)



1. Unspecified limit deviations of dimensions are $\pm 0.5\text{mm}$ allowed to increase limit deviations upto $\pm 1\text{mm}$.
2. *Dimension is given for reference.
3. *1 Dimensions are ensured by tool.

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

3A

EQUIVALENT MATERIAL
Gr. D IS:513-1994.

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

EST. WT. (kg) **0.028** 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	BW	MATERIAL :- SHEET	USED ON:-
CHD	[Signature]	AT-1.5 GOST 19904-90	CB 3342-16
APPD	[Signature]	K270B6-II-F-10-Cb GOST 16523-89	
DATE	09.5.07	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
SCALE:- 1:1		TITLE :-	
DIMENSIONS IN mm		INSERT	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69			
ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER 3342-25

F-6
28
106

SIZE A3

3A	21.5.10	4 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09
ISSUE	DATE	NATURE OF AMENDMENTS

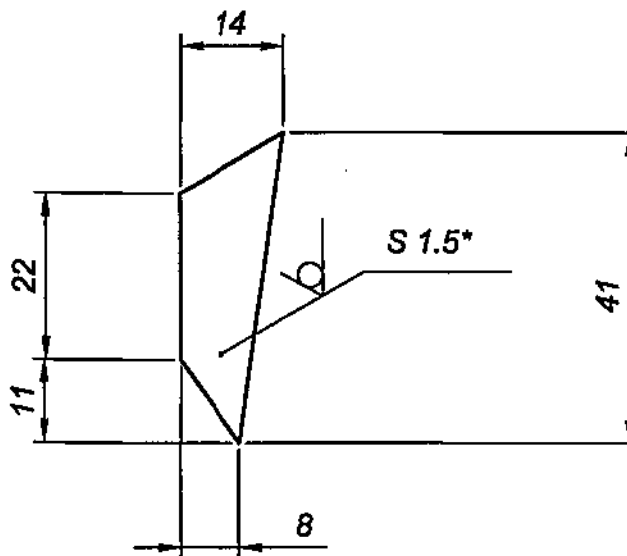
DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 4

F-6
29
106

DRAWING NUMBER
3342-26

SHEET No. 1 OF 1

20 / (✓)



1. Unspecified limit deviations of dimensions are $\pm 0.5\text{mm}$
2. *Dimension is given for reference.

4A

EQUIVALENT MATERIAL
Gr. D IS:513-1994.

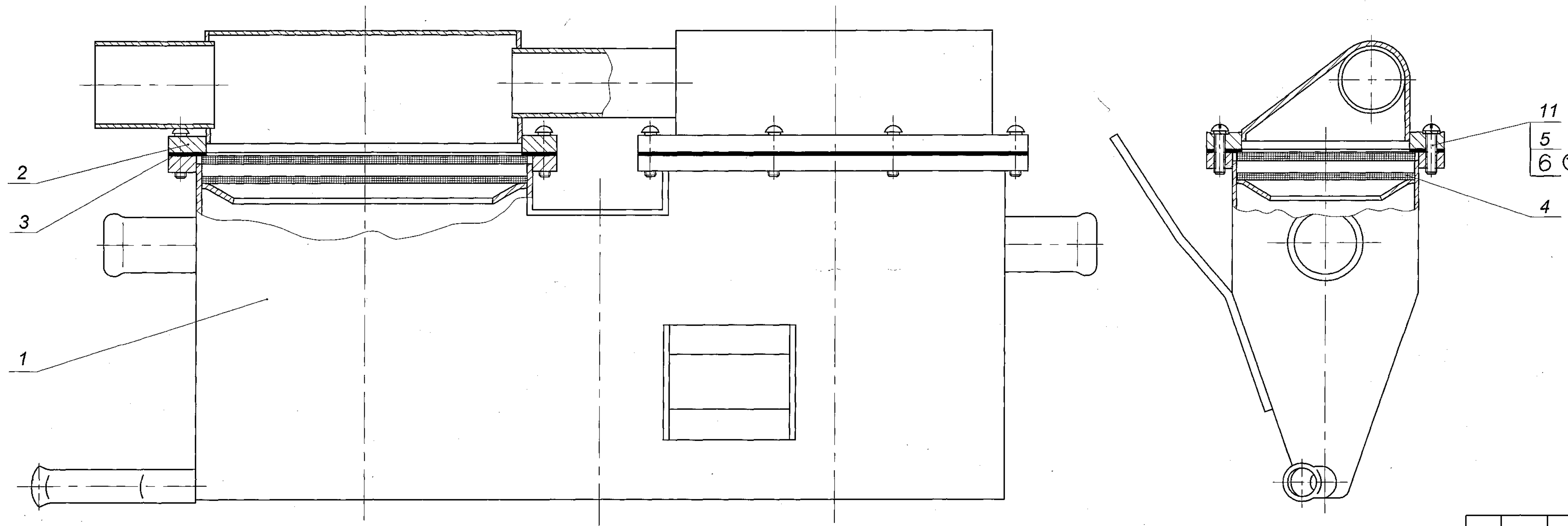
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

			EST. WT. (Kg) 0.003	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.	
			MATERIAL :- SHEET AT-1.5 GOST 19904-90	USED ON :- C6 3342-16
4A	21.5.10	4 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09	K270B6-II-F-10-cb GOST 16523-89	
ISSUE	DATE	NATURE OF AMENDMENTS		
DRN		SCALE :- 1:1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
CHD		DIMENSIONS IN mm		
APPD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69		TITLE :- SHEET
DATE	09.5.07	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 3342-26

SIZE A4

DRAWING NUMBER
Cb.3342-81-1

SHEET No. 1 OF 1



1. Before assembly, thoroughly wash all the parts, in diesel except the part at item 3, and blow off with compressed air.
2. Select the quantity of meshes (item 4) in such a way, that the pocket is pressed with the cover (item 2) densely. It is allowed to increase or decrease the quantity.
3. In tropical design, components marked with designation "T II" in column "Remarks" of the part list of given drawings, should be of tropical construction, as specified in the working drawings.
4. Set gasket item 3 on high-temperature silicone sealing-glue "Polys-force" Ty.2252-001-51221435-00 with temperature of operation in the range from minus 50° to plus 320° as per ИЛ-759-88.

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 6

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

EST. WT. (kg) 3.211 TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

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

DRN	CHD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69	ALL THREADS TO CONFORM TO
			09.5.07	1:1			
MATERIAL :-				USED ON :-			
				Sb.3342-00-21			
CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)							
AVADI							
TITLE :-						OIL SEPARATOR ASSY	
D S CAT NUMBER				DRAWING NUMBER			
				Cb.3342-81-1			
7	3-12-08	NOTN. No 149-03 (R-158)					
ISSUE	DATE	NATURE OF AMENDMENTS					

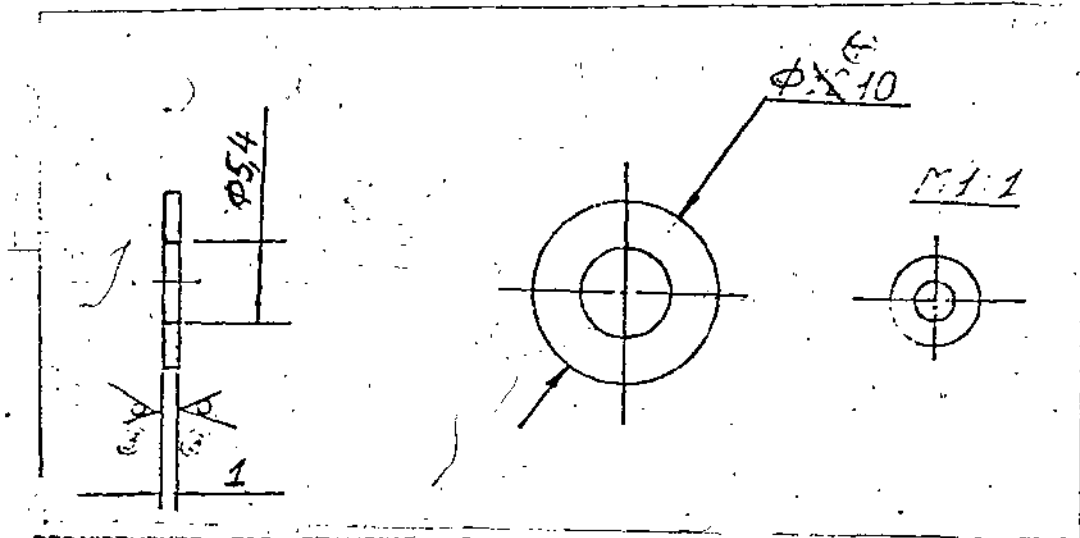
F-6
9
106
SIZE A4 x 4

DRAWING NUMBER

353-03-2

Rz40 ✓ (✓)

COMMON TO V-9252 ENGINE



3. REQUIREMENTS FOR STAMPING AS PER STANDARD 82050-16.
4. THE COMPONENT SHOULD BE STRAIGHTENED AFTER STAMPING. BURRS ARE NOT ALLOWED.
5. COATING : Zn 15 Cr AS PER UΛ-483-82 WITH REMOVAL OF HYDROGEN EMBRITTLEMENT.
6. COATING WITH ZINC IS ALLOWED BY THERMAL DIFFUSION METHOD AS PER UΛ-1181. COATING THICKNESS 0.009 - 0.012 mm TO BE PASSIVATED.
7. ALTERNATE MATERIAL : STEEL GRADES 08, 08Kn, 10 GOST 1050-74.
8. IN TROPICALIZED CONSTRUCTION COATING : Cd 9, CHROMATIZING AS PER UΛ-104 WITH ELIMINATION OF HYDROGEN EMBRITTLEMENT.
9. FINISHING PARAMETER OF MACHINING SURFACES TO BE ENSURED WITH TOOL.

(B) EQUIVALENT MATERIAL

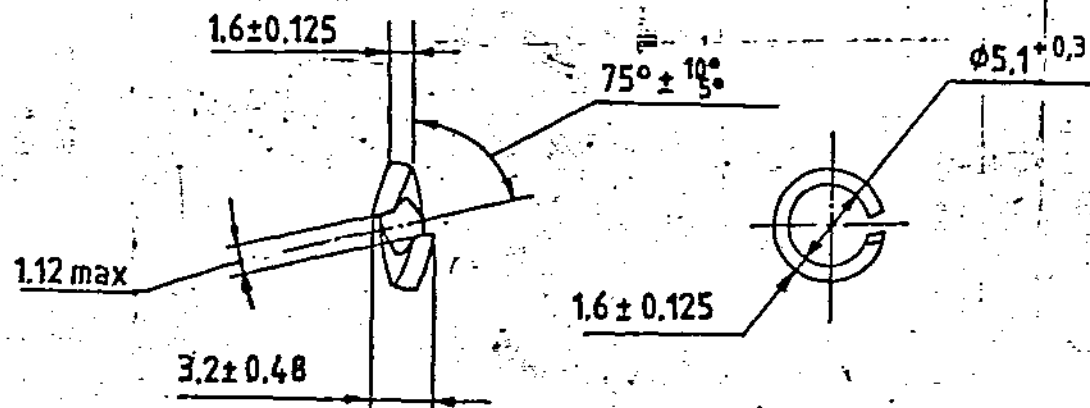
Gr. O IS: 513-1994

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

		EST. WT. 0.0007 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THUS $\frac{\text{---}}{\text{---}}$ (LETTERS)
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	
B	17.03.10	4 th Alt. Comm. Mt. Minutes Pt. No. 1 Dt. 26.10.09	MATERIAL:- USED ON: CB 3312-00-22 CB 3301-00-44, CB 3301-00-37, CB 3312-00-15 (A)
A	25-8-08	USED ON NUMBER ADDED	STRIP 08nc-M-2-1 GOST 503-81
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN	CHD	SCALE:- 2 : 1 DIMENSIONS IN mm	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADL
TCD	APPD	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS 2102 -69	
DATE	24/8/88	ALL THREADS CONFORM TO	TITLE WASHER BRIGHT 6
		D. S CAT NUMBER	DRAWING NUMBER 353-03-2

KVD.No. 78696

DRAWING NUMBER
353-93-1



1. IN TROPICAL MANUFACTURE, COATING Cd 9 Cr AS PER UCL-104 WITH REMOVAL OF HYDROGEN EMBRITTLEMENT.
2. WASHER ST65Γ09 GOST 6402-70 MAY BE USED, IN VISUAL AND TROPICAL MANUFACTURE.

