

1. INSPECTION GROUP **II** AS PER TECHNICAL REQUIREMENTS TT-11
2. BUTT-END **B** SHOULD BE CARBURIZED h 0.7 TO 1.1 mm IN THE MANUFACTURED ARTICLES HRC ≥ 55 . THREAD SHOULD BE PROTECTED AGAINST CARBURIZING. IT IS ALLOWED TO CARBURIZE HEXA HEDRON EDGES OF SURFACES B F. LOCAL CARBURIZING OF THREAD IS ALLOWED.
3. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS :-
FOR SHAFTS - AS PER B7,
OTHERS - AS PER C17.
4. IT IS ALLOWED TO MAKE THREAD HAVING AN ANGLE DIAMETER OF 9.35 ± 0.02 .
5. COATING - CHEMICALLY OXIDIZED, OILED.

EXPLANATORY NOTE :

6. MATERIAL QUOTED : 12XH3A
TY 14-1-381-72
12XH3A = CHROMIUM NICKEL STEEL (HIGH QUALITY).

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	Ni	Mo	P	S	Cu
	M A X I M U M								
12XH3A	0.09-0.16	0.17-0.37	0.30-0.60	0.60-0.90	2.75-3.15	-	0.025	0.025	0.30

b) **MECHANICAL PROPERTIES :-**

GRADE OF STEEL	ULTIMATE TENSILE STRENGTH Kgf/mm ² (min)	YIELD POINT Kgf/mm ² (min)	IMPACT STRENGTH Kgf/cm ² (min)	RELATIVE ELONGATION % (MIN 2	RELATIVE REDUCTION ALONG CROSS SECTION % (MIN)
12XH3A	95	70	9	11	55

Ⓐ **EQUIVALENT MATERIAL**
EN 36B TO BS : 970 /
13 Ni 13 Cr 3 TO IS : 4432-1988

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

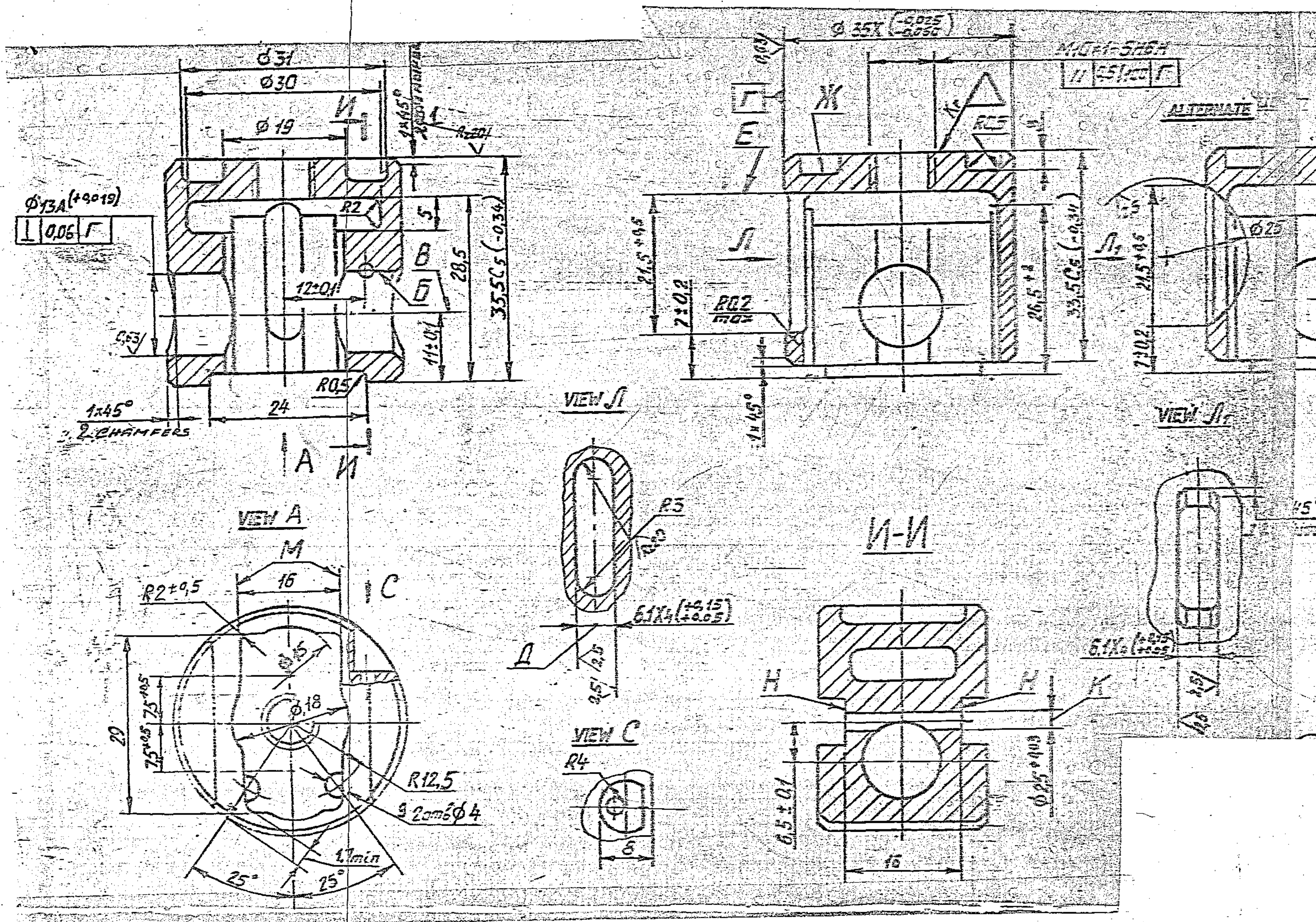
EST. WT. 0.021 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS # LETTERS)

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	TCD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69
				25-04-87	2 : 1		
				MATERIAL :-		USED ON :-	
				12XH3A TY 14-1-381-72		CB 20-27-15-1 CB 20-27-15-2	
				CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)			
				A Y A D I			
				TITLE			
				TAPPET BOLT			
A		15-7-10		4 th ALT. COMM. MEETING MINUTES POINT No 9 DT 26-10-09		ALL THREADS TO CONFORM TO	
ISSUE		DATE		NATURE OF AMENDMENTS		D S CAT NUMBER	
						DRAWING NUMBER 20-27-51	

KVD No. - 63414





- 1 INSPECTION GROUP III AS PER TECHNICAL REQUIREMENTS TT-11
- 2 EXCEPT FOR SURFACE H, CYANIDE TO A DEPTH OF 0.35 TO 0.45 mm. SURFACE B AND F, TO A DEPTH OF AT LEAST 0.2 mm. SURFACE K MAY HAVE NO CYANIDE LAYER.
- 3 HARDNESS OF SURFACE F SHOULD BE HR 15N > 09. CHECK MAY BE PERFORMED WITH CALIBRATED FILE.
- 4 UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS :-
 FOR HOLES - AS PER A7,
 SHAFTS - AS PER B7,
 OTHERS - AS PER C47.
- 5 MISALIGNMENT AND SHIFT OF SLOT A WITH RESPECT TO DIAMETRICAL PLANE OF SURFACE F WHICH IS PERPENDICULAR TO THE AXIS OF SURFACE B SHOULD NOT EXCEED 0.04 mm (1 QUALIFIED TOLERANCE).
- 6 MISALIGNMENT OF THE AXIS OF SURFACE B WITH RESPECT TO THE DIAMETRICAL PLANE OF SURFACE F SHOULD NOT EXCEED 0.5 mm.
- 7 NON-SQUARENESS OF SURFACE H TO AXIS B SHOULD BE CHECKED BY TURNING THE ROLLER, 20.0 mm IN DIAMETER, WHICH IS MADE AS PER TOLERANCES OF GAUGES ON PIN 19 mm IN DIAMETER ROLLER HAVING DIMENSIONS 23.0x15.9 AND CHAMFER 1.2x60° MAY BE USED FOR CHECKING.
- 8 SURFACE B MAY HAVE NOTCHES AND TRACES OF PRELIMINARY MACHINING AS PER STANDARD.
- 9 SURFACE E MAY HAVE CUTTINGS IN WHICH ARE CAUSED BY MACHINING OF RADI R2 AND ARE NOT BROUGHT ONTO SURFACE *.
- 10 THE PART SHOULD BE CHECKED BY USING THE MAGNETIC FLAW DETECTOR AS PER INSTRUCTIONS US 20-17.
- 11 COATING - CHEMICALLY OXIDIZED, OILED.

EXPLANATORY NOTE :

MATERIAL QUOTED : OPEN HEARTH STEEL 10 GOST 1050-74.

a) CHEMICAL COMPOSITION :

GRADE	CONTENT OF ELEMENTS %							
	C	Si	Mn	Cr	P	S	Cu	Ni
10	0.07-0.14	0.17-0.37	0.35-0.65	0.15	0.035	0.040	0.25	0.25

b) MECHANICAL PROPERTIES :

GRADE	TENSILE STRENGTH	YIELD POINT	ELONGATION	REDUCTION
	Kgf/mm ²	Kgf/mm ²	%	IN AREA %
10	34	21	31	55

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

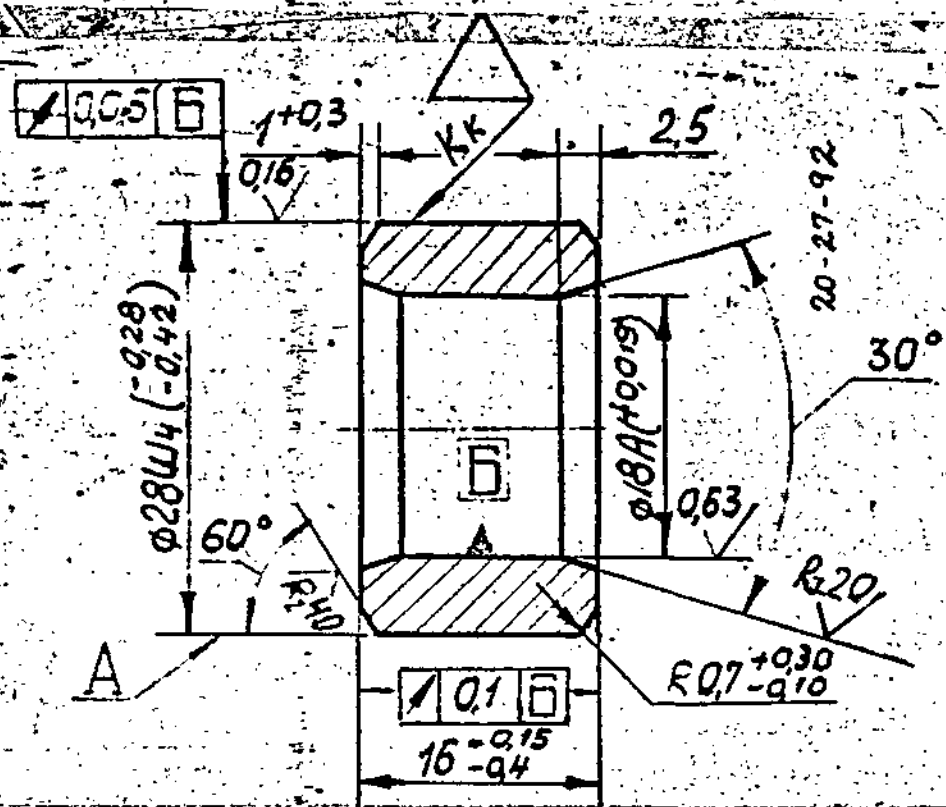
EST. MASS 0.102 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS * LETTERS)

