

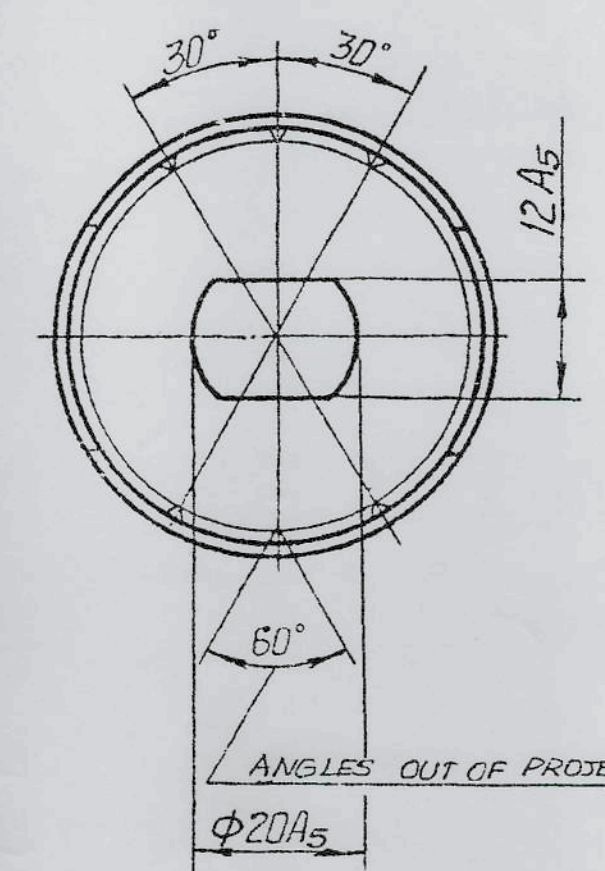
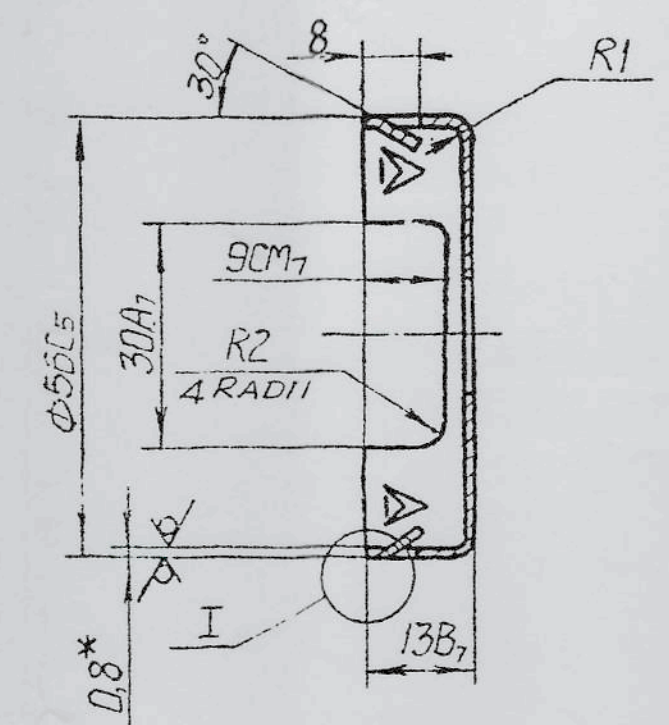
DS CAT No.
1015-004164

DIMENSIONS ARE IN mm

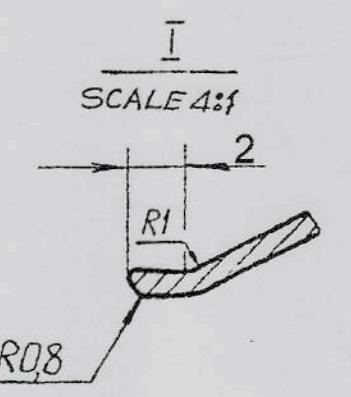
1. WHEN BEING TURNED THROUGH 180° THE CLEANING ROD BLOCK, COMPONENT 2, UNLESS ACTION OF SPRING, COMPONENT 3, SHOULD BE TIGHTLY FIXED WITH SLOTS A AND B