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

		EST. WT. ¹⁰⁰⁰ Pcs 0.424 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THUS $\frac{\oplus}{\ominus}$ (LETTERS)
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.			
A	16.8.10	1 st Alt. Comm. Meeting Minutes Point No. 12 Dt: 26-10-09	MATERIAL:- ST 65 Γ 06 GOST 6402-70
ISSUE DATE		NATURE OF AMENDMENTS	USED ON Cb 322-10-4 Cb 322-10-4
DRN	<i>Ughle</i>	SCALE:- 2 : 1 DIMENSIONS IN mm	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.
CHOC	<i>S. S. S.</i>	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS 2102 -69	TITLE WASHER
APPO	<i>S. S. S.</i>	ALL THREADS CONFORM TO	D S CAT NUMBER
DATE	<i>28.5.01</i>		DRAWING NUMBER 353-93-1
SIZE A4			

EXPLANATORY NOTE:

MATERIAL QUOTED: WASHER 5T, 65Γ, 06 GOST 6402-70.

CORRESPONDS DESIGN AND DIMENSIONS OF SPRING (LOCK) WASHERS.

06 = CONVENTIONAL SYMBOL OF FINISH. (PARKERISING FOLLOWED

5 = NOMINAL THREAD DIA OF BOLT OR SCREW BY OILING).

T = HEAVY ; 65Γ = GRADE OF STEEL AS PER GOST 1050-74.
(65G)

CHEMICAL COMPOSITION: AS PER GOST 1050-74.

CONTENT OF ELEMENTS %							
C	Si	Mn	Cr	S	P	Cu	Ni
MAXIMUM							
0.62-0.70	0.17-0.37	0.90-1.20	0.25	0.040	0.035	0.25	0.25

WEIGHT OF STEEL WASHERS AND THEIR RESILIENCE PROPERTIES AS PER GOST 6402-70.

THEORITICAL WEIGHT OF 1000 STEEL WASHERS IN kg = 0.424.

ESTIMATED RESILIENCE OF WASHERS FROM STEEL GRADE 65G = 28.7.
IN kg

MECHANICAL PROPERTIES: AS PER GRADE 65G GOST 1050-74.

YIELD POINT kgf/mm² (MIN) = 44

ULTIMATE TENSILE STRENGTH (MIN) = 75
kgf/mm².

ELONGATION % (MIN) = 9

REFERENCE NOTE: 09 = ZINC PLATING (CONVENTIONAL SYMBOLOF FINISH)

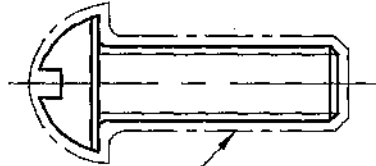
Ⓐ EQUIVALENT MATERIAL
75 C6 TO IS: 2507/EN 42 J BS: 970

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - NIL

DRAWING NUMBER

356-22-5

SHEET No. 1 OF 1



Coating to be carried out with a thickness of Zinc- 3microns, Chromium-1micron as per instruction ВП-749-88 with removal of hydrogen embrittlement.

1. In tropical construction, coating is carried out with thickness of Cadmium-9microns, Chromium-1micron as per instruction ВП-569-84 with removal of hydrogen embrittlement.
2. Blank should correspond to requirements of GOST 1759.0-87 for accuracy class B.

F-6
59
106

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

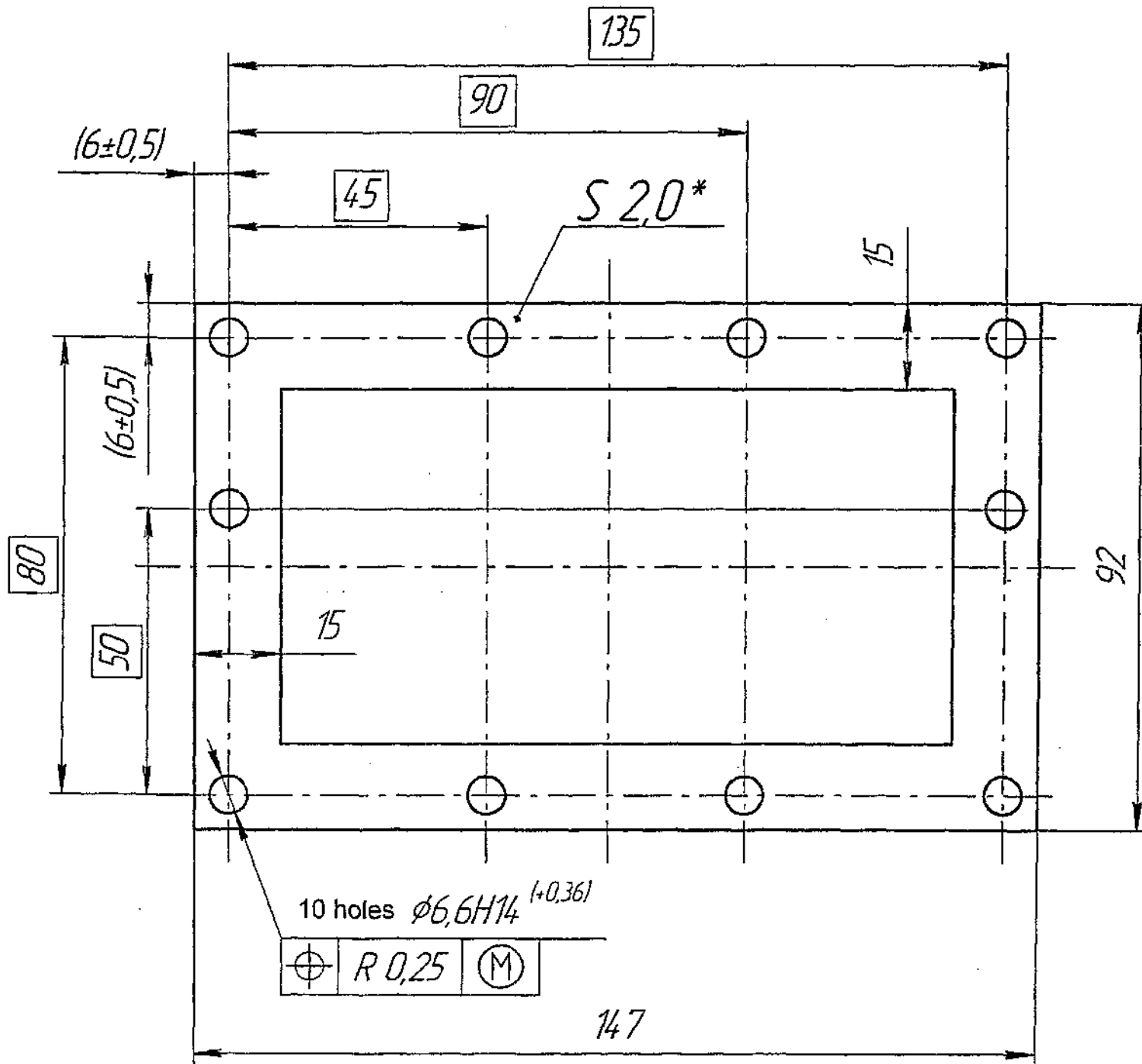
			EST. WT. 0.003	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
			ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	
			MATERIAL :- BLANK SCREW M5-6gx16.58 GOST 17473-80	USED ON :- Cb 3342-00-21 Cb 3342-81-1
ISSUE DATE	NATURE OF AMENDMENTS			
DRN	SCALE :- 2:1		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
	DIMENSIONS IN mm			
CHD	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69			TITLE :-
APPD				SCREW M5x16
DATE	ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
10.5.07				356-22-5

SIZE A4

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 6
DRG. REPLACES 3342-124 ISSUE-4, VIDE NOTN. NO: 2002-202

DRAWING NUMBER
3342-124

SHEET No. 1 OF 1



1. Unspecified limit deviations of dimensions ± 0.5 mm.
2. **Alternate** material is Paronite ПМБ 20 GOST 481-80.
3. There should not be Notches and rupture on the edges of profile.
4. * Dimension for reference.