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

DRN	9/11/87	MATERIAL :-	10 GOST 1050-74	USED ON :-	CS 20-27-15-1
CHD		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)			
TEC		A V A D I			
APPD		TITLE			TAPPET BODY
DATE	06-03-87	D S CAT NUMBER			
SCALE	2 : 1	DRAWING NUMBER			20-27-91-1
DIMENSIONS IN mm.		ALL THREADS TO CONFORM TO			
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69		NATURE OF AMENDMENTS			
ISSUE DATE					



DRAWING NUMBER
20-27-92



1. INSPECTION GROUP III AS PER TECHNICAL REQUIREMENTS TT-11.
2. HRC \geq 58 CARBURIZE H 0.8 TO 1.5 mm, H 0.8 TO 1.4 mm, ON SURFACES A AND B IN MANUFACTURED PARTICLE MICROSTRUCTURE OF CARBONIZED COATING IS NEEDED MARTENSITE NOT IN EXCESS OF NUMBER 4, SCALE 3, GOST 8233-56, CARBIDE NET SHOULD NOT EXCEED NUMBER 4, SCALE 5, GOST 8233-56.
3. UNSPECIFIED LIMIT DEVIATIONS FOR DIMENSIONS ARE AS PER CM7.
4. TAPER OF SURFACE A SHOULD NOT EXCEED 0.015 mm.
5. QUALITY OF SURFACE A SHOULD NOT EXCEED 0.02 mm.

EXPLANATORY NOTE:-

MATERIAL QUOTED:- STEEL 12X H3A TY14-1-381-72

2.5/✓(✓)

12 X H3A = GRADE OF STEEL.

CHEMICAL COMPOSITION:-

CONTENT OF ELEMENTS %							
C	Si	Mn	Cr	Ni	P	S	Cu
					MAXIMUM.		
0.09-0.16	0.17-0.37	0.30-0.60	0.60-0.90	2.75-3.15	0.025	0.025	0.30

MECHANICAL PROPERTIES:-

HEAT TREATMENT.

- a) **HARDENING**
- i) FIRST HARDENING OR NORMALIZING = 860 °C.
 - ii) SECOND HARDENING = 760-810 °C.
 - iii) COOLING MEDIUM = WATER OR OIL.

- b) **TEMPERING**
- i) TEMPERATURE °C = 180.
 - ii) COOLING MEDIUM = AIR OR OIL.

- YIELD POINT Kg/mm² (MIN) = 70.
- ULTIMATE STRENGTH Kg/mm² (MIN) = 95.
- % RELATIVE ELONGATION (MIN) = 11.
- % RELATIVE REDUCTION ALONG CROSS SECTION (MIN) = 55.
- IMPACT STRENGTH Kg.m/cm² (MIN) = 9.

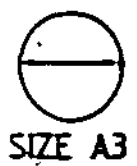
KVD 63427

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

EST. WT. 0.0437 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>A. B. K.</i>	MATERIAL:-	12XH3A TY 14-1-381-72	USED ON	CB 20-27-15-1 CF 20-27-15-2
CHKD	<i>P. S. S.</i>	DATE	25-5-89	CONTROLLER OF QUALITY ASSURANCE (HEAVY VEHICLES)	
TCD	<i>N. S. S.</i>	SCALE:-	2 : 1	AVADI	
APPD	<i>I. S. S.</i>	DIMENSIONS IN mm	TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS: 2102-69	TITLE	
DATE	25-5-89	ALL THREADS TO CONFORM TO		TAPPET ROLLER	
ISSUE DATE		NATURE OF AMENDMENTS		D S CAT NUMBER	DRAWING NUMBER
					20-27-92



SIZE A3



EXPLANATORY NOTE:-

MATERIAL QUOTED:- STEEL 12X H3A GOST 4543-71.

CHROMIUM -NICKEL AND CHROMIUM-NICKEL STEEL
12 X H3A = GRADE OF STEEL.

CHEMICAL COMPOSITION :-

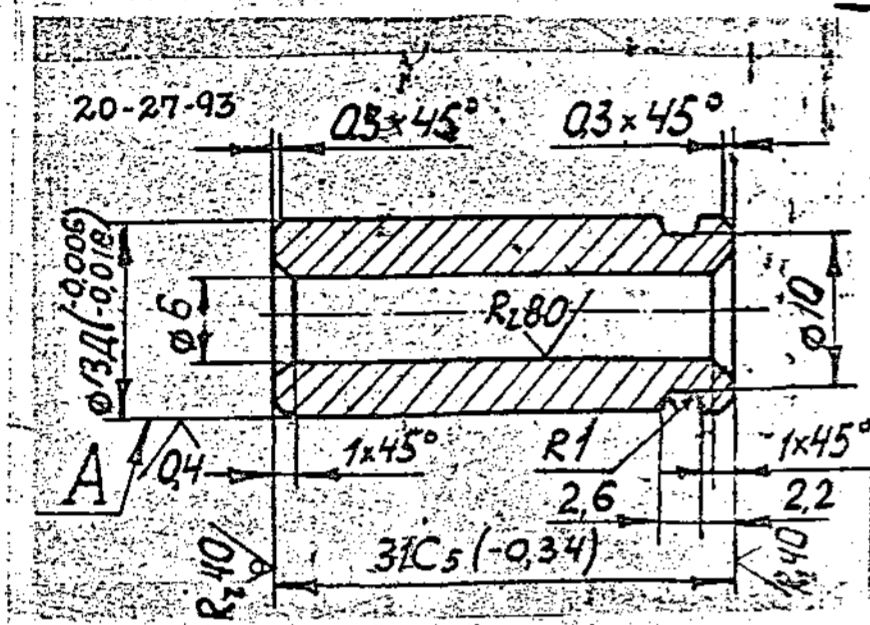
CONTENT OF ELEMENTS %								
C	Si	Mn	Cr	Ni	P	S	Cu	
MAXIMUM								
0.09-0.16	0.17-0.37	0.30-0.60	0.60-0.90	2.75-3.15	0.025	0.025	0.30	

MECHANICAL PROPERTIES:-

2. HEAT TREATMENT.

- a) **HARDENING**
- i) FIRST HARDENING OR NORMALIZING = 860 °C.
 - ii) SECOND HARDENING = 760-810 °C.
 - iii) COOLING MEDIUM = WATER OR OIL.
- b) **TEMPERING**
- i) TEMPERATURE °C = 180.
 - ii) COOLING MEDIUM = AIR OR OIL.

- 3. YIELD POINT Kg/mm² (MIN) = 70.
- 4. ULTIMATE STRENGTH Kg/mm² (MIN) = 95.
- 5. % RELATIVE ELONGATION (MIN) = 11.
- 6. % RELATIVE REDUCTION ALONG CROSS SECTION (MIN) = 55.
- 7. IMPACT STRENGTH Kg.m/cm² (MIN) = 9.



ALTERNATE MATERIAL QUOTED : STEEL 18x2H4MA TY 14-1-381-72

a) **CHEMICAL COMPOSITION :** AS PER GOST 4543-71

GRADE OF STEEL	CONTENT OF ELEMENTS %								
	C	Si	Mn	Cr	Ni	Mo	P	S	Cu
MAXIMUM									
18x2H4BA (18x2H4MA)	0.14-0.20	0.17-0.37	0.25-0.55	1.35-1.65	4.00-4.40	0.30-0.40	0.025	0.025	0.30

b) **MECHANICAL PROPERTIES :** AS PER GOST 4543-71

GRADE OF STEEL	YIELD POINT Kg/mm ²	ULTIMATE STRENGTH Kg/mm ²	RELATIVE ELONGATION %	RELATIVE REDUCTION ALONG CROSS SECTION %	IMPACT STRENGTH Kgfm/cm ²
	M I N I M U M				
18x2H4BA (18x2H4MA)	85	115	12	50	12

1. INSPECTION GROUP III AS PER TECHNICAL REQUIREMENTS TT-11
2. CARBURIZE SURFACE A, h 1 TO 1.4mm, IN MANUFACTURED ARTICLE. HRC > 58. HRC 26 TO 40 OF NON-CARBURIZED SURFACES
3. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS:
FOR HOLES - AS PER A7
FOR SHAFTS - AS PER B7
FOR OTHERS - AS PER C7
4. COATING: CHEMICALLY OXIDIZED, OILED.
5. ALTERNATE MATERIAL IS STEEL 18 X 2 H4MA TY 14-1-381-72, HRC 35 TO 45 AS NON-CARBURIZED SURFACES.