2. DIMENSIONS FOR REFERENCE.

DATE		AUTHORITY		ZONE		AMENDMENTS		SIG AHSP	SIG DO	DRAWN:-	CHD:-	ASSY DRG:-	CQA(W), JABALPUR
21-2-08		19113-W				HINDI NOMEN ADDED				SCANNED:-	CHD:- OPS	DATE:-	
4-4-06						SCANNED & PRINTED WITHOUT CHANGE				DO	FOR CQA(W)	ESTD mass:- 0.850	
PREV DC Nos:- 16360-W & 17088-W DT 04-07-91										PROTECTIVE FINISH:-		SCALE:- 1:1	
DRG SEALED:- 16360-W DT 03-09-85										MATERIAL:-		DESIGN No.	CLEANING ROD ASSEMBLY DRAWING कलीनिंग रॉड (असेम्ब्ली ड्राइंग)
PROV										DO CQA(W)		PART No. 902.03.100 C B	
												DS CAT No. 1015-004164	38



INDIGENOUS MATL:-
IS: 513-2008, DESIGNATION CRA



1. COATING: CHEMICAL PHOSPHATING HASTENED CHROMATIZING VARNISH 5Φ-4 NIGROSENE (I) GOST 12172-74.
2. DIMENSION FOR REFERENCE.
3. K SHOULD BE MARKED ON A BATCH TAG.

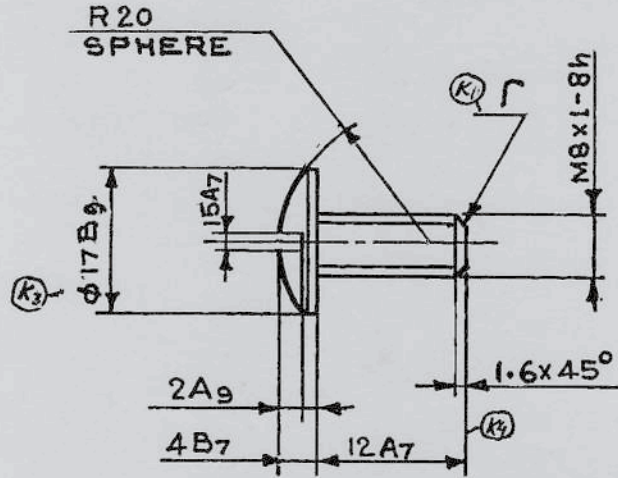
DRAWN:-				CHD:-		ASSY DRG:-		CQA(W), JABALPUR
SCANNED:-				CHD:-		DATE:-		
4-5-06				C/D/MAN		DO		SCALE:- 1:1
AMENDMENTS				SIG AHSP		SIG DO		ESTD mass:- 0.026
PREV DC Nos:- 16360-W & 17088-W Dt.04-07-91				MATERIAL:- SHEET 50.8 GOST 19904-74		II-B F-0.8 K77 GOST 9045-70		DESIGN No.
DRG SEALED PROV :-16360-W Dt.03-09-85				PROTECTIVE FINISH:-		PART No.		902.03.102
DO CQA(W)				CUP कप		DS CAT No.		1055-000629

DS CAT No.

5305-013199

DIMNS ARE IN mm.