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

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

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

ISSUE	DATE	NATURE OF AMENDMENTS

DRN *B. Anand Rao*
CHD *P. Venkatesh*
APPD *P. S. Srinivas*
DATE *4-12-08*

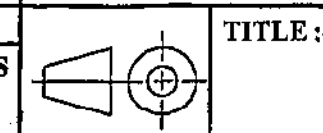
MATERIAL :-
PARONIT ПМБ-20
GOST 481-80

USED ON :-
Cb 3342-81-1

CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)
AVADI

SCALE:- 1 : 1

DIMENSIONS IN mm
TOLERANCE ON DIMNS
UNLESS OTHERWISE
STATED IS : 2102 - 69



TITLE :-

GASKET

ALL THREADS TO
CONFORM TO

D S CAT NUMBER

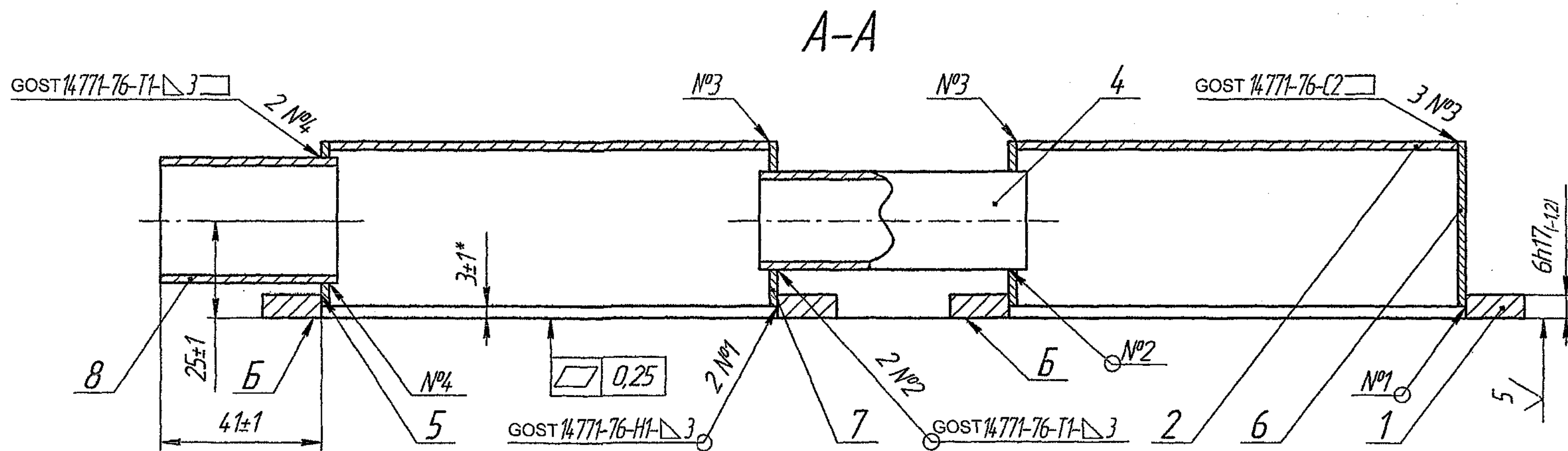
DRAWING NUMBER
3342-124

F-158

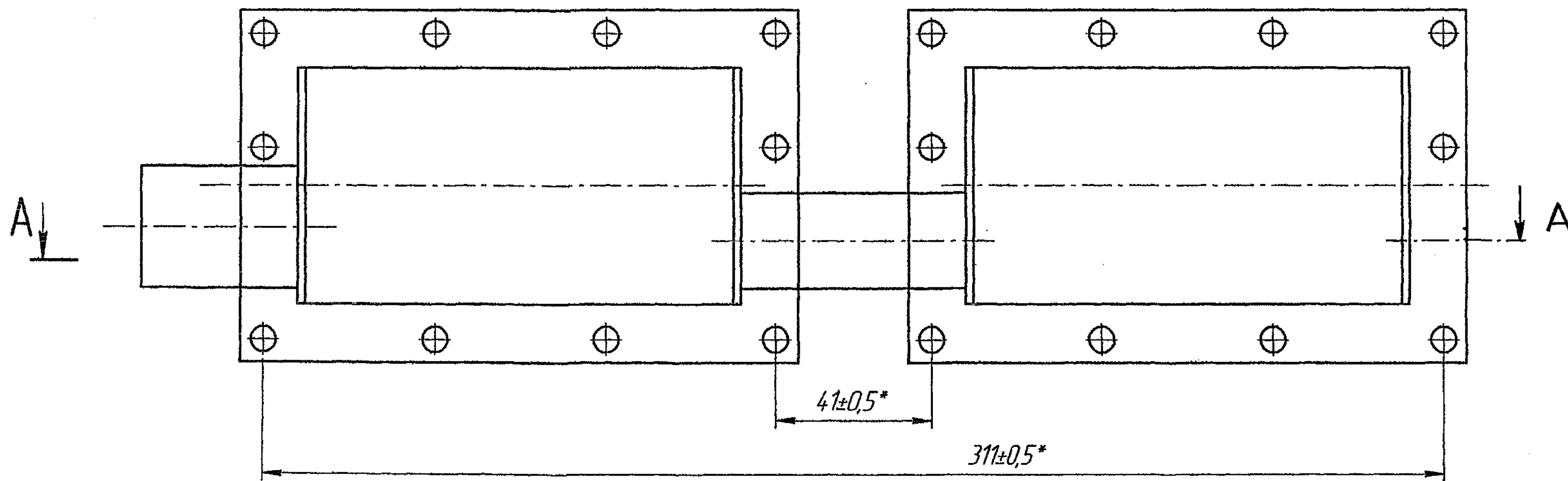
SIZE A3

DRAWING NUMBER
Cb.3342-107-2

SHEET No. 1 OF 1



1. Coat by varnish ГФ-95 GOST 8018-70 as per ИЛ-628-86 all around, except surface Б.
2. Airtightness test in water by air at pressure 50(+25) kPa [(0.5+0.25) kgf/cm²], leakage of air is not permitted. In places of air leakage it is permitted to assemble and repeat air tightness test by capillary method (dipping in kerosene) as per GOST 3242-79.
3. Welded seams would correspond to TT 23 108-43-74.
4. * Dimensions are ensured by tools.
5. Welding from inside is permitted.
6. Its is permitted to adjust the part during assembling for welding



DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 6
DRG. REPLACES Cb 3342-107-2 ISSUE-5, VIDE NOTN. NO: 2007-202.

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

EST. WT. (Kg) 0.959	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
------------------------	--

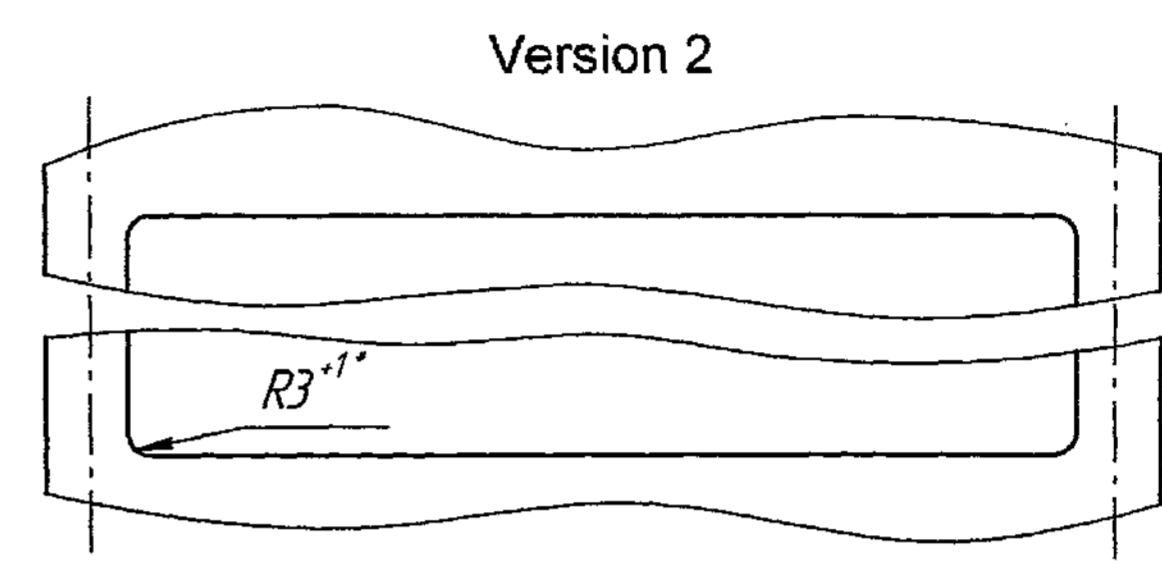
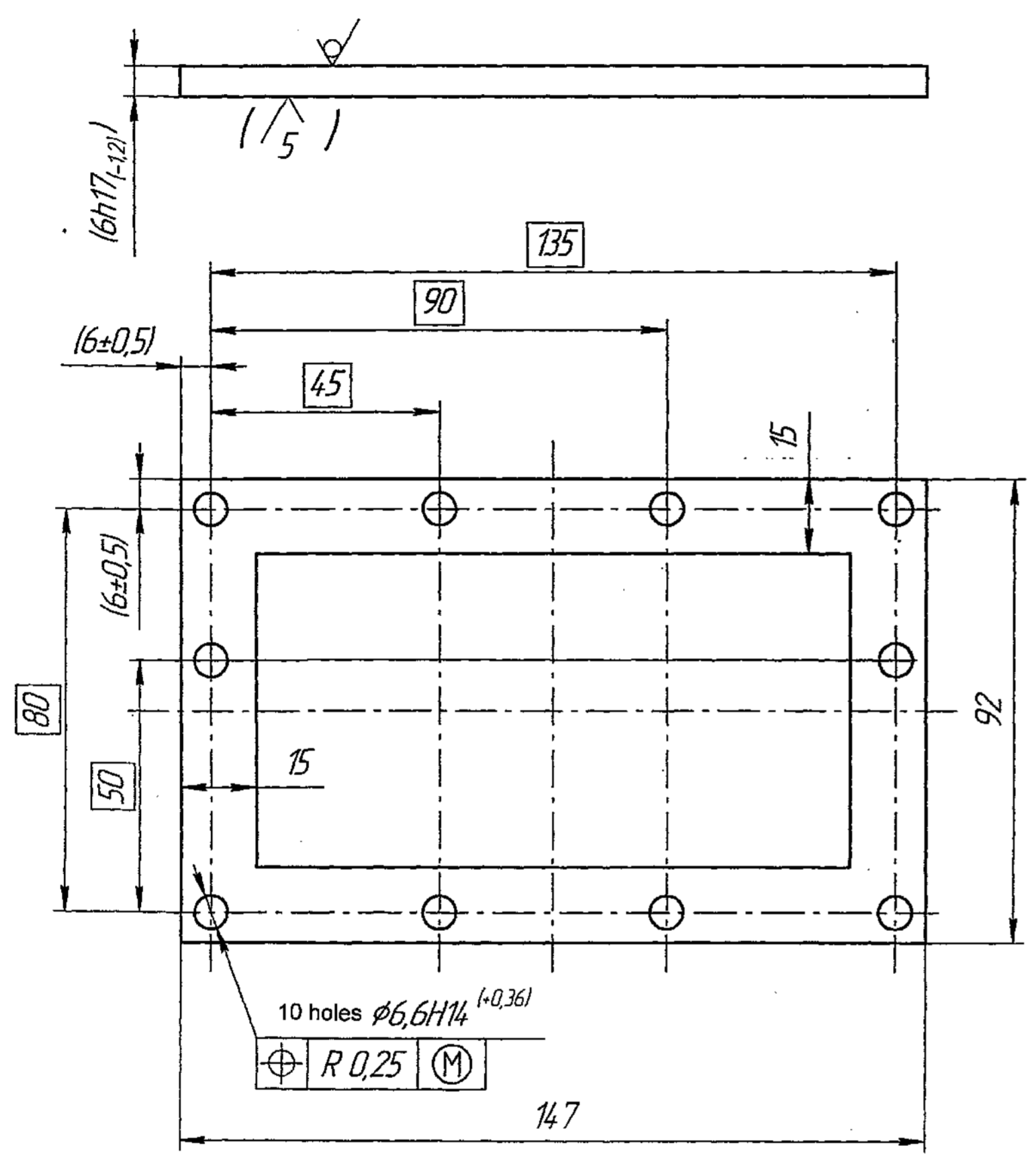
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS
OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-
SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	B. A. and Paul	MATERIAL :-	USED ON :-
CHD	Pravin Dutt		Cb 3342-81-1
APPD	Pravin Dutt	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DATE	10-12-08	TITLE :-	
SCALE:-	1 : 1	COVER ASSY.	
DIMENSIONS IN mm		D S CAT NUMBER	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69		DRAWING NUMBER	
ALL THREADS TO CONFORM TO		Cb.3342-107-2	
ISSUE	DATE	NATURE OF AMENDMENTS	

F-158

SIZE A2

20 / (✓)



1. Alternate material steel 20, 10kn GOST 1050 - 88,
2. Dimension in brackets is after assembling.
3. Unspecified limit deviations of dimensions is ± 0.5 mm.
4. * Dimension is ensured with tool.

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 6
 DRG. REPLACES 3342-125 ISSUE-4, VIDE NOTN. NO: 2002-202

(F-158)
 SIZE A2

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

EST. WT. (Kg) 0.269	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.	

(6A)
 EQUIVALENT MATERIAL
 040 A 04 (EN 2A) BS:970

DRN	R. S. Reddy	MATERIAL :-	USED ON :-
CHD	V. S. Reddy	STEEL 10	Cb 3342-107-2
APPD	R. S. Reddy	GOST 1050-88	
DATE	4-12-08	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
SCALE:- 1:1		TITLE :-	
DIMENSIONS IN mm		FLANGE	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102 - 69		D S CAT NUMBER	
ALL THREADS TO CONFORM TO		DRAWING NUMBER	
6A	29.04.10	3342-125	
ISSUE	DATE	NATURE OF AMENDMENTS	

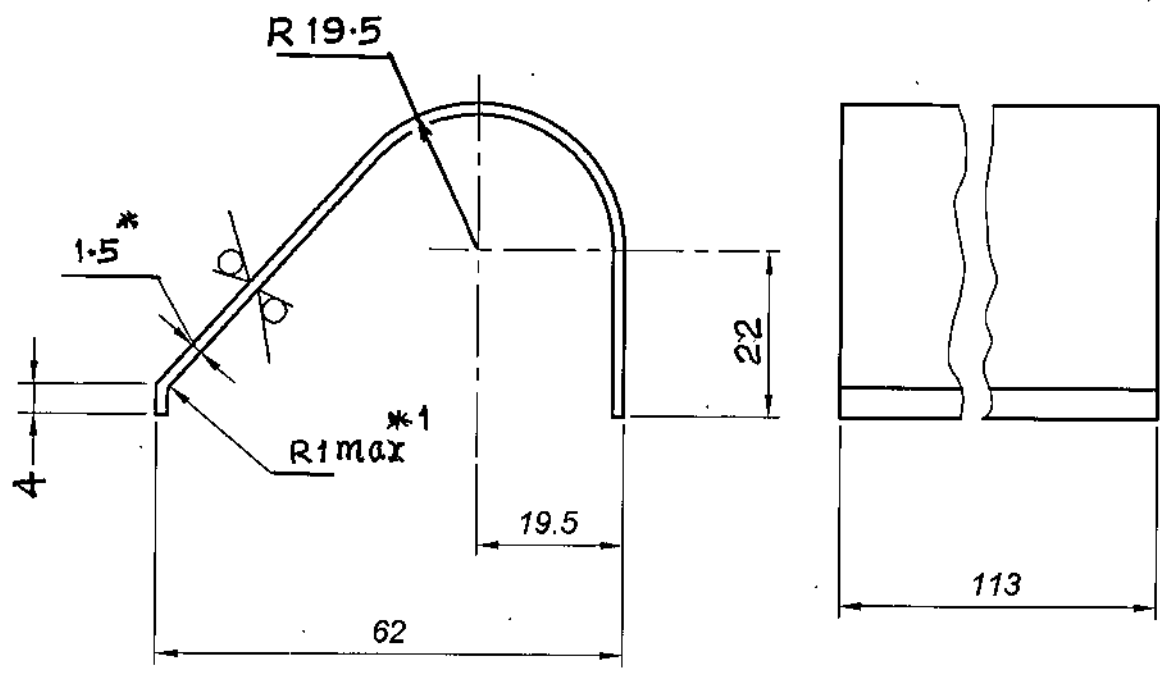
DRAWING NUMBER
3342-280

SHEET No. 1 OF 1

20/ (✓)

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 4

F-6
44
106

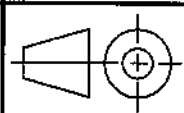


1. Unspecified limit deviations of dimensions are $\pm 0.5\text{mm}$.
2. *Dimension is given for reference.
3. ¹Dimension is ensured by tool.