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

EST. WT. 0.024 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

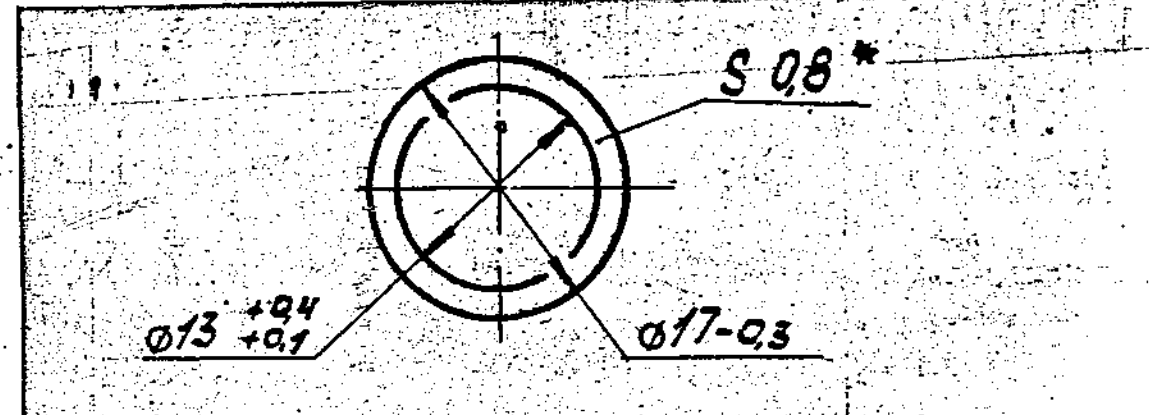
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	CHD	TCD	APPD	DATE	SCALE	DIMENSIONS IN mm.	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69	ALL THREADS TO CONFORM TO
				24-5-89	2:1			
MATERIAL :- 12XH3A TY 14-1-381-72					USED ON :- Cb 20-27-15-1 OR Cb 20-27-15-2			
CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) A V A D I					TITLE TAPPET PIN			
ISSUE					DATE		NATURE OF AMENDMENTS	
							D S CAT NUMBER	
							DRAWING NUMBER 20-27-93	

KVD No: 63428



DRAWING NUMBER
20-27-94



1. INSPECTION GROUP IV AS PER TECHNICAL REQUIREMENTS TT-11.
2. H R C 44 TO 48.
3. REQUIREMENTS PLACED UPON STAMPING ARE AS PER STANDARD B2050-16. STRAIGHTEN AFTER STAMPING
4. WASHER MAYBE MADE STEEL 65F, GOST 1050-74.
5. COATING : CHEMICALLY OXIDIZED, OILED.
6. * DIMENSION IS GIVEN FOR REFERENCE.

EXPLANATORY NOTE FOR ALTERNATE MATERIAL:

ALTERNATE MATERIAL QUOTED: steel 65Г Gost 1050-74

65Г : Grade of steel.

chemical composition:

Carbon = 0.62-0.70 ; Silicon = 0.17-0.37 ; Manganese = 0.90-1.20 ;

Chromium = 0.25 (max) Phosphorus = 0.035 (max) ;

Sulphur = 0.040 (max) ; copper = 0.25 (max) ;

Nickel = 0.25 (max).

Mechanical Properties :

Yield point $\text{kgf/mm}^2 = 44$ (min)

Ultimate tensile strength $\text{kgf/mm}^2 = 75$ (min)

Elongation % = 9 (min)

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

PLOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION		DRN	<i>G. Narayana</i>	MATERIAL:- 55-BT-C-	USED ON C6 20-27-15-1 OR
EST. WT.	TO BE STAMPED OR MARKED WHERE INDICATED THIS \pm (LETTERS)	CM	<i>By Bharat</i>	0.8x35 GOST 2284-79	C6 20-27-15-2
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE P OUT SIDE INSIDE EQUIVALENT CHAMBERS ARE PERMISSIBLE		TCD	<i>Chandrababu</i>	APPO	
		DATE	24-10-89	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	
		SCALE:-	1:1	AVADI	
		DIMENSIONS IN mm		TITLE TAPPET WASHER	
		TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS:2102-69		D S CAT NUMBER	
		ALL THREADS TO CONFORM TO		DRAWING NUMBER	
		ISSUE DATE	16-08-10	20-27-94	
		NATURE OF AMENDMENTS		4 th Alt. Comm. Meeting Minutes Point No.12 Dt:26-10-09	

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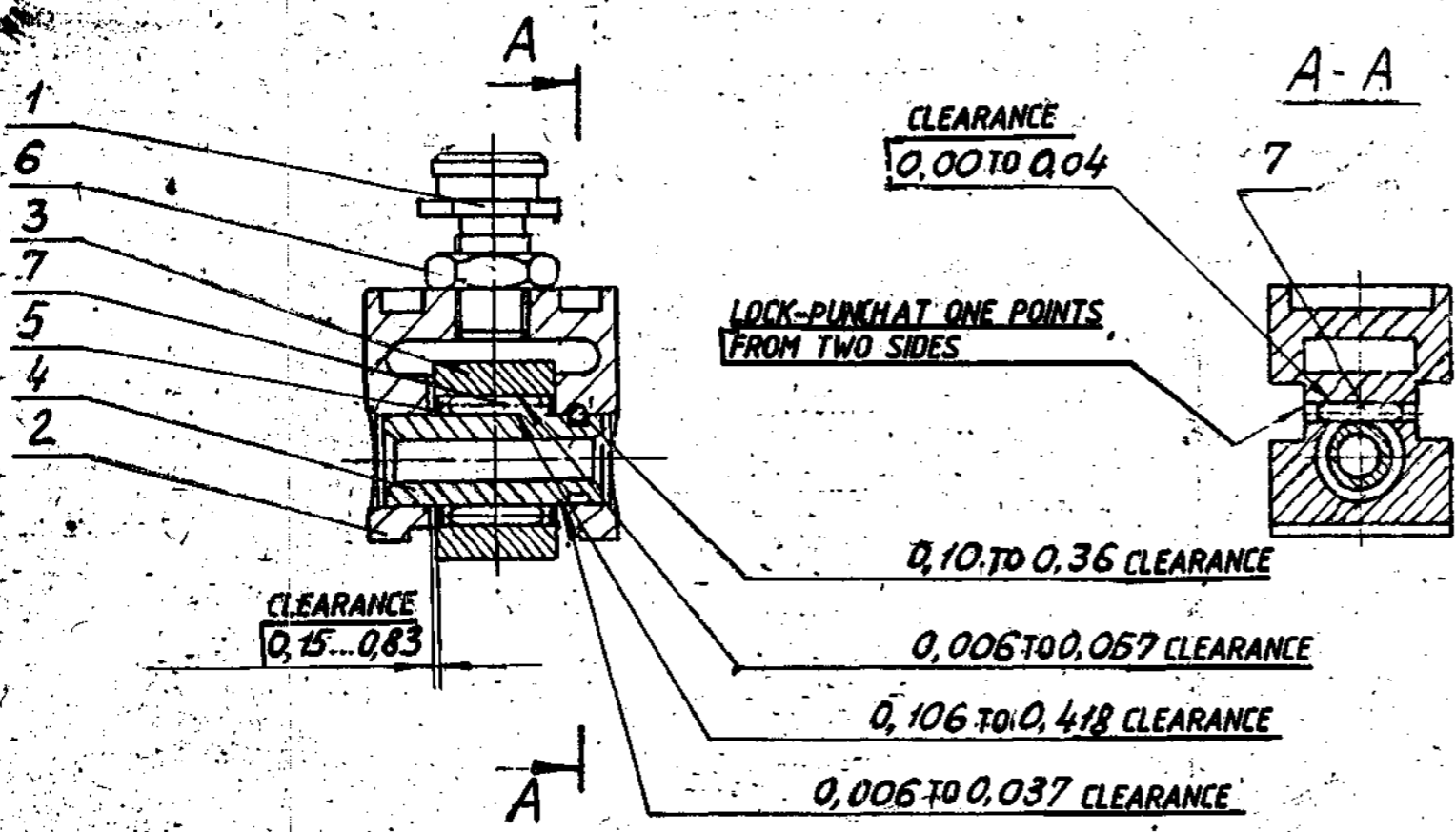


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THE
OFFICE OF THE
ATTORNEY GENERAL
STATE OF CALIFORNIA
SAN FRANCISCO
JANUARY 1900



1. IN ASSEMBLED TAPPET DIFFERENCE OF DIAMETER OF ROLLERS (REF. NO. 7.) SHOULD NOT EXCEED 0.003 mm.
2. TAPPET BOLT SHOULD BE ASSEMBLED WITH THE BODY AND LOCK NUT BY HAND SMOOTHLY WITHOUT SEIZING, SELECTION IS ALLOWED.

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

		EST. MASS 0.204 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THUS ∇
		LETTERS!	
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE			
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN		SCALE :- 1:1	MATERIAL :- _____ USED ON :- C6 20-27-00-4
CHD		DIMENSIONS IN mm	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI
ICD		TOLERANCE ON DIMNS UNLESS OTHERWISE STATED	TITLE :- TAPPET ASSY
APPD		ALL THREADS CONFORM TO	D S CAT NUMBER _____ DRAWING NUMBER C6 20-27-15-1
DATE	23-04-87		



QTY	REMARKS	DESCRIPTION	QTY	REMARKS
		TECHNICAL PAPERS		
	cb 20-27-15-1	TAPPET ASSY		
		P. A. R. T. S		
11	1	20-27-51	TAPPET BOLT	1
12	2	20-27-91-1	TAPPET BODY	1
11	3	20-27-92	TAPPET ROLLER	1
11	4	20-27-93	TAPPET PIN	1
11	5	20-27-94	TAPPET WASHER	2
11	6	327-52	TAPPET LOCK NUT	1
		STANDARD ARTICLES		
11	7	ROLLER 2.5X13.8 II 500-65	GOST 6870-72	20

ISSUE	DATE	NATURE OF AMENDMENTS	ISSUE	DATE	NATURE OF AMENDMENTS
DRN			USED ON	Cb 20-27-00-4	
CHK			CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) NV7.DI		
TCD			TITLE	TAPPET ASSY	
APPD			D'S CAT NUMBER	ITEM LIST FOR	
DATE: 7.05.87	SHT No 1	OFF 1	65 20-27-15-1		

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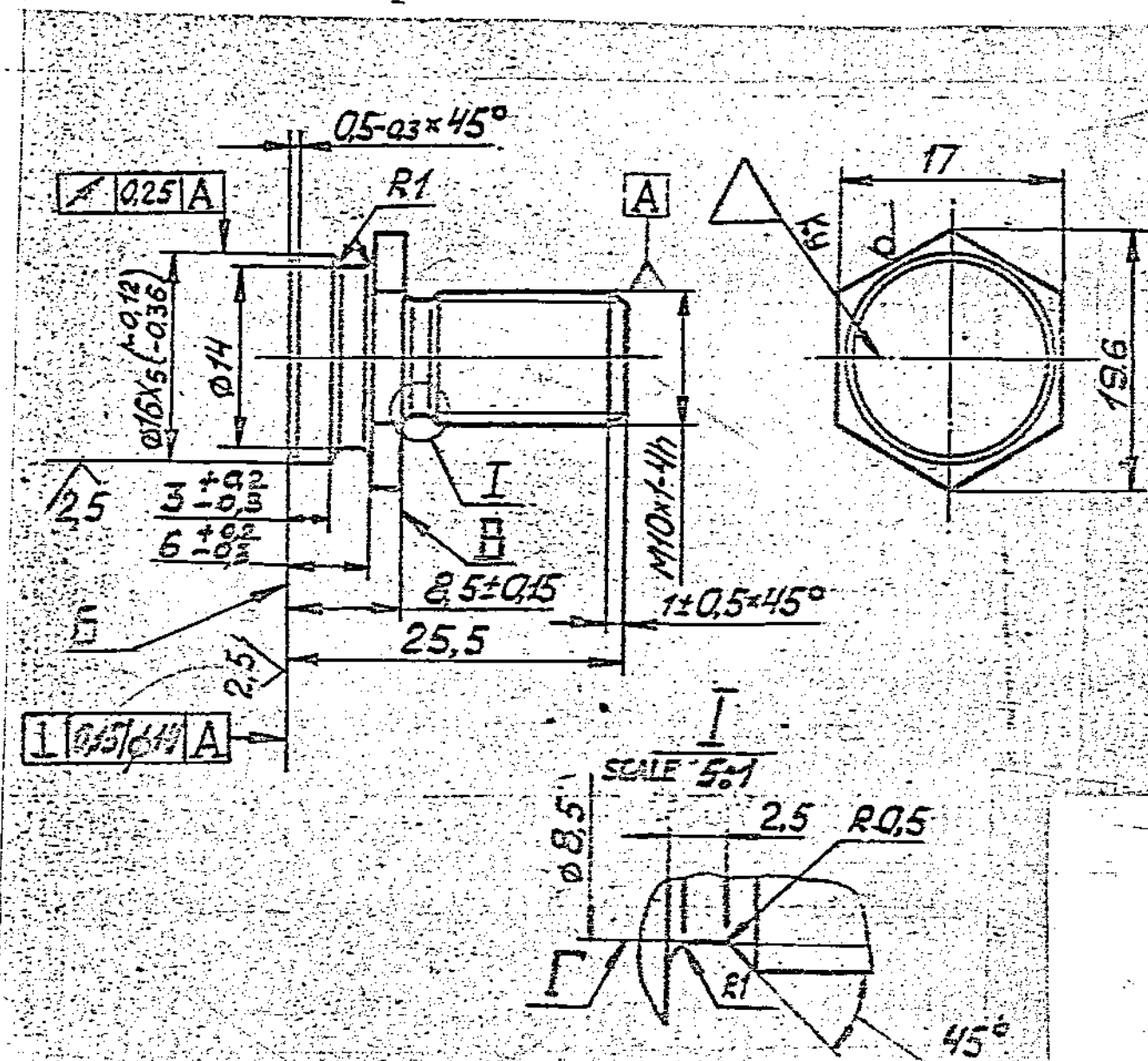
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1. INSPECTION GROUP **II** AS PER TECHNICAL REQUIREMENTS TT-11
2. BUTT-END **B** SHOULD BE CARBURIZED h 0.7 TO 1.1 (mm) IN THE MANUFACTURED ARTICLES $HRC \geq 55$. THREAD SHOULD BE PROTECTED AGAINST CARBURIZING. IT IS ALLOWED TO CARBURIZE HEXA HEDRON EDGES OF SURFACES **B** & **F**. LOCAL CARBURIZING OF THREAD IS ALLOWED.
3. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS :-
FOR SHAFTS - AS PER B7,
OTHERS - AS PER C17.
4. IT IS ALLOWED TO MAKE THREAD HAVING AN ANGLE DIAMETER OF 9.35 ± 0.02 .
5. COATING - CHEMICALLY OXIDIZED, OILED.

EXPLANATORY NOTE :

6. MATERIAL QUOTED : 12XH3A
TY 14-1-381-72
12XH3A = CHROMIUM NICKEL STEEL (HIGH QUALITY).

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	Ni	Mo	P	S	Cu
	M A X I M U M								
12XH3A	0.09-0.16	0.17-0.37	0.30-0.60	0.60-0.90	2.75-3.15	-	0.025	0.025	0.30

b) **MECHANICAL PROPERTIES :-**

GRADE OF STEEL	ULTIMATE TENSILE STRENGTH Kg _f /mm ² (min)	YIELD POINT Kg _f /mm ² (min)	IMPACT STRENGTH Kg _f /cm ² (min)	RELATIVE ELONGATION % (MIN 2	RELATIVE REDUCTION ALONG CROSS SECTION % (MIN)
12XH3A	95	70	9	11	55

Ⓐ **EQUIVALENT MATERIAL**
EN 36B TO BS : 970 /
13 Ni 13 Cr 3 TO IS : 4432-1988

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

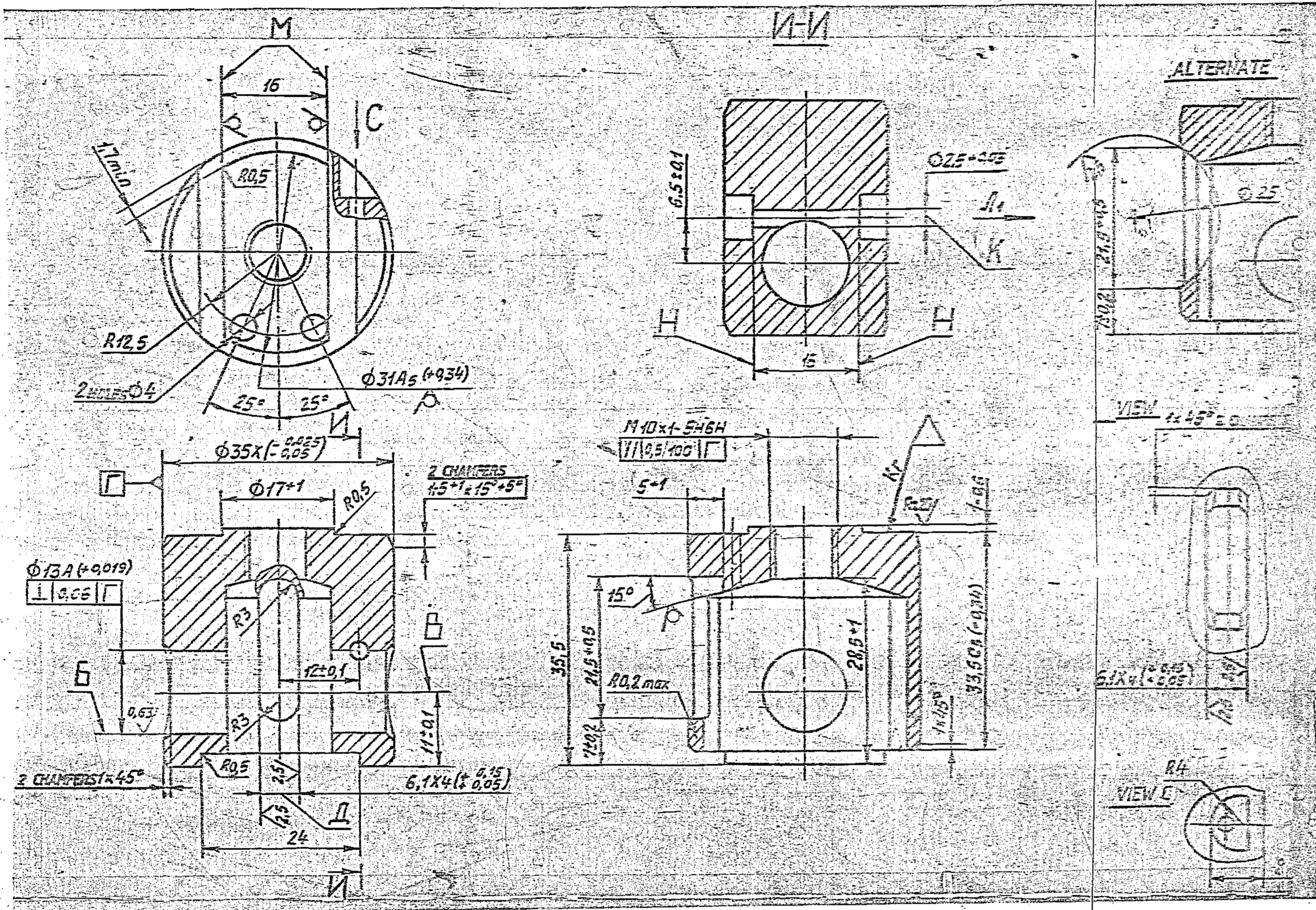
EST. WT. 0.021 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS # LETTERS)

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	TCD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69	MATERIAL :- 12XH3A TY 14-1-381-72	USED ON :- CB 20-27-15-1 CB 20-27-15-2	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) A Y A D I	TITLE TAPPET BOLT
A	15-7-10	4 th ALT. COMM. MEETING MINUTES POINT No 9 DT 26-10-09						D S CAT NUMBER	DRAWING NUMBER 20-27-51		
ISSUE	DATE	NATURE OF AMENDMENTS									

KVD No. - 63414





1. INSPECTION GROUP III AS PER TECHNICAL REQUIREMENTS TT-11.
2. EXCEPT FOR SURFACE H, CYANIDE TO A DEPTH OF 0.35 TO 0.45 mm, SURFACES E AND F TO A DEPTH OF AT LEAST 0.2 mm, SURFACE K MAY HAVE NO CYANIDED LAYER.
3. HARDNESS OF SURFACE SHOULD BE HR 150 ^{CHECKED} MAY BE PERFORMED WITH CALIBRATED FILE.
4. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS -
FOR HOLES - AS PER A7,
SHAFTS - AS PER D7,
OTHERS - AS PER Q77.
5. MISALIGNMENT AND SWAY OF SLOT P WITH RESPECT TO DIAMETRICAL PLANE E WHICH IS PERPENDICULAR TO THE AXIS OF SURFACE E SHOULD NOT EXCEED 0.04 mm. (QUALIFIED TOLERANCE.)
6. MISALIGNMENT OF THE AXIS OF SURFACE B WITH RESPECT TO THE DIAMETRICAL PLANE OF SURFACE F SHOULD NOT EXCEED 0.03 mm.
7. NON SQUARENESS OF SURFACE M WITH RESPECT TO AXIS B SHOULD BE CHECKED BY TURNING THE ROLLER, 28.8 mm IN DIAMETER WHICH IS MADE AS PER TOLERANCE OF GAGES, ON PM, 13.0 mm IN DIAMETER. ROLLER HAVING DIMENSIONS $\phi 28.8 \times 15.9$ AND CHAMFER $1.2 \times 60^\circ$ MAY BE USED FOR CHECKING.
8. SURFACE B MAY HAVE NOTCHES AND TRACES OF PRELIMINARY MACHINING AS PER STANDARD.
9. THIS SHOULD BE CHECKED BY USING THE MAGNETIC FLAW DETECTOR AS PER INSTRUCTIONS USED-17.
10. COATING : CHEMICALLY OXIDIZED, OILED.