(4A) EQUIVALENT MATERIAL
Gr. D IS:513-1994.

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

		EST. WT. 0.143	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.	
		MATERIAL :- SHEET AT-1.5 GOST 19904-90	USED ON :- Cb 3342-107-2
4A	19-5-10	4 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09	
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN		SCALE :- 1:1	
CHD		DIMENSIONS IN mm	
APPD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69	
DATE	09.5.07	ALL THREADS TO CONFORM TO	
SIZE A4		D S CAT NUMBER	DRAWING NUMBER 3342-280



TITLE :-
COVER

DRAWING NUMBER

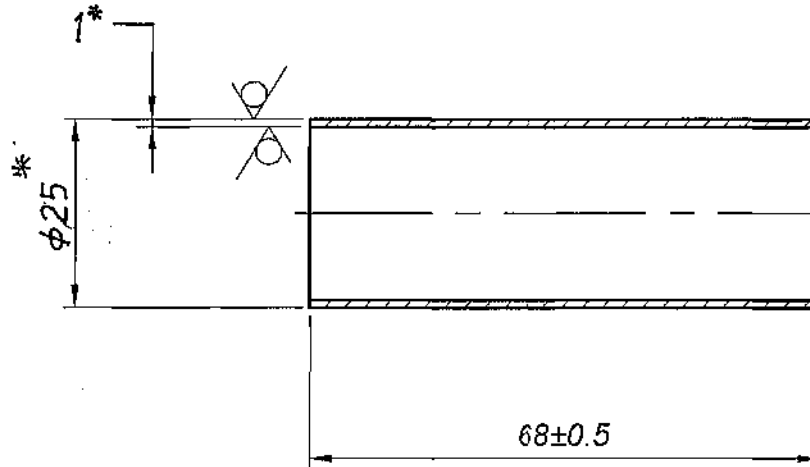
3342-284

SHEET No. 1 OF 1

20/ (✓) (✓)

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

F-6
48
106



1. *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)	
		0.06		
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.		
		MATERIAL :- PIPE	USED ON :-	
		25x1 GOST 8734-75	Cb. 3342-107-2	
		B 10 GOST 8733-87		
ISSUE	DATE	NATURE OF AMENDMENTS		
DRN		SCALE :- 1:1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
CHD		DIMENSIONS IN mm	AVADI	
APPD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69	TITLE :-	
DATE		ALL THREADS TO CONFORM TO	PIPE	
10-5-07			D S CAT NUMBER	DRAWING NUMBER
				3342-284

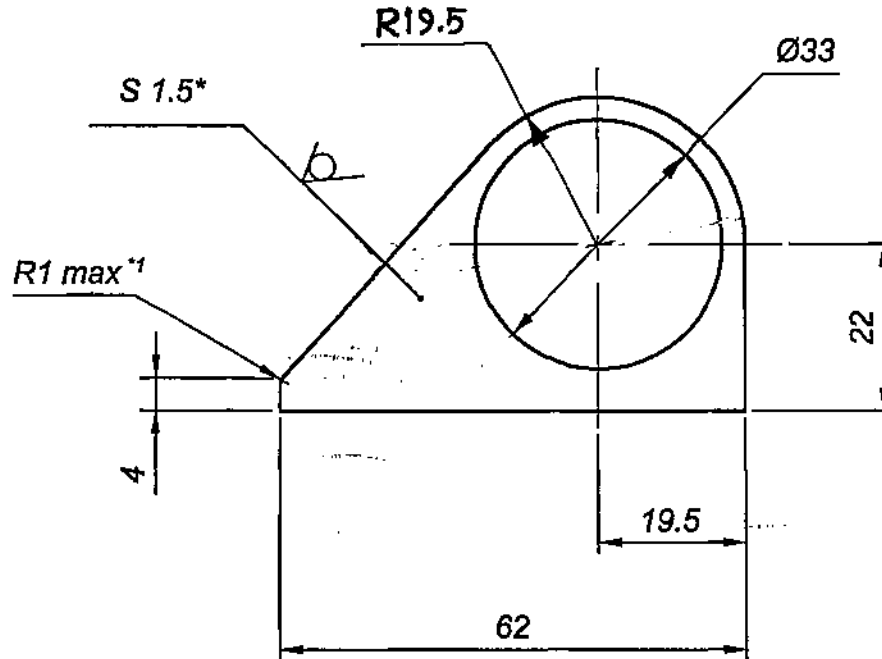
SIZE A4

DRAWING NUMBER
3342-285

SHEET No. 1 OF 1

20/ (✓)

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 5



1. Unspecified limit deviations of dimensions are $\pm 0.5\text{mm}$.
2. *Dimension is given for reference.
3. *1 Dimension is ensured by tool.

F-6
49
106

5A

EQUIVALENT MATERIAL
Gr. 0 IS:513-1994

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

		EST. WT. (Kg) 0.013	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.			
5A	19.5.10	4 th Alt. Comm. Meet. Minutes Point No.2 Dt:26-10-09	MATERIAL :- SHEET AT-1.5 GOST 19904-90 USED ON:- Cb 3342-107-2
ISSUE	DATE	NATURE OF AMENDMENTS	K270B6-II-Г-10-сб GOST 16523-89
DRN		SCALE :- 1:1 DIMENSIONS IN mm	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI
CHD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69	TITLE :- SHEET
APPD		ALL THREADS TO CONFORM TO	D S CAT NUMBER
DATE	09.5.07		DRAWING NUMBER 3342-285

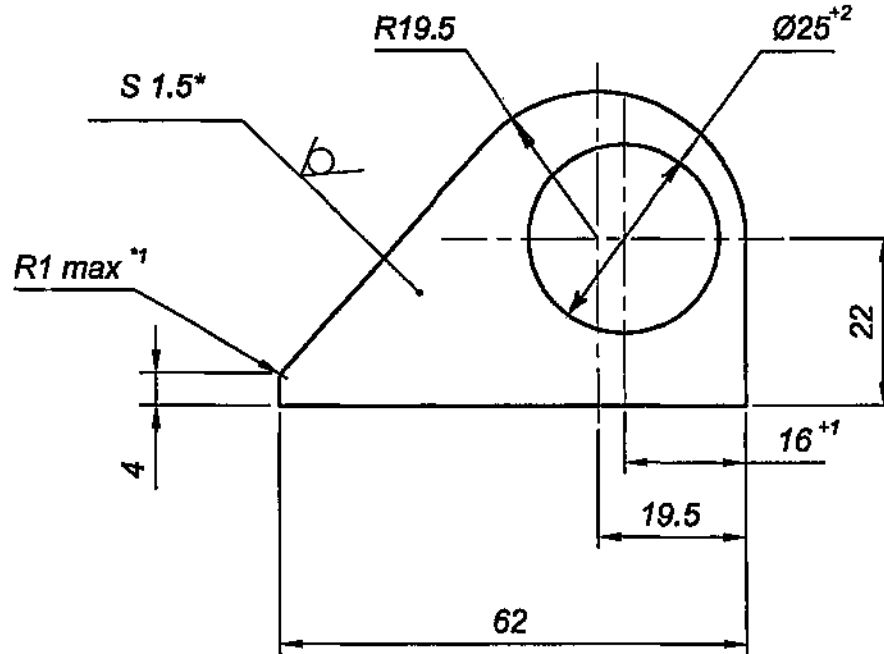
SIZE A4

DRAWING NUMBER
3342-285-1

SHEET No. 1 OF 1

20/ (✓) (✓)

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3



1. Unspecified limit deviations of dimensions are $\pm 0.5\text{mm}$.
2. *Dimension is given for reference.
3. *1 Dimension is ensured by tool.

F-6
50
106

3A EQUIVALENT MATERIAL
Gr. 0 IS:513-1994

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

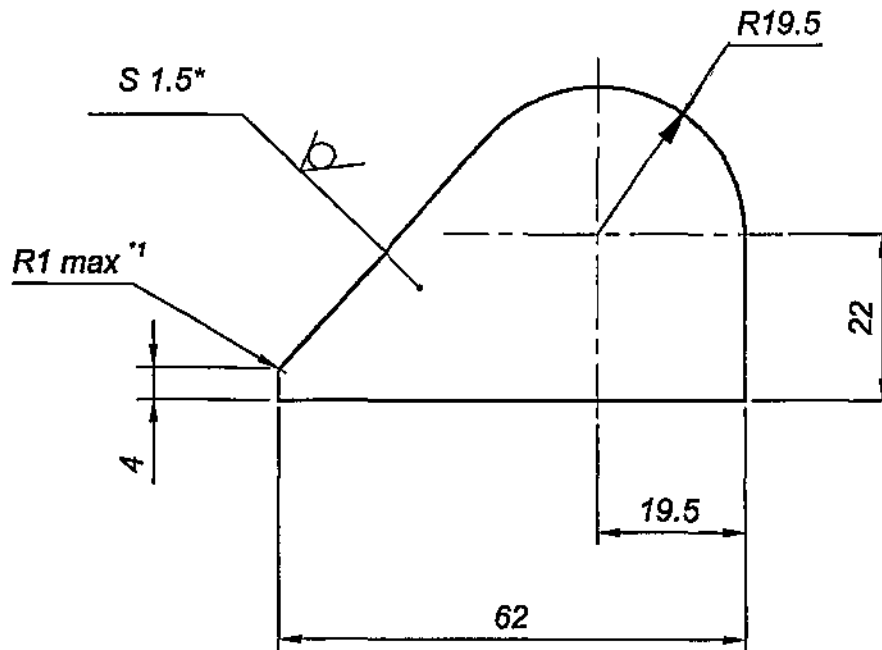
		EST. WT. (Kg) 0.01	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT- SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	
3A	19.5.10	4 th Alt. Comm. Meet. Minutes Point No.2 Dt:26-10-09	MATERIAL :- SHEET AT-1.5 GOST 19904-90 USED ON:- Cb 3342-107-2
ISSUE DATE	NATURE OF AMENDMENTS		K270B6-II-Г-10-cb GOST 16523-89
DRN	SCALE :- 1:1		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI
	DIMENSIONS IN mm		
CHD	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69		TITLE :- SHEET
APPD	ALL THREADS TO CONFORM TO		D S CAT NUMBER
DATE	09.5.07		DRAWING NUMBER 3342-285-1
SIZE A4			

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 4

DRAWING NUMBER
3342-286

SHEET No. 1 OF 1

20/ (✓)



1. Unspecified limit deviation of dimensions are $\pm 0.5\text{mm}$.
2. *Dimension is given for reference.
3. *1Dimension is ensured by tool.

F-6
51
706

4A

EQUIVALENT MATERIAL
Gr. 0 IS:513-1994

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

		EST. WT. (Kg) 0.008	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.	
4A	19.5.10	4 th Alt. Comm. Meet. Minutes Point No.2 Dt:26-10-09	MATERIAL :- SHEET AT-1.5 GOST 19904-90 K270B6-II-Г-10-cb GOST 16523-89
ISSUE DATE	NATURE OF AMENDMENTS	USED ON :- Cb 3342-107-2	
DRN	SCALE :- 1:1 DIMENSIONS IN mm	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
CHD	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69	TITLE :- SHEET	
APPD	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 3342-286
DATE			
SIZE A4			

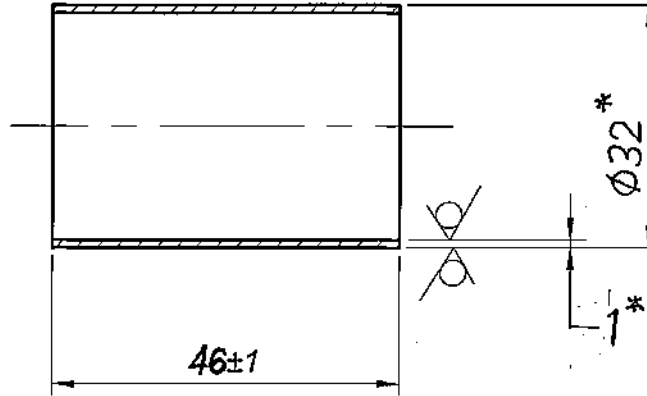
DRAWING NUMBER
3342-290

SHEET No. 1 OF 1

20/ (✓)

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 5

F-6
54
106



1. *Dimension is given for reference.