EXPLANATORY NOTE :

MATERIAL QUOTED : OPEN HEARTH STEEL 10 GOST 1050-74.

a) **CHEMICAL COMPOSITION :**

GRADE	CONTENT OF ELEMENTS %							
	C	Si	Mn	Cr	P	S	Cu	Ni
10	0.07-0.14	0.17-0.37	0.35-0.65	0.15	0.035	0.040	0.25	0.25

b) **MECHANICAL PROPERTIES :**

GRADE	TENSILE STRENGTH	YIELD POINT	ELONGATION	REDUCTION
	Kgf/mm ²	Kgf/mm ²	%	IN AREA %
10	34	21	31	55

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

EST. MASS : 0.112 Kg
TO BE STAMPED OR MARKED WHERE INDICATED THUS \equiv 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	TEC	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
				06-03-87	2:1					20-27-91-2
MATERIAL :- 10 GOST 1050-74								USED ON :- 10 GOST 1050-74		
CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI								TITLE		TAPPET BODY
ISSUE / DATE								NATURE OF AMENDMENTS		

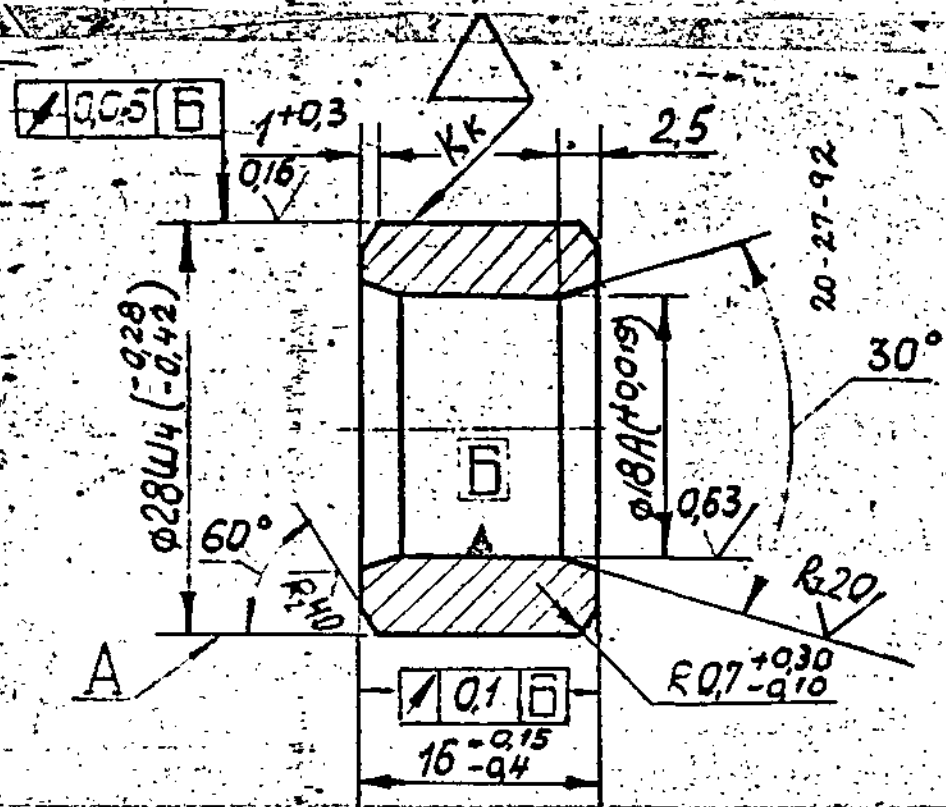
THE HISTORY OF THE CITY OF BOSTON

FROM THE FIRST SETTLEMENT TO THE PRESENT TIME
BY
JOHN B. HENNING

VOLUME I
FROM THE FIRST SETTLEMENT TO 1789

BOSTON
PUBLISHED BY
LITTLE, BROWN, AND COMPANY
1898

DRAWING NUMBER
20-27-92



- INSPECTION GROUP III AS PER TECHNICAL REQUIREMENTS TT-11.
- HRC \geq 58 CARBURIZE H 0.8 TO 1.5 mm, H 0.8 TO 1.4 mm, ON SURFACES A AND B IN MANUFACTURED PARTICLE MICROSTRUCTURE OF CARBONIZED COATING IS NEEDED MARTENSITE NOT IN EXCESS OF NUMBER 4, SCALE 3, GOST 8233-56, CARBIDE NET SHOULD NOT EXCEED NUMBER 4, SCALE 5, GOST 8233-56.
- UNSPECIFIED LIMIT DEVIATIONS FOR DIMENSIONS ARE AS PER CM7.
- TAPER OF SURFACE A SHOULD NOT EXCEED 0.015 mm.
- QUALITY OF SURFACE A SHOULD NOT EXCEED 0.02 mm.

EXPLANATORY NOTE:-

MATERIAL QUOTED:- STEEL 12X H3A TY14-1-381-72

2.5/√(√)

12 X H3A = GRADE OF STEEL.

CHEMICAL COMPOSITION:-

CONTENT OF ELEMENTS %							
C	Si	Mn	Cr	Ni	P	S	Cu
					MAXIMUM.		
0.09-0.16	0.17-0.37	0.30-0.60	0.60-0.90	2.75-3.15	0.025	0.025	0.30

MECHANICAL PROPERTIES:-

HEAT TREATMENT.

- a) HARDENING
- FIRST HARDENING OR NORMALIZING = 860°C.
 - SECOND HARDENING = 760-810°C.
 - COOLING MEDIUM = WATER OR OIL.

- b) TEMPERING
- TEMPERATURE °C = 180.
 - COOLING MEDIUM = AIR OR OIL.

- YIELD POINT Kgf/mm² (MIN) = 70.
- ULTIMATE STRENGTH Kgf/mm² (MIN) = 95.
- % RELATIVE ELONGATION (MIN) = 11.
- % RELATIVE REDUCTION ALONG CROSS SECTION (MIN) = 55.
- IMPACT STRENGTH Kgf.m/cm² (MIN) = 9.

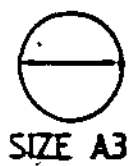
KVD 63427

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

EST. WT. 0.0437 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>A. B. K. S.</i>	MATERIAL:-	12X H3A TY 14-1-381-72	USED ON	CB 20-27-15-1 CF 20-27-15-2
CHKD	<i>P. S. S.</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)			
TCD	<i>N. S. S.</i>	AVADI			
APPD	<i>201</i>	TITLE			
DATE	25-5-89	TAPPET ROLLER			
SCALE:-	2 : 1	D S CAT NUMBER			
DIMENSIONS IN mm		DRAWING NUMBER			
TOLERANCE ON DIMS		20-27-92			
UNLESS OTHERWISE STATED IS: 2102-69					
ALL THREADS TO CONFORM TO					
ISSUE DATE	NATURE OF AMENDMENTS				



SIZE A3



EXPLANATORY NOTE:-

MATERIAL QUOTED:- STEEL 12X H3A GOST 4543-71.

CHROMIUM -NICKEL AND CHROMIUM-NICKEL STEEL
12 X H3A = GRADE OF STEEL.

CHEMICAL COMPOSITION :-

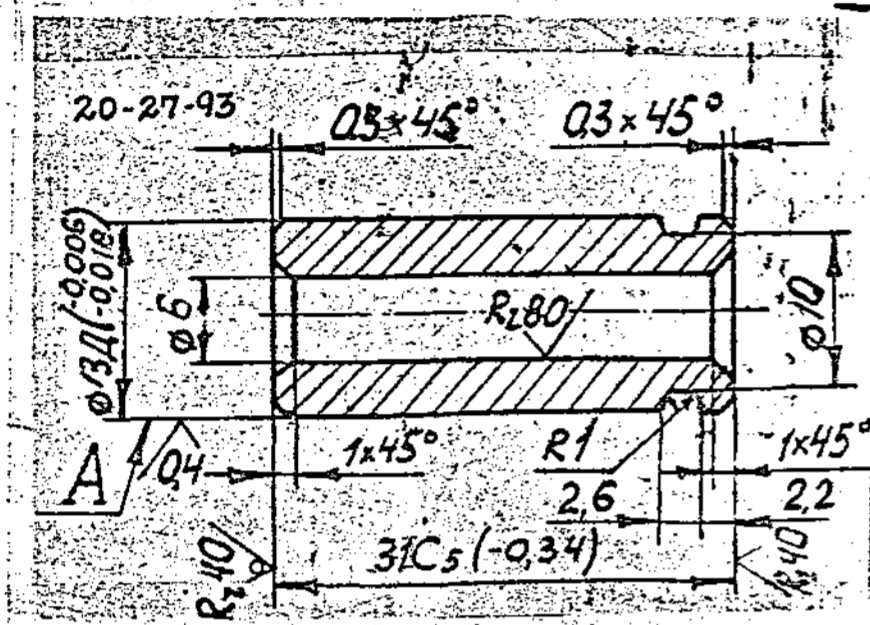
CONTENT OF ELEMENTS %								
C	Si	Mn	Cr	Ni	P	S	Cu	
MAXIMUM								
0.09-0.16	0.17-0.37	0.30-0.60	0.60-0.90	2.75-3.15	0.025	0.025	0.30	

MECHANICAL PROPERTIES:-

2. HEAT TREATMENT.

- a) **HARDENING**
- i) FIRST HARDENING OR NORMALIZING = 860 °C.
 - ii) SECOND HARDENING = 760-810 °C.
 - iii) COOLING MEDIUM = WATER OR OIL.
- b) **TEMPERING**
- i) TEMPERATURE °C = 180.
 - ii) COOLING MEDIUM = AIR OR OIL.

- 3. YIELD POINT Kg/mm² (MIN) = 70.
- 4. ULTIMATE STRENGTH Kg/mm² (MIN) = 95.
- 5. % RELATIVE ELONGATION (MIN) = 11.
- 6. % RELATIVE REDUCTION ALONG CROSS SECTION (MIN) = 55.
- 7. IMPACT STRENGTH Kg.m/cm² (MIN) = 9.



ALTERNATE MATERIAL QUOTED : STEEL 18x2H4MA TY 14-1-381-72

a) **CHEMICAL COMPOSITION :** AS PER GOST 4543-71

GRADE OF STEEL	CONTENT OF ELEMENTS %								
	C	Si	Mn	Cr	Ni	Mo	P	S	Cu
MAXIMUM									
18x2H4BA (18x2H4MA)	0.14-0.20	0.17-0.37	0.25-0.55	1.35-1.65	4.00-4.40	0.30-0.40	0.025	0.025	0.30

b) **MECHANICAL PROPERTIES :** AS PER GOST 4543-71

GRADE OF STEEL	YIELD POINT Kg/mm ²	ULTIMATE STRENGTH Kg/mm ²	RELATIVE ELONGATION %	RELATIVE REDUCTION ALONG CROSS SECTION %	IMPACT STRENGTH Kgfm/cm ²
	M I N I M U M				
18x2H4BA (18x2H4MA)	85	115	12	50	12

1. INSPECTION GROUP III AS PER TECHNICAL REQUIREMENTS TT-11
2. CARBURIZE SURFACE A, h 1 TO 1.4mm, IN MANUFACTURED ARTICLE. HRC > 58. HRC 26 TO 40 OF NON-CARBURIZED SURFACES
3. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS:
FOR HOLES - AS PER A7
FOR SHAFTS - AS PER B7
FOR OTHERS - AS PER C7
4. COATING: CHEMICALLY OXIDIZED, OILED.
5. ALTERNATE MATERIAL IS STEEL 18 X 2 H4MA TY 14-1-381-72, HRC 35 TO 45 AS NON-CARBURIZED SURFACES.

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

EST. WT. 0.024 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

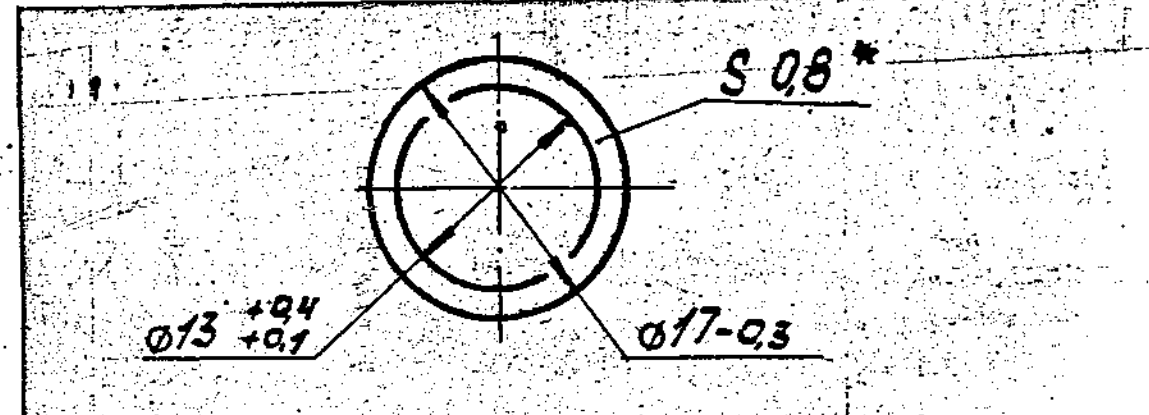
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

DRN	CHD	TCD	APPD	DATE	SCALE	DIMENSIONS IN mm.	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69	ALL THREADS TO CONFORM TO
				24-5-89	2:1			
MATERIAL :- 12XH3A TY 14-1-381-72					USED ON :- Cb 20-27-15-1 OR Cb 20-27-15-2			
CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) A V A D I					TITLE TAPPET PIN			
ISSUE					DATE		NATURE OF AMENDMENTS	
D S CAT NUMBER					DRAWING NUMBER 20-27-93			

KVD No: 63428



DRAWING NUMBER
20-27-94



1. INSPECTION GROUP IV AS PER TECHNICAL REQUIREMENTS TT-11.
2. H R C 44 TO 48.
3. REQUIREMENTS PLACED UPON STAMPING ARE AS PER STANDARD B2050-16. STRAIGHTEN AFTER STAMPING
4. WASHER MAYBE MADE STEEL 65F, GOST 1050-74.
5. COATING : CHEMICALLY OXIDIZED, OILED.
6. * DIMENSION IS GIVEN FOR REFERENCE.

EXPLANATORY NOTE FOR ALTERNATE MATERIAL:

ALTERNATE MATERIAL QUOTED: steel 65Г Gost 1050-74

65Г : Grade of steel.

chemical composition:

Carbon = 0.62-0.70 ; Silicon = 0.17-0.37 ; Manganese = 0.90-1.20 ;

Chromium = 0.25 (max) Phosphorus = 0.035 (max) ;

Sulphur = 0.040 (max) ; copper = 0.25 (max) ;

Nickel = 0.25 (max).

Mechanical Properties :

Yield point $\text{kgf/mm}^2 = 44$ (min)

Ultimate tensile strength $\text{kgf/mm}^2 = 75$ (min)

Elongation% = 9 (min)

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

PLOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION		DRN	<i>G. Narayana</i>	MATERIAL:- 55-BT-C-	USED ON C6 20-27-15-1 OR
EST. WT.	TO BE STAMPED OR MARKED WHERE INDICATED THIS \pm (LETTERS)	CM	<i>By Bharat</i>	0.8x35 GOST 2284-79	C6 20-27-15-2
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE P OUT SIDE INSIDE EQUIVALENT CHAMBERS ARE PERMISSIBLE		TCD	<i>Chandrababu</i>	APPO	
		DATE	24-10-89	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES)	AVADI
		SCALE:-	1:1	DIMENSIONS IN mm	TITLE TAPPET WASHER
				TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS:2102-69	
		ISSUE DATE	16-08-10	ALL THREADS TO CONFORM TO	D S CAT NUMBER
		NATURE OF AMENDMENTS			DRAWING NUMBER
		4 th Alt. Comm. Meeting Minutes Point No.12 Dt:26-10-09			20-27-94

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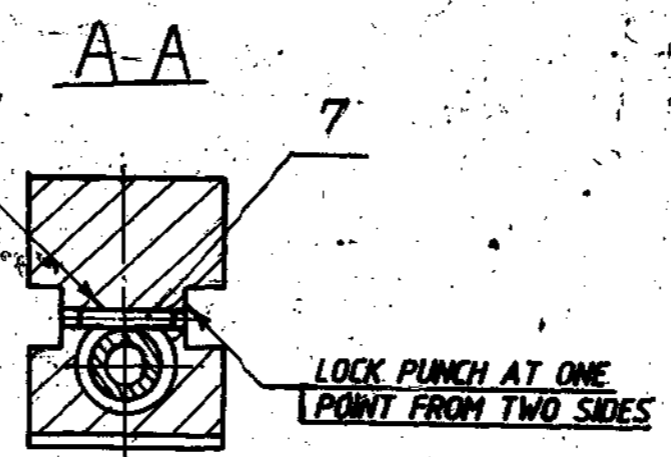
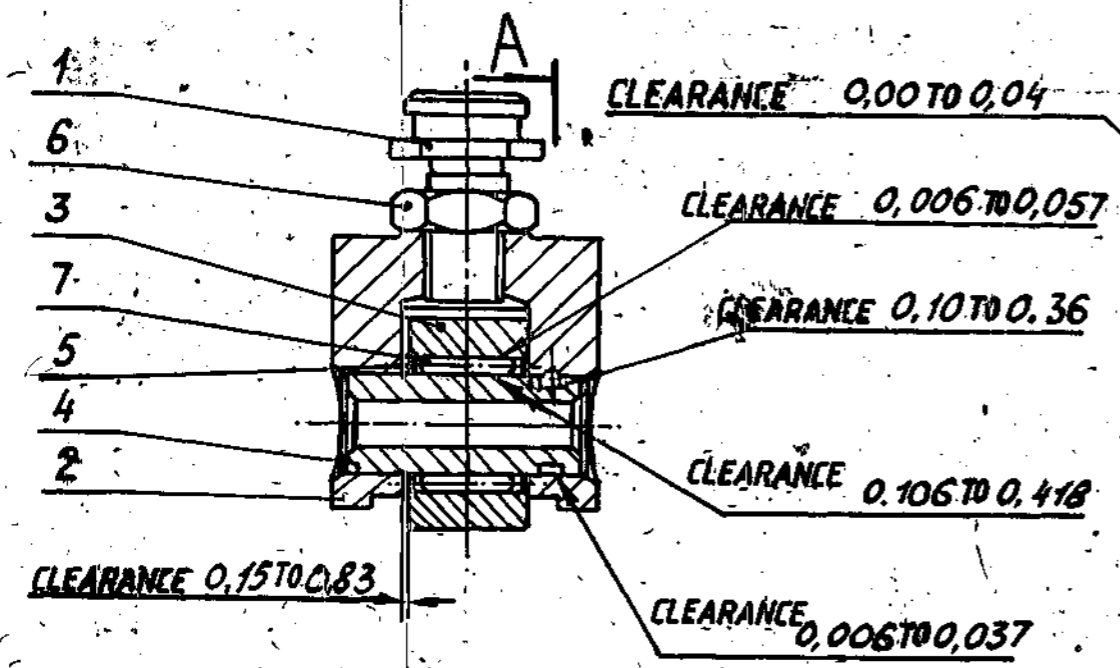
THE
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ART AND HISTORY



THE
OFFICE OF THE
ATTORNEY GENERAL
STATE OF CALIFORNIA
SAN FRANCISCO

2-51-2-07-90

REVISED BY: D. J. M. R. C.



- 1) IN ASSEMBLED TAPPET DIFFERENCE OF DIAMETER OF ROLLERS (REF. NO. 7.) SHOULD NOT EXCEED 0.003 mm.
- 2) TAPPET BOLT SHOULD BE ASSEMBLED WITH THE BODY AND LOCK NUT BY HAND SMOOTHLY WITHOUT SEIZING, SELECTION IS PERMITTED.