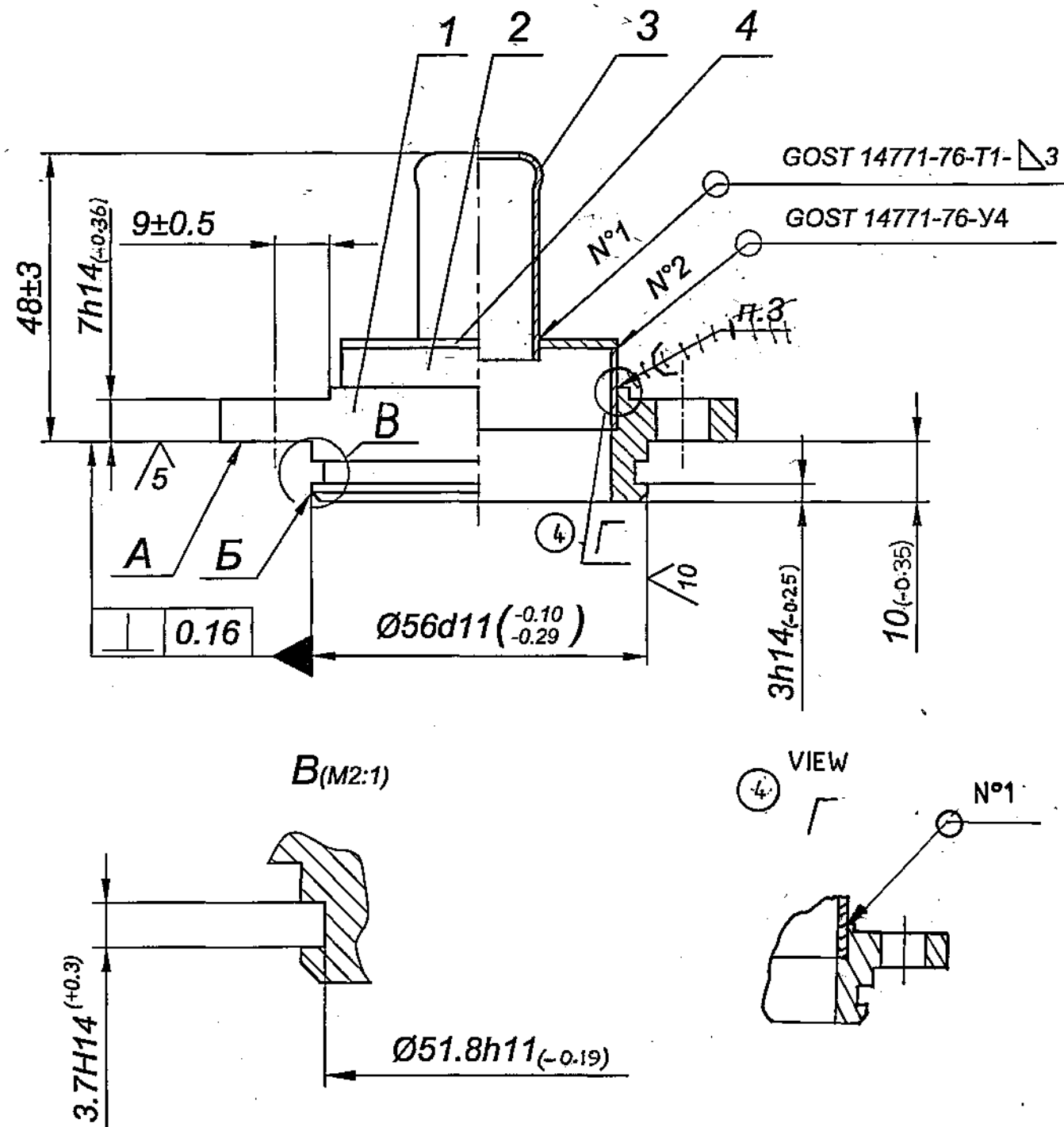
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

		EST. WT. 0.034	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.	
		MATERIAL :- PIPE <u>32x1 GOST 8734-75</u> B 10 GOST 8733-87	USED ON :- Cb. 3342-107-2
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN <i>BN</i>		SCALE :- 1:1	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI
		DIMENSIONS IN mm	
CHD <i>R. B. Chakrabarti</i>		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69	TITLE :- PIPE
APPD <i>Johnny</i>		ALL THREADS TO CONFORM TO	D S CAT NUMBER
DATE 10.5.07			DRAWING NUMBER 3342-290

SIZE A4

DRAWING NUMBER
Cb.3342-185-2

SHEET No. 1 OF 1



1. Coating: Bakelite varnish ЛБС-1 as per instructions ИЛ-665-86. Unevenness, downflows and influxes are not allowed on the surfaces A and B. It is allowed to scrap influx & sections without coating.

2. Weld seams should correspond to TT. 23.108-43-74.

3. Wire Л63 GOST 12920-67.

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

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

EST. WT. (Kg) 0.222 TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

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

ISSUE	DATE	NATURE OF AMENDMENTS
4	04.11.08	NOTN. No.374-05 (F-158)

DRN
CHD
APPD
DATE 09.5.07
SCALE: 1:1
DIMENSIONS IN mm
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69
ALL THREADS TO CONFORM TO

MATERIAL :-
USED ON :- Sb 3342-00-21
CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)
AVADI

TITLE :- **FLANGE ASSY**

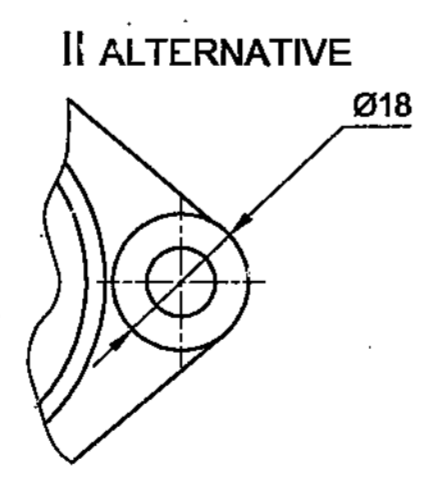
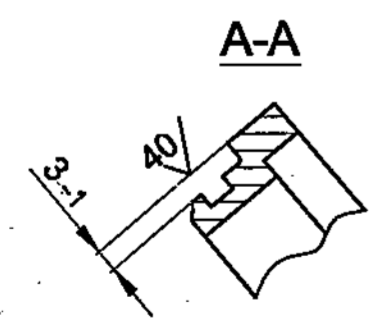
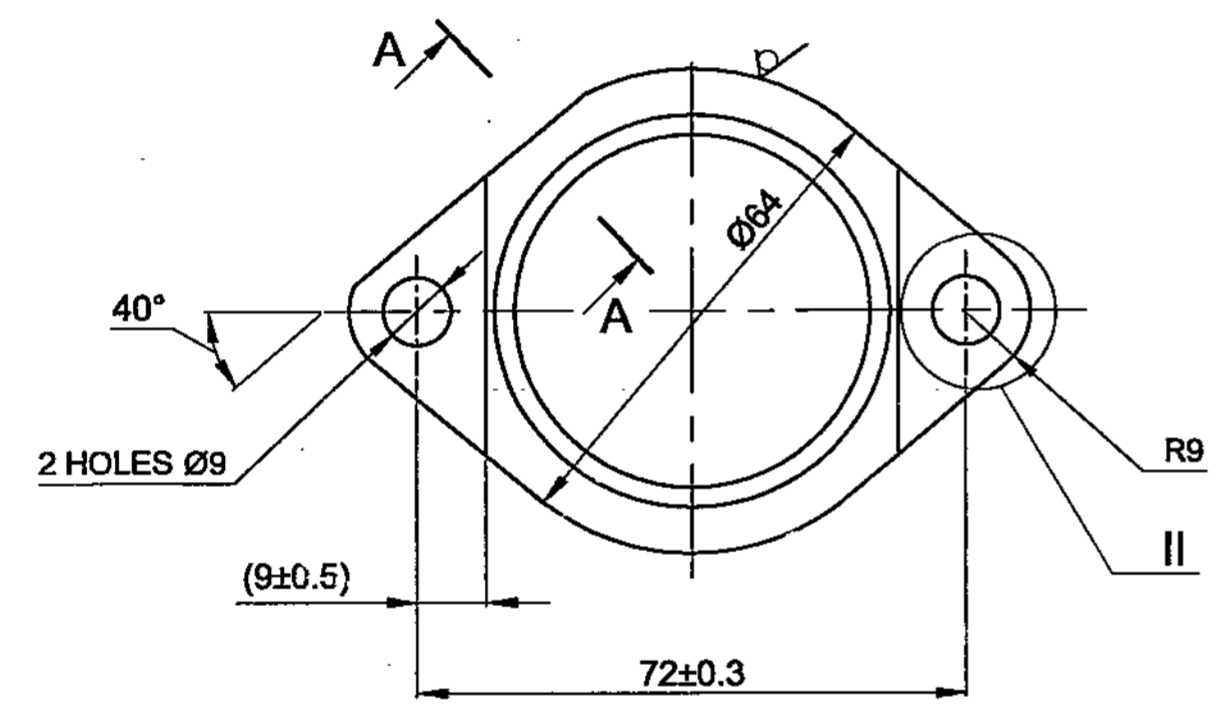
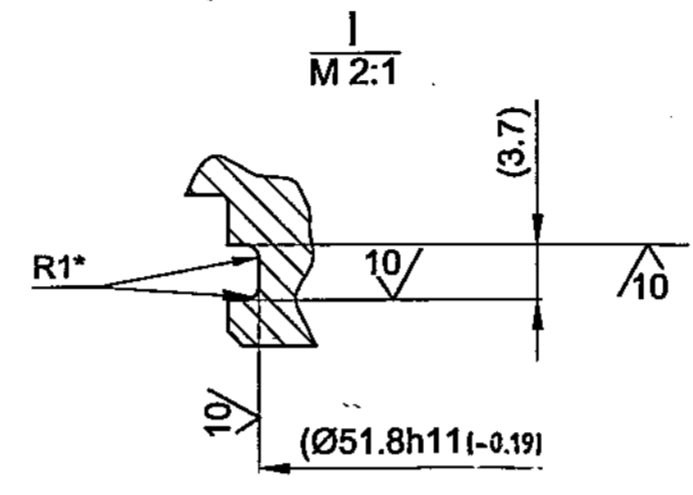
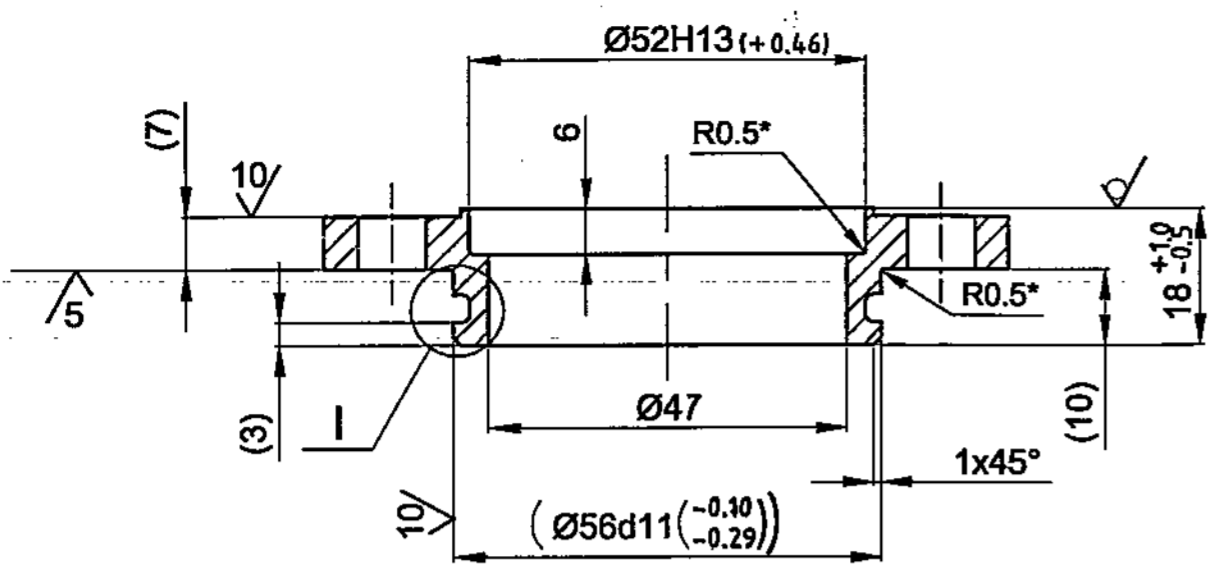
D S CAT NUMBER
DRAWING NUMBER
Cb.3342-185-2

F-6
13
106

SIZE A3

DRAWING NUMBER
3342-139-2

20 ✓ (✓)



1. Blank : Forged steel blank as per GOST 7505-89.
2. Unspecified limit deviations of dimensions H14.h14, $\frac{IT14}{2}$.
3. Dimension in brackets - is after assembly.
4. *Dimension to be ensured by tool.
5. Alternative material is steel 35 GOST 1050-88.
6. Local depression are allowed on the unmachined surfaces to a maximum 0.5 mm.