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

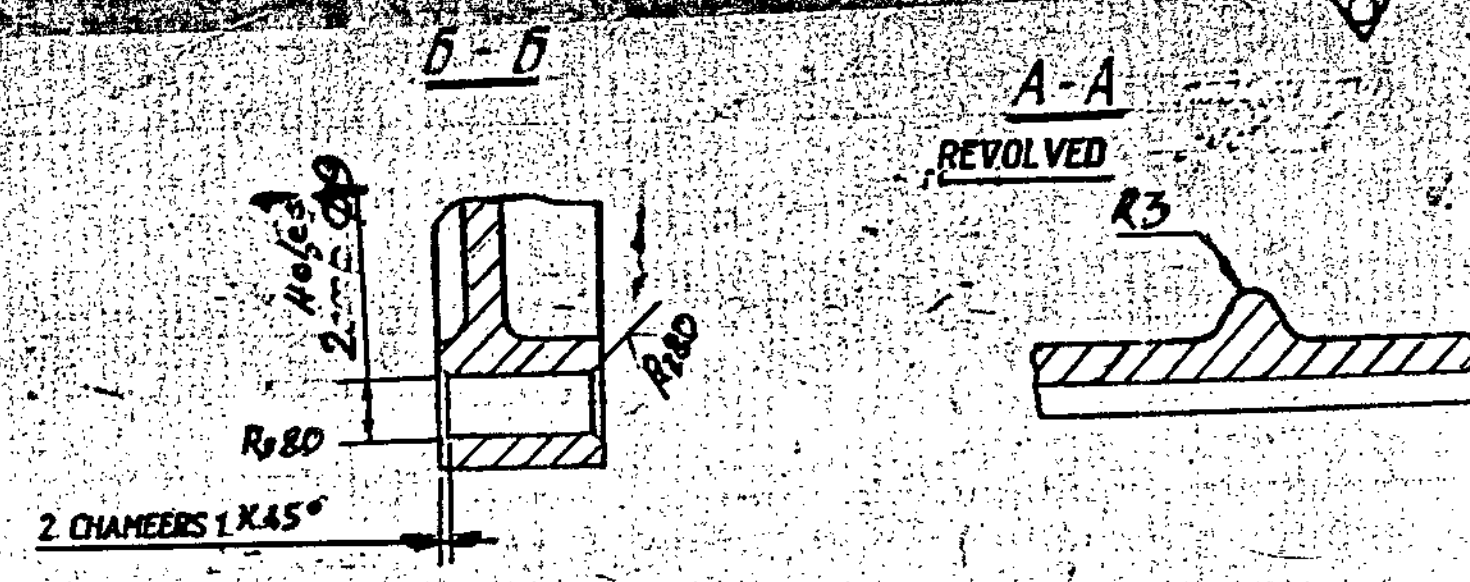
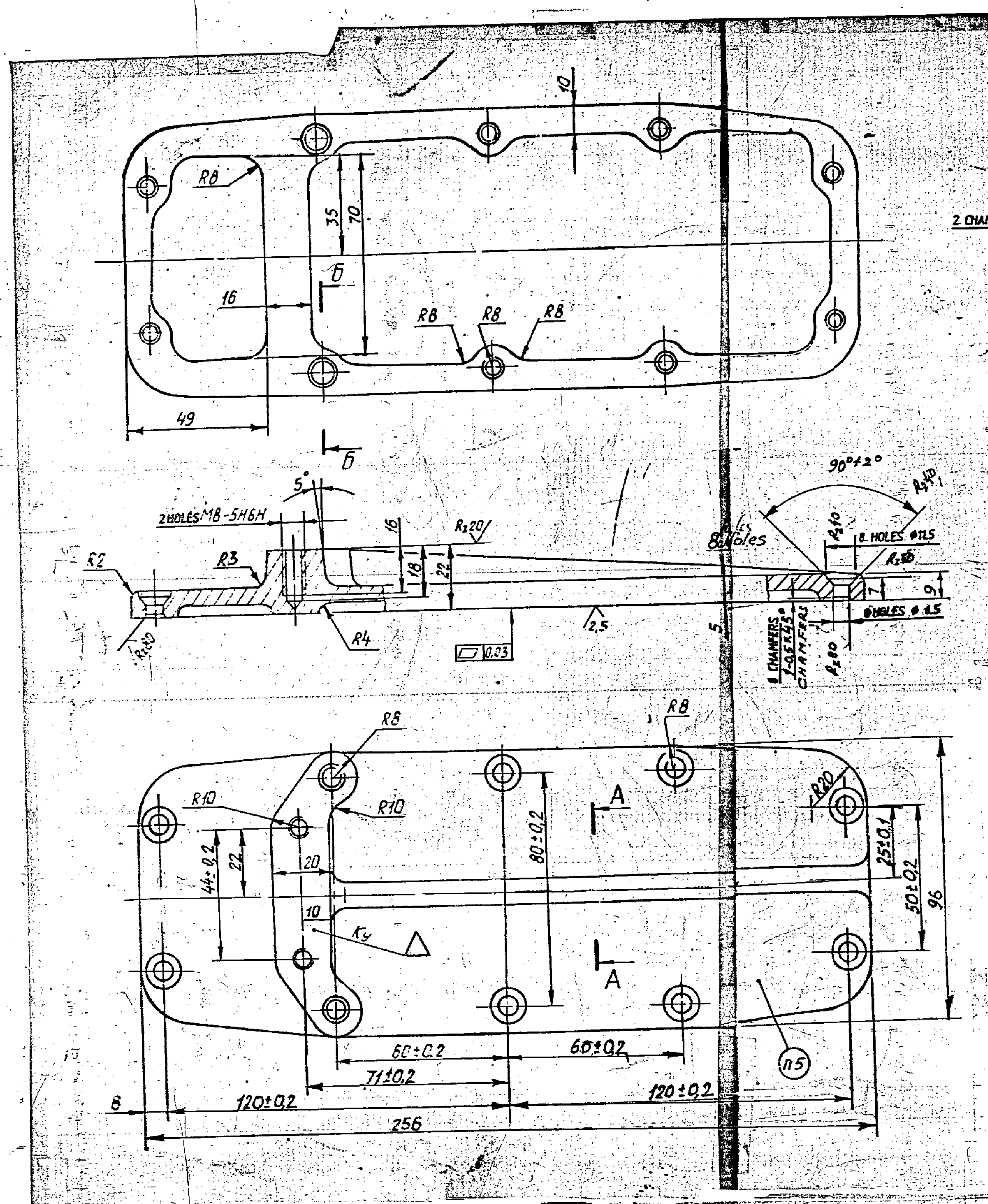
		EST. MASS 0.214 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THUS Φ
		LETTERS)	
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE P OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE	
ISSUE DATE	NATURE OF AMENDMENTS	MATERIAL :-	USED ON :- C6 20-27-00-4
DRN	SCALE :- 1:1	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVAD	
CHD	DIMENSIONS IN mm	TITLE :- TAPPET ASSY	
TCO	TOLERANCE ON DIMS UNLESS OTHERWISE STATED	D.S CAT NUMBER	
APPD	ALL THREADS CONFORM TO	DRAWING NUMBER C6 20-27-15-2	
DATE 7.05.87			



NO	QTY	REGISTRATION	DESCRIPTION	QTY	REMARKS
			TECHNICAL PAPERS		
		cb. 20-27-15-2	TAPPET ASSY		
			P A R T S		
11	1	20-27-51	TAPPET BOLT	1	
12	2	20-27-91-2	TAPPET BODY	1	
11	3	20-27-92	TAPPET ROLLER	1	
11	4	20-27-93	TAPPET PIN	1	
11	5	20-27-94	TAPPET WASHER	2	
11	6	327-52	TAPPET LOCK NUT	1	
			STANDARD ARTICLES		
11	7		ROLLER 2.5 X 13.0 II-500-65 GOST. 6870-72	20	

ISSUE	DATE	NATURE OF AMENDMENTS	ISSUE	DATE	NATURE OF AMENDMENTS
OF		USED OF		CB 20-27-00-4	
CHK		<i>R. Ivan</i>	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVAD		
TCD		<i>N. Ivan</i>	TITLE: TAPPET ASSY		
APP		<i>[Signature]</i>	ITEM LIST FOR		
DATE	7-05-87	SHT No. 1 OF 1	CB 20-27-15-2		





1. $H B \geq 80$.
2. REQUIREMENT PLACED UPON CASTINGS ARE AS PER STANDARD 82050-15 AND TECHNICAL REQUIREMENTS TT A 1 310-5/6.5.
3. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSION ARE AS FOLLOWS :-
FOR HOLES - AS PER A7,
SHAFTS - AS PER B7,
OTHERS - AS PER CM7.
4. UNMACHINED SURFACE COATING : BAKELITE VARNISH -1 bc-1, GOST 901-78 V 6/1X2.
5. MARK THE GRADE OF MATERIAL BY CASTING AS PER GOST 217-79 USING TYPE 10 -10, GOST 2930-62.
6. ALTERNATE MATERIAL IS AΛ4 . GOST 2685-75.

EXPLANATORY NOTE :-

7. MATERIAL QUOTED : AΛ9 GOST 2685-75
ALT MATERIAL QUOTED : AΛ4 GOST 2685-75
- AΛ9 } GRADE OF ALUMINIUM CASTING ALLOY.
AΛ4 } (PRESSURE DIE CASTING PREFERRED)

a) CHEMICAL COMPOSITION :-

GRADE OF ALLOY	C O N T E N T O F E L E M E N T S %												
	BASIC COMPONENTS				A D M I X T U R E S (M A X I M U M)								
	Al	Mg	Si	Mn	IRON	Cu	Mn	Zn	TIN	LEAD	Br	Zr	TOTAL
AΛ9	BASE	0.2-0.4	6.0-8.0	-	150	0.20	0.50	0.30	0.01	0.05	0.10	0.15	2.00
AΛ4	BASE	0.17-0.3	8.0-10.5	0.2-0.5	100	0.10	-	0.20	0.03	0.05	0.10	0.15	1.50

b) MECHANICAL PROPERTIES :-

GRADE OF ALLOY	PARTIAL RESISTANCE Kgf/mm ² (max)	SPECIFIC ELONGATION % (max)	HARDNESS AS PER BRINELL H B (max)
AΛ9	17	1	50
AΛ4	15	2	50

K VD No-66748

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

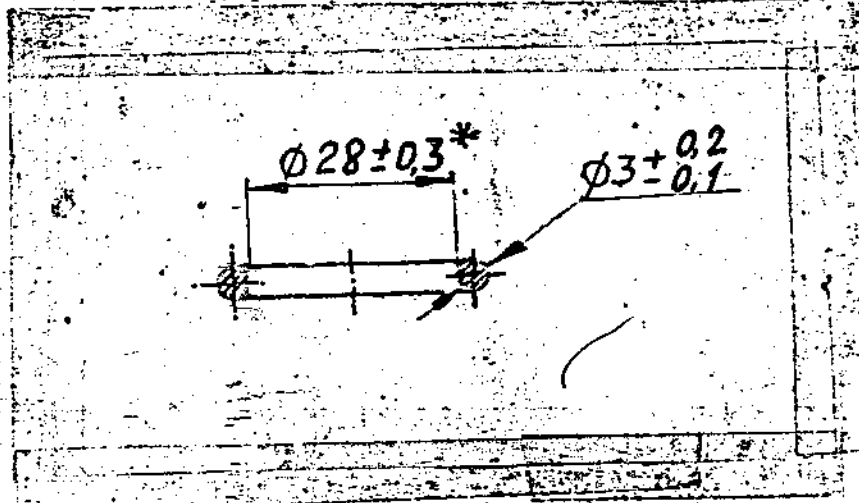
EST. MASS 0.423 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS : # LETTERS

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R 0.25 SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

DESIGNER	MATERIAL	ISSUED BY
CHKD BY	AΛ9 GOST 2685-75	CB 20-27-00-4
DATE	06-07-87	SCALE
CONTROLLERATE OF QUALITY ASSURANCE - HEAVY VEHICLES, A V A D		
DIMENSIONS		TITLE
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 0.10		GOVERNOR COVER
ALL THREADS TO CONFORM TO		DRAWING NUMBER
ISSUE DATE		20-15-620-4



DRAWING NUMBER
20-08-246



1. * DIMENSION IS PROVIDED WITH TOOLS.
2. APPLY MARKING ON TO THE LABEL.
3. OTHER REQUIREMENTS ARE AS PER TECHNICAL SPECIFICATIONS TY 005 216-75 FOR ARTICLES, CODE 25.3111.HD.