Ⓐ EQUIVALENT MATERIAL
STEEL 070M 20(EN 3A) TO BS: 970

DRAWING 'INDIANISED BASED ON RUSSIAN ORIGINAL' ISSUE - 11
DRG. REPLACES 3342-139-2 ISSUE-NIL VIDE NOTIFICATION NO: 91-560.

COMMON TO V-9252

1-153
54
74
SIZE A2

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

EST. WT. 0.14 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 OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	B. Anand/Bal	MATERIAL :- STEEL 20	USED ON :- Sb 3342-185-1
CHD	R. S. Jeyaraj	GOST 1050-88	Sb 3342-185-2
APPD	R. S. Jeyaraj	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DATE	01-01-08		
SCALE:- 1:1		TITLE :- FLANGE	
DIMENSIONS IN mm			
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69		D S CAT NUMBER	
ALL THREADS TO CONFORM TO			
ISSUE	DATE	NATURE OF A ^o NDMENTS	DRAWING NUMBER
A	9-7-10	4 th ALT. COMM. Mtg. MINUTE'S POINT No.5 DT. 26-10-09	3342-139-2

USED ON

ITEM No.

DRAWING NUMBER

D S CAT NUMBER

DESCRIPTION

QTY

REMARKS

Cb.3342-00-21

Cb.3342-222-2

CLIP ASSY

ITEM LIST

1

3342-246

CLAMP

1

2

3342-289

CLAMP

1

I/L CREATED BASED ON RUSSIAN ORIGINAL ISSUE -- 2

ISSUE

DATE

NATURE OF AMENDMENTS

ISSUE

DATE

NATURE OF AMENDMENTS

DRN

[Signature]

CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.

CHD

Rozakhiyeva

TITLE :

CLIP ASSY

APPD

[Signature]

DATE

17.5.04

SHT. NO. 1 OF 1

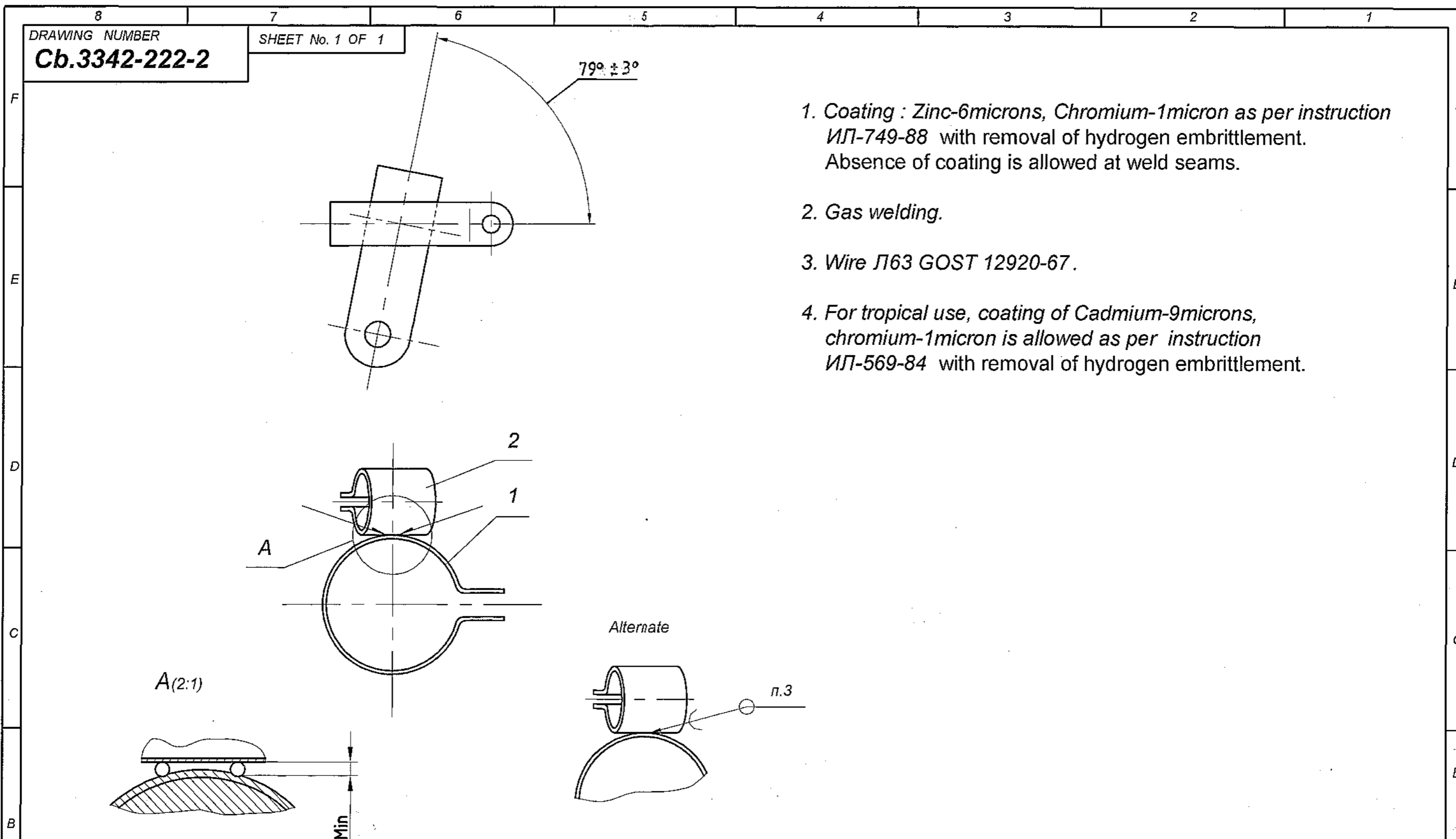
D S CAT NUMBER

ITEM LIST FOR
Cb.3342-222-2

F-6
16/106

DRAWING NUMBER
Cb.3342-222-2

SHEET No. 1 OF 1



1. Coating : Zinc-6microns, Chromium-1micron as per instruction ИЛ-749-88 with removal of hydrogen embrittlement. Absence of coating is allowed at weld seams.
2. Gas welding.
3. Wire Л63 GOST 12920-67.
4. For tropical use, coating of Cadmium-9microns, chromium-1micron is allowed as per instruction ИЛ-569-84 with removal of hydrogen embrittlement.

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

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

EST. WT. 0.037 TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

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

ISSUE	DATE	NATURE OF AMENDMENTS

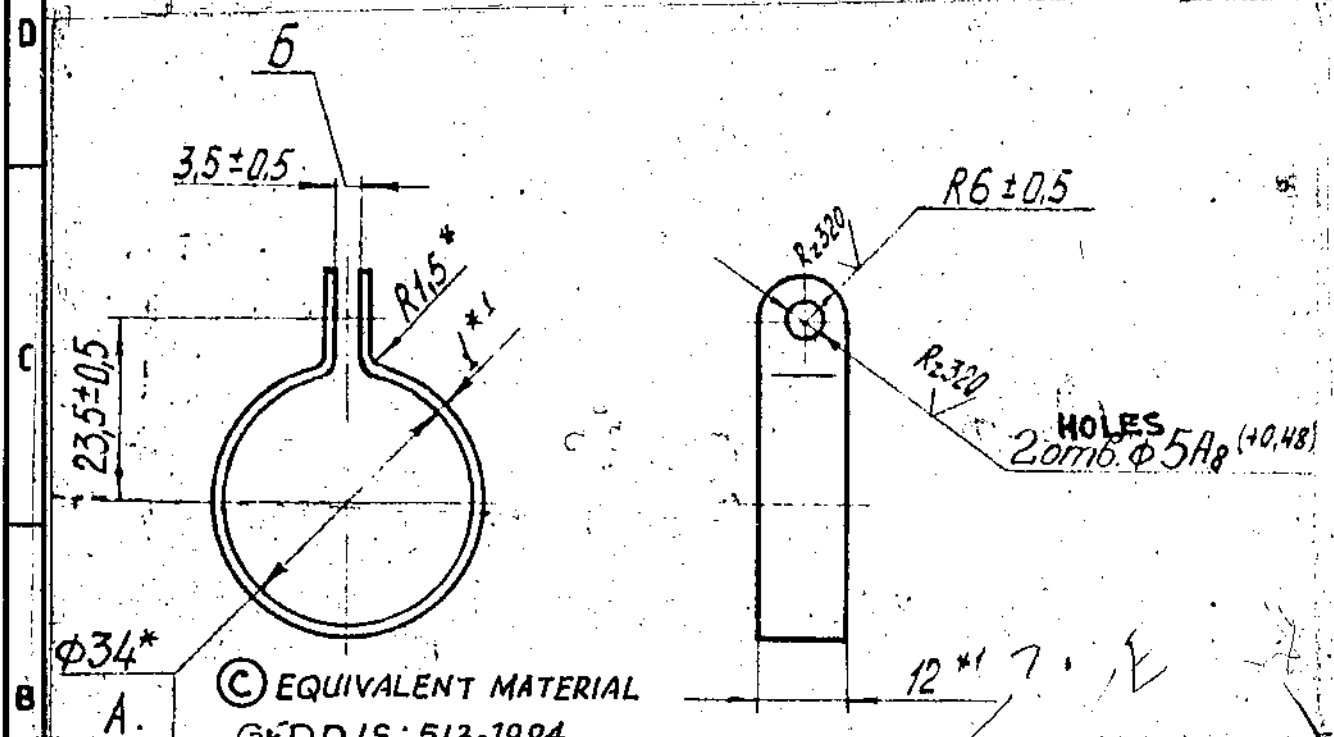
DRN	CHD	APPD	DATE	SCALE:- 1:1	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69	ALL THREADS TO CONFORM TO	MATERIAL :-	USED ON:- Sb 3342-00-21
			09.5.07						
CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI						TITLE :- CLIP ASSY			
						D S CAT NUMBER		DRAWING NUMBER Cb.3342-222-2	

F-6
17
106
SIZE A3

DRAWING NUMBER

3342 246

✓ (✓)



© EQUIVALENT MATERIAL
G.D.D IS: 513-1994

1. LENGTH OF STRAIGHTENED COMPONENT = 127.5 mm.
2. DIMENSIONS "b" SHOULD BE CHECKED ON MANDREL ØA.
3. THE COMPONENT MAY BE MANUFACTURED FROM STEEL 08Kп GOST 1050-74.
4. * DIMENSIONS SHOULD BE ENSURED BY TOOL.
5. *1 DIMENSIONS FOR REFERENCE.
6. IN TROPICAL DESIGN, COATING Cd, CHROMATIZING, AS PER UST-569-84, REMOVING HYDROGEN EMBRITTLEMENT.

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

A-10

			EST WT 0.01 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.
C	17.03.10	6 th Alt. Comm. Mt. Minutes Pt. No. 1 Dt. 26.10.09	MATERIAL	USED ON
B	15.4.90	AUTHY. No. BK 86-195,	BAND 08ПC-M-2-0-1x12	CB 3342 221 CB
A	15.10.87	AUTHY. NOTN. NO. BK 83-126	GOST 503-74 81 ©	
ISSUE	DATE	NATURE OF AMENDMENTS		
DRN	SCALE: 1 : 1		CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI	
CHD	DIMENSIONS IN mm			
TCD	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED			TITLE CLAMP
APPD	ALL THREADS CONFORM TO		D S CAT NUMBER	DRAWING NUMBER
DATE				3342 246

SIZE A4

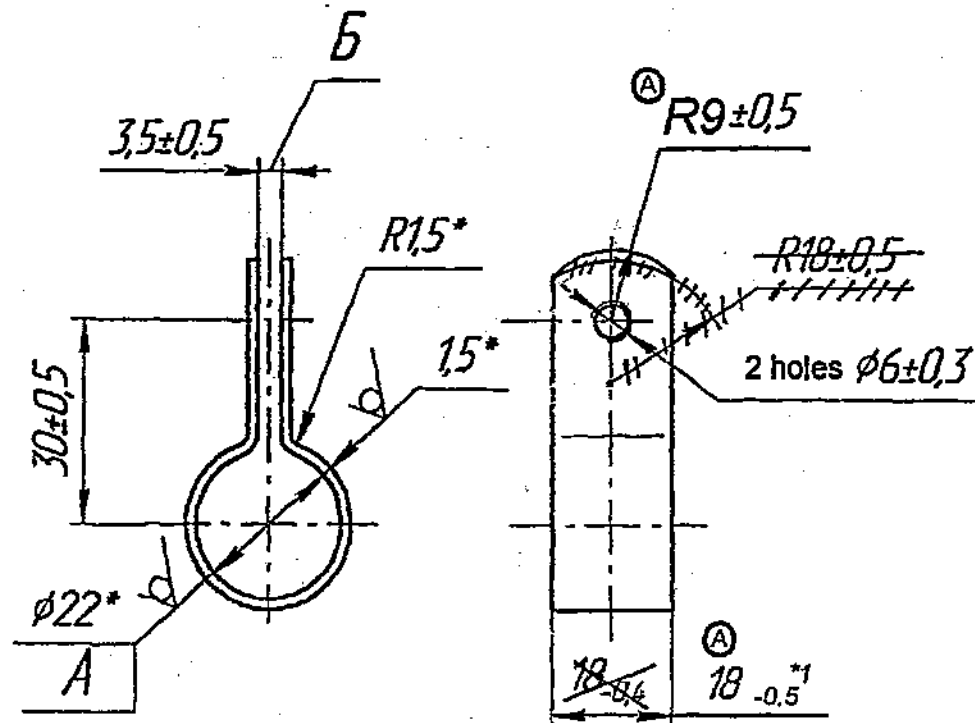
Praveen
 (P. JANARDHANAN)
 Dt. 15 Nov '10 JTO (D)

DRG. RE:INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE -3

DRAWING NUMBER
3342-289

SHEET No. 1 OF 1

20/ (✓)



1. Free length ~124 mm.
2. Inspect the dimension B for mandrel dia. A.
3. Manufacturing from steel 08K11 GOST 1050-74 is permitted.
4. *Dimensions are ensured by tool.
5. *1 Dimension is given for reference.

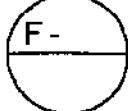
ⓑ EQUIVALENT MATERIAL Gr. DD
 IS: 513 - 1994

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)
 0.027

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	Sd/=	MATERIAL :- STRIP	USED ON :- 3342-222-2
			CHD	Sd/=	08nc-M-2-1.5 GOST 503-81	
			APPD	Sd/=		
			DATE	Nov 2010	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
			SCALE:- 1 : 1			
			DIMENSIONS IN mm			
			TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69		TITLE :- CLAMP	
		B	13.11.10	4 th Alt. Comm. Mtg. Minutes Point No.1 Dated 26.10.09		
		A	22.9.2000	477-06		
		3	-	99-260		
		ISSUE	DATE	NATURE OF AMENDMENTS	D S CAT NUMBER	DRAWING NUMBER 3342-289



SIZE A3

USED ON

ITEM No.

DRAWING NUMBER

D S CAT NUMBER

DESCRIPTION

QTY

REMARKS

Cb 3342-00-21

Cb.3342-295-2

TUBE ASSY

ITEM LIST

1

3342-296-2

PIPE

1

2

3342-301

PIPE

1

I/L CREATED BASED ON RUSSIAN ORIGINAL ISSUE - NIL

ISSUE

DATE

NATURE OF AMENDMENTS

ISSUE

DATE

NATURE OF AMENDMENTS

DRN

[Signature]

CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.

CHD

[Signature]

TITLE :

TUBE ASSY

APPD

[Signature]

DATE

18.5.07

SHT. NO. 1 OF 1

D S CAT NUMBER

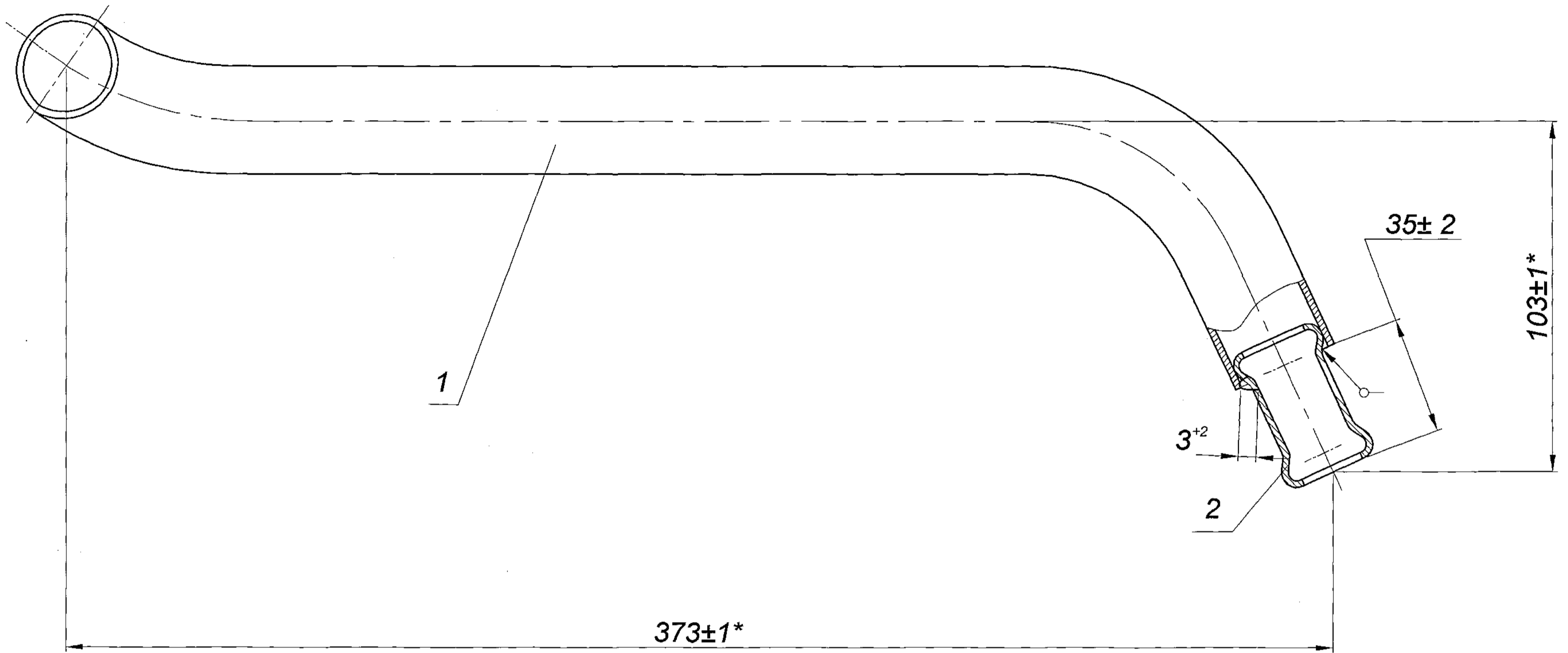
ITEM LIST FOR

Cb.3342-295-2

F - 6
18/106

DRAWING NUMBER
Cb.3342-295-2

SHEET No. 1 OF 1



1. Weld seam should correspond to TT 23.108-43-74.
2. Electric arc welding in the medium of protective gases.
3. Coating : Bakelite varnish as per ИЛ-665-86.
4. *Dimension is given for reference.
- ① 5. Before coating, check for air tightness in water with air pressure $(0,4 \pm 0,1) \text{ Mpa} [(4 \pm 1) \text{ kgf/cm}^2]$, allowance of air is not permitted. In the place of allowance of air, welding and repetition test for air tightness is permitted.

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - NIL

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

EST. WT. 0.371	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
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ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	CHD	APPD	DATE	MATERIAL :-	USED ON :- Cb 3342-00-21
			10.5.07		
SCALE:- 1:1				CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DIMENSIONS IN mm				TITLE :- TUBE ASSY	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102-69				D S CAT NUMBER	
ALL THREADS TO CONFORM TO				DRAWING NUMBER Cb.3342-295-2	
ISSUE	DATE	NATURE OF AMENDMENTS			
1	03-12-08	Notification No. 105-04, F-158			

F-6
19
106
SIZE A2

USED ON	ITEM No.	DRAWING NUMBER	D S CAT NUMBER	DESCRIPTION	QTY	REMARKS	
Cb-3342-16		Cb.3342-186-4		CONE ASSY			
		ITEM LIST					
	1	3342-192-4		CONE	1		
	2	3342-193-3		MESH	1		
		ISSUE	DATE	NATURE OF AMENDMENTS	ISSUE	DATE	NATURE OF AMENDMENTS
		DRN	<i>[Signature]</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.			
	CHD	<i>[Signature]</i>	TITLE : CONE ASSY				
	APPD	<i>[Signature]</i>					
	DATE	10.5.07	SHT. NO. 1 OF 1	D S CAT NUMBER	ITEM LIST FOR Cb.3342-186-4		

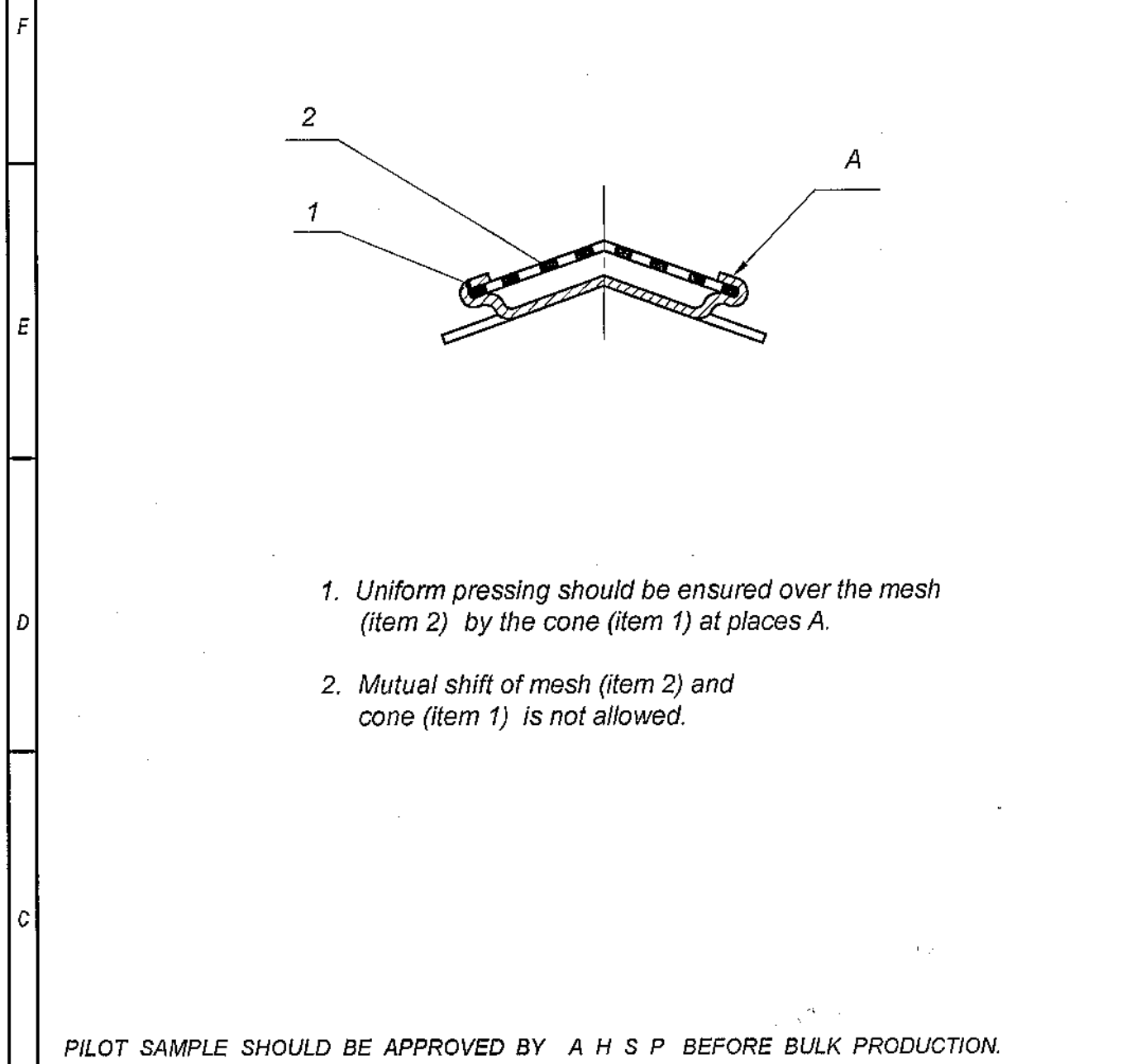
I/L CREATED BASED ON RUSSIAN ORIGINAL ISSUE - 2

F-6
14/106

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

F - 6
15
106

4	3	2	1
DRAWING NUMBER Cb.3342-186-4		SHEET No. 1 OF 1	



1. Uniform pressing should be ensured over the mesh (item 2) by the cone (item 1) at places A.
2. Mutual shift of mesh (item 2) and cone (item 1) is not allowed.