MATERIAL QUOTED:

RUBBER H.O 68-1 TY 005-216-75

H068-1 = GRADE OF RUBBER

PARAMETERS:

1. WORKING MEDIUM = AIR, FUELS, OILS AND GASOLINE
2. WORKING TEMPERATURE = -50°C TO $+100^{\circ}\text{C}$
3. ULTIMATE STRENGTH AT RUPTURE Kgf/cm^2 (MIN) = 90
4. ELONGATION AT RUPTURE % (MIN) = 250
5. HARDNESS AGAINST HARDNESS GAUGE TWP UNITS = 55-70
6. DENSITY g/cm^3 = 1.24 ± 0.05
7. RESIDUAL ELONGATION AFTER RUPTURE (MAX) = 12

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

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

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

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

DRN		MATERIAL:-RUBBER HD-68-1 TY005 216-75.	USED ON CB 2008-00-7 CS 20-27-00-4
CHK		APPD	CONTROLLERATE OF QUALITY ASSURANCE(HEAVY VEHICLES) AVADI
TCO		DATE	
SCALE:-	1:1		
DIMENSIONS IN mm		TITLE	RING
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS:2102-69		D S CAT NUMBER	DRAWING NUMBER
ALL THREADS TO CONFORM TO			20-08-246
ISSUE DATE	22.05.08	NATURE OF AMENDMENTS	

EXP. NOTE RELEASD ON 17-6-91

Issue 12.01.71

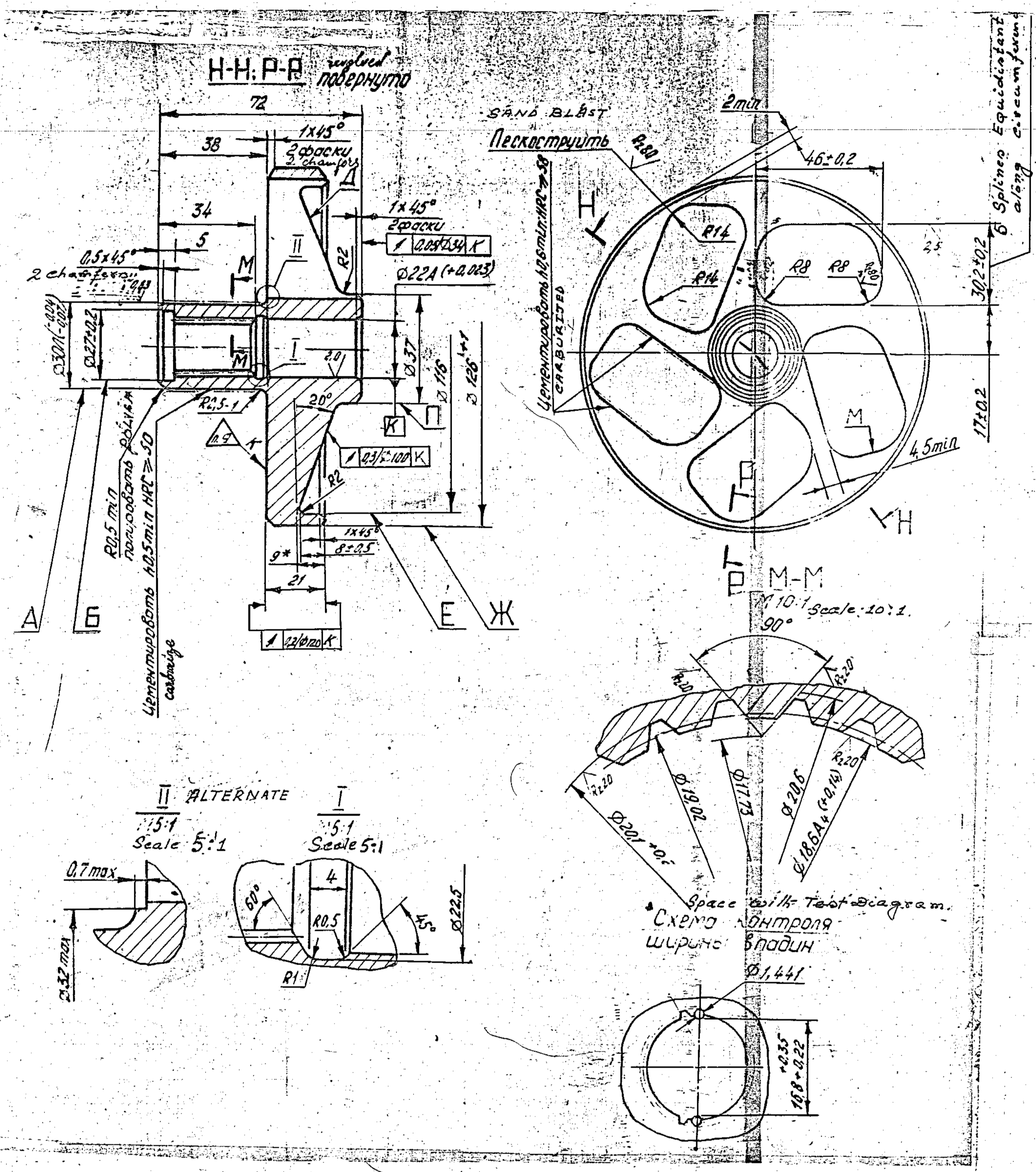


SIZE A3





DRAWING NUMBER
20-15-611-1



- INSPECTION GROUP III AS PER TECHNICAL REQUIREMENTS TT-11.
- HRC 37 TO 44 OF NON-CARBURIZED LAYER. IT IS ALLOWED TO CARBURIZE ALL OVER (h 1,2,Max) EXCEPT FOR SURFACES B, Ж, K AND SPLINES. AFTER HEAT TREATMENT DISTORTION OF SURFACES E AND Ж SHOULD NOT EXCEED 0.2mm OVER LIMIT DIAMETERS.
- UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS FOR: HOLES - AS PER A₁; SHAFTS - AS PER B₁; OTHERS - AS PER C₁.
- RUN-OUT OF SURFACE A WITH RESPECT TO THE AXIS OF SURFACE K SHOULD NOT EXCEED 0.07mm AT THE END OF THE SHANK.
- ALIGNMENT OF SURFACE K AND SPLINES SHOULD BE CHECKED WITH A GAUGE WHICH PROVIDES MATING WITH PARTS 20-27-4-6.
- BALANCE THE FINALLY MANUFACTURED PART, WHEN BALANCING THE PART REMOVE FLATS FROM SURFACE E AND A. UNBALANCE OF NOT MORE THAN 3 g PER R 63 mm IS PERMITTED.
- COATING: CHEMICALLY OXIDIZED, OILED.
- UNEVEN MATING OF RADI R 14 AND R 8 WITH STRAIGHT SECTIONS OF THE SPLINE IS PERMITTED.
- STAMP BY ACID-FREE METHOD.
- CUTTING OF NOT MORE THAN 0.5mm AS PER R 2 IS PERMITTED ON SURFACE J.
- *DIMENSIONS ARE GIVEN FOR REFERENCE.
- DRILL TRACE HAVING A DEPTH OF NOT MORE THAN 0.5mm ON SURFACE M IS PERMITTED.

Number of Teeth	Z	24
Pin diameter	d _p	1.441
Distance Over Pins	M _A	16.8022
Space width along pitch circle chord	S _q	
Pitch circle diameter	d _q	19.02

EXPLANATORY NOTE :-

15. MATERIAL QUOTED :- 18X2H4MA (18X2H4BA) TO GOST 4543-71. CHROMIUM, NICKEL, MOLYBDENUM STEEL OF HIGH QUALITY, GRADE 18X2H4MA (18X2H4BA) TO GOST 4543-71.

CHEMICAL COMPOSITION: %

CARBON	= 0,11 - 0,20
SILICON	= 0,17 - 0,25
CHROMIUM	= 1,35 - 1,65
NICKEL	= 4,00 - 4,40
MOLYBDENUM	= 0,30 - 0,40
TITANIUM	= 0,06 (MAX)
PHOSPHORUS	= 0,025 (MAX)
SULPHUR	= 0,025 (MAX)
COPPER	= 0,30 (MAX)

PHYSICAL PROPERTIES :-

YIELD POINT	= 85 Kgf/mm ² (M)
ULTIMATE STRENGTH	= 115 Kgf/mm ² (MIN)
RELATIVE ELONGATION	= 12 % (MIN)
RELATIVE REDUCTION ALONG CROSS-SECTION	= 50 % (MIN)
IMPACT STRENGTH	= 12 Kgf/cm ²

Ⓐ EQUIVALENT MATERIAL STEEL
835 M15 (EN39B) TO BS:970

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

EST. MASS TO BE STAMPED OR MARKED WHERE INDICATED THIS 1.0 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	CHD	YCD	APPD	DATE	SCALE	DIMENSIONS IN mm	TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS 2102-01	MATERIAL :- 18X2H4MA (18X2H4BA) TO GOST 4543-71	USED ON :- CB 20-27-00-4
				06-03-87	1:1			CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
TITLE								GOVERNOR CROSS	
ISSUE DATE								DRAWING NUMBER	
27.8.10 4 th ALT. Comm. Meeting Minutes Point No.16 Date 26.10.09								20-15-611-1	