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

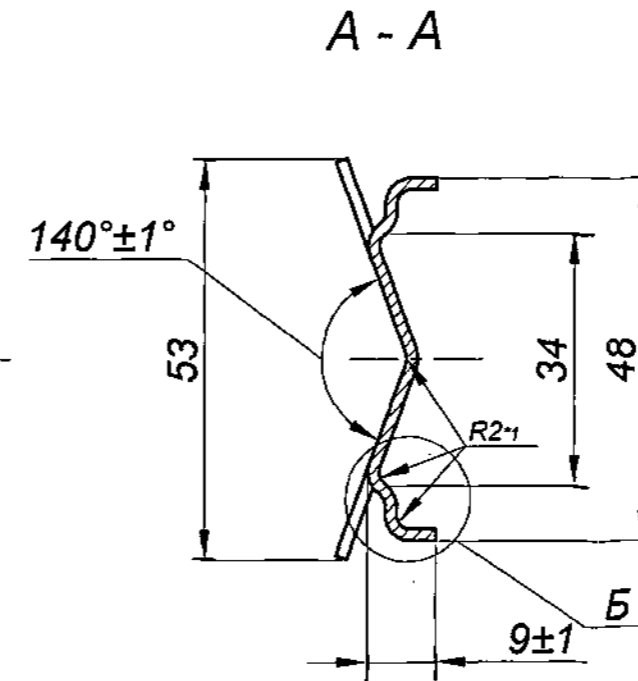
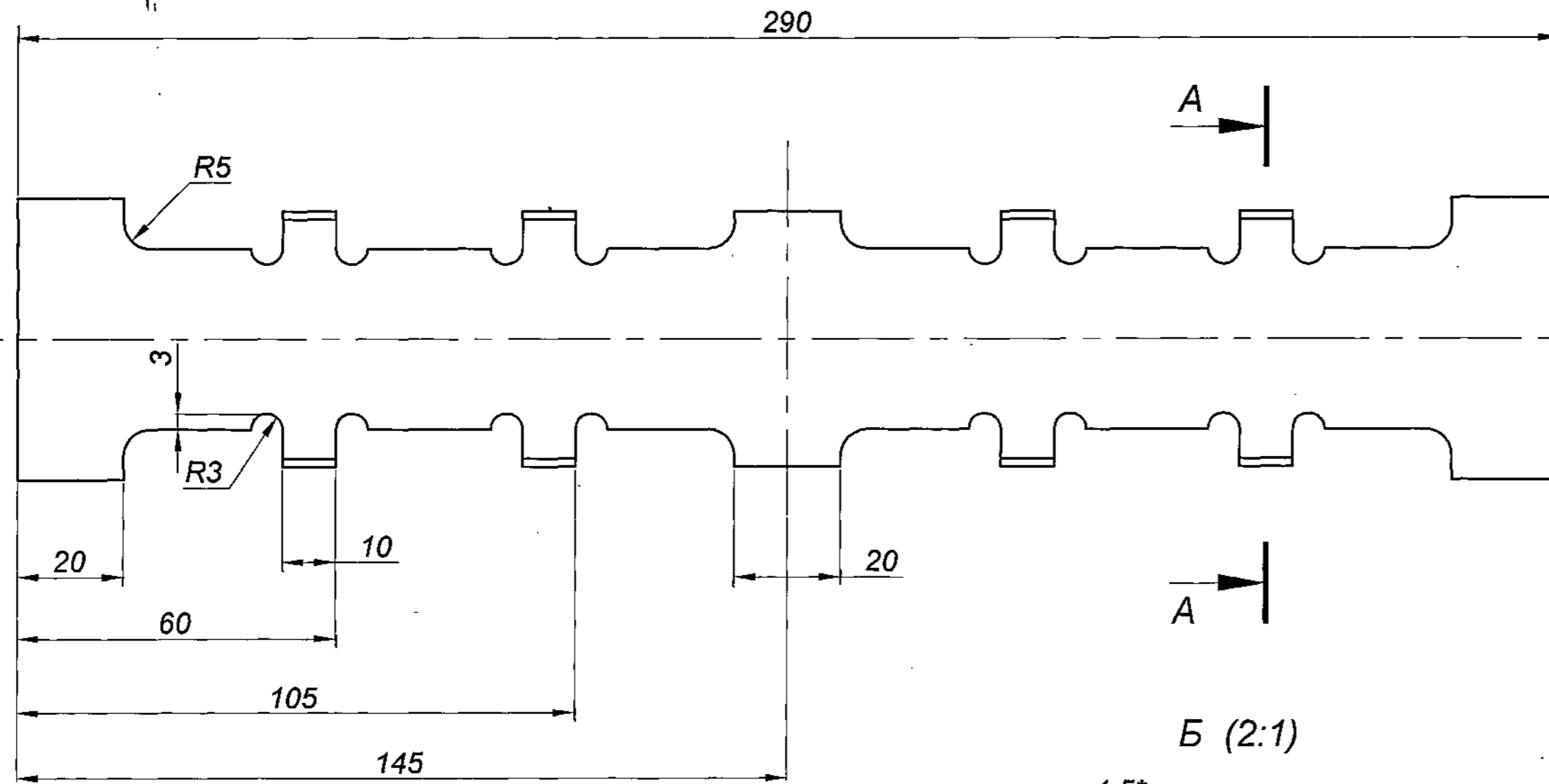
			EST. WT. 0.208	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
			ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.	
			MATERIAL :- _____	USED ON :- Cb 3342-16
ISSUE	DATE	NATURE OF AMENDMENTS	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
DRN		SCALE :- 1:1		
CHD		DIMENSIONS IN mm		
ARPD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED IS : 2102 - 69		TITLE :- CONE ASSY
DATE	10.5.07	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER Cb.3342-186-4

SIZE A4

DRAWING NUMBER
3342-192-4

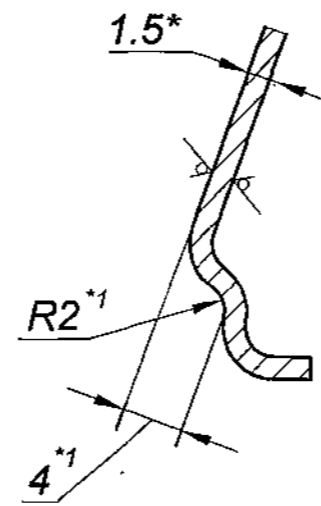
SHEET No. 1 OF 1

20 ✓ (✓)



1. Unspecified limit deviations of dimensions are ± 0.5 mm.
2. *Dimension is given for reference.
3. **1 Dimensions are ensured by tool.

B (2:1)



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

EST. WT. (kg) 0.17 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.

3A EQUIVALENT MATERIAL
Gr. D IS:513-1994.

DRN	CHD	APPD	DATE	MATERIAL :- SHEET AT-1.5 GOST 19904-90 K270B6-II-Г-10-сb GOST 16523-89	USED ON :- Cb 3342-186-4
			10.5.07	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
SCALE:- 1:1				TITLE :- CONE	
DIMENSIONS IN mm				D S CAT NUMBER	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102 - 69				DRAWING NUMBER 3342-192-4	
ALL THREADS TO CONFORM TO					
3A	29.04.10	6 th Alt. Comm. Mt. Minutes Pt. No. 2 Dt. 26.10.09			
ISSUE	DATE	NATURE OF AMENDMENTS			

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

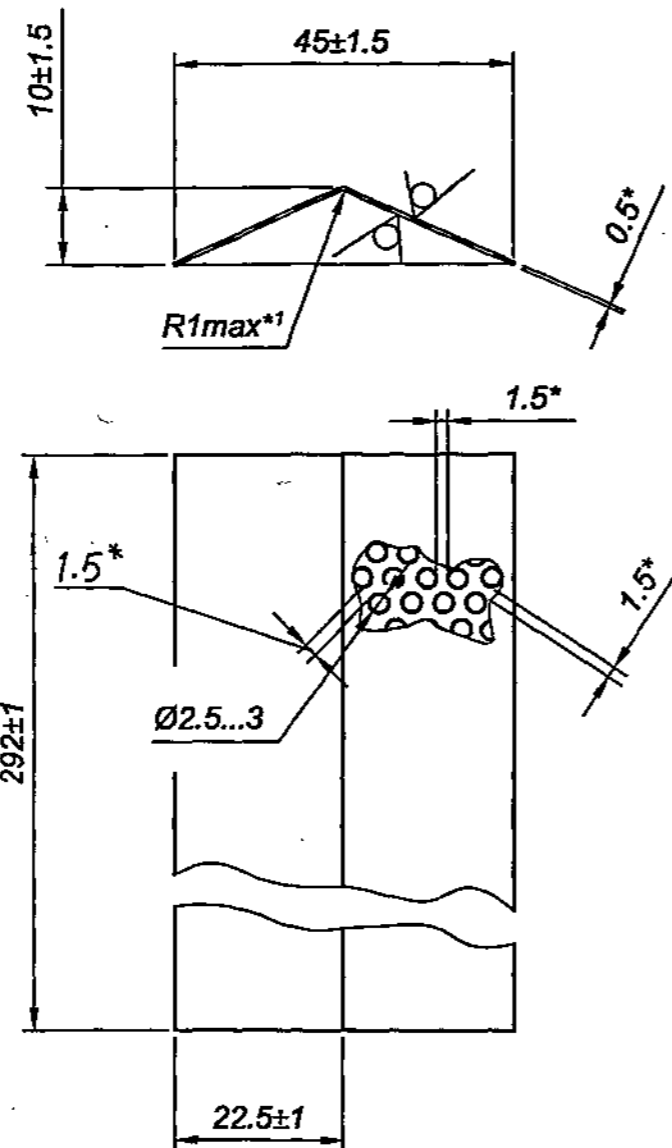
F - 6
37
106

SIZE A4 x 3

DRAWING NUMBER
3342-193-3

SHEET No. 1 OF 1

80/ (✓)



1. Ruptures along the edges are allowed.
2. Widening of holes $\text{Ø}2.5 \dots 3$ mm is allowed.
3. *Dimension is given for reference.
4. ¹Dimension is ensured by tool.

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

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3

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

EST. WT. (Kg) **0.038** 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		MATERIAL :- SHEET	USED ON :-
			CHD		AT-0.5 GOST 19904-90	Sb 3342-186-4
			APPD		II-BF-08кп GOST 9045-93	
			DATE	09.5.07	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
			SCALE:-	1:1	AVADI	
			DIMENSIONS IN	mm	TITLE :-	
			TOLERANCE ON DIMNS	UNLESS OTHERWISE STATED IS : 2102 - 69	MESH	
			ALL THREADS TO	CONFORM TO	D S CAT NUMBER	DRAWING NUMBER
			A	17-03-10		3342-193-3
			ISSUE	DATE	NATURE OF AMENDMENTS	

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SIZE: A3