RZ40



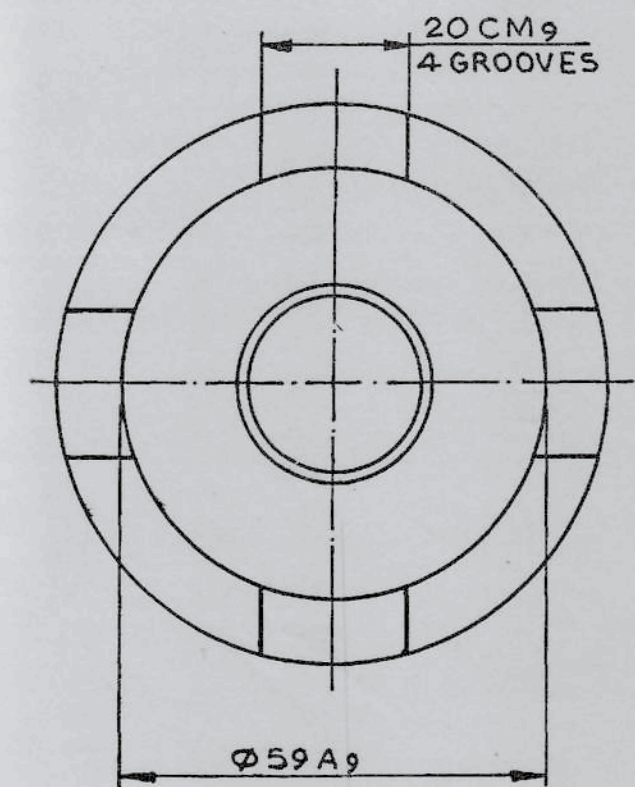
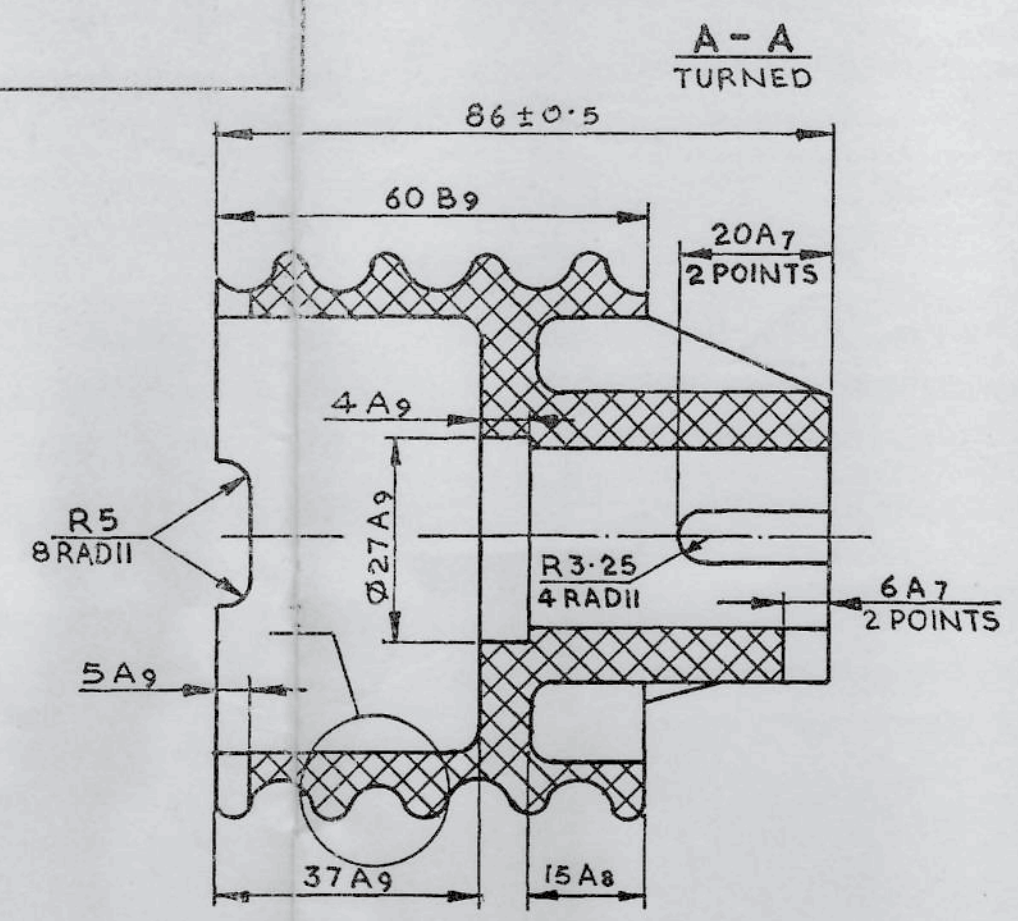
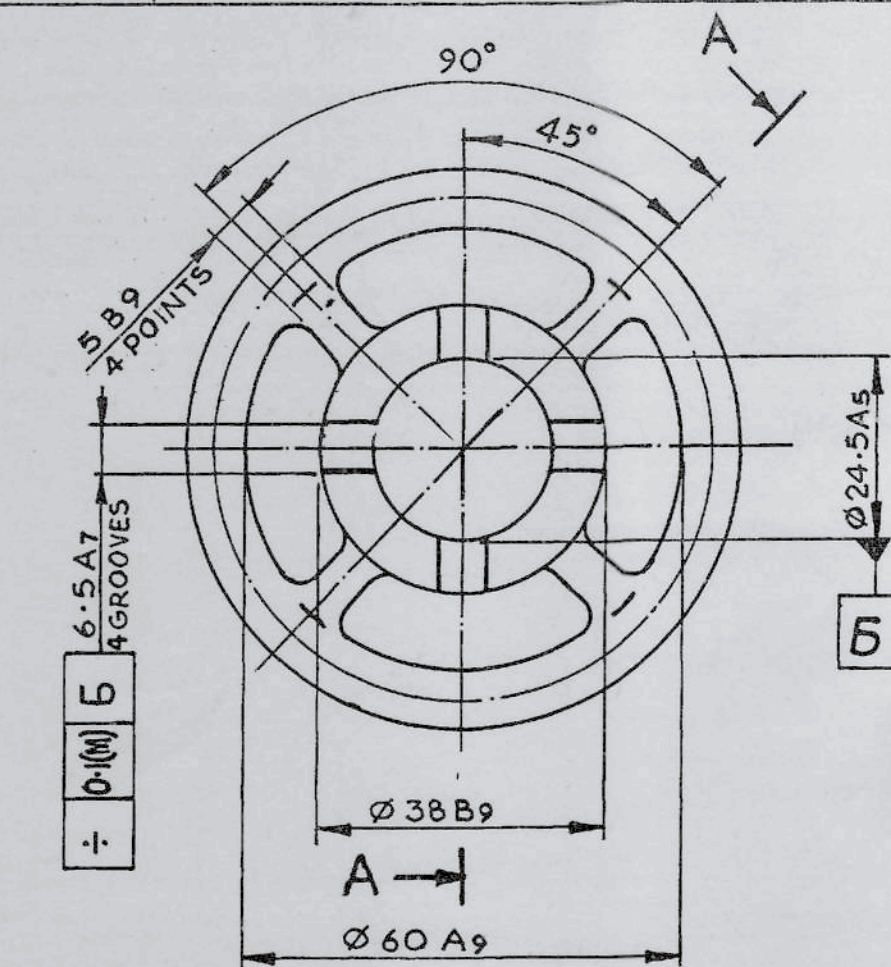
1. EDGES SHOULD BE BLUNTED TO R APPROXIMATELY 0.2 mm.
2. COATING: CHEMICAL PHOSPHATING HASTENED CHROMATIZING.
VARNISH B Φ-4 WITH NIGROSINE(1) GOST 12172-74.
3. UNSPECIFIED DIMENSIONS OF RAD II: FILLET NOT MORE THAN 0.3 mm.
4. ALTERNATE MATERIAL STEEL 25 GOST 1050-74.
5. HEADING WITH SLOT IS ALLOWED.
6. MANUFACTURING WITHOUT CHAMFER Γ(1.6 X 45°) IS ALLOWED.
7. K SHOULD BE MARKED ON TAG.

INDIGENOUS MATL:- IS:5517-1993 GRADE 30C8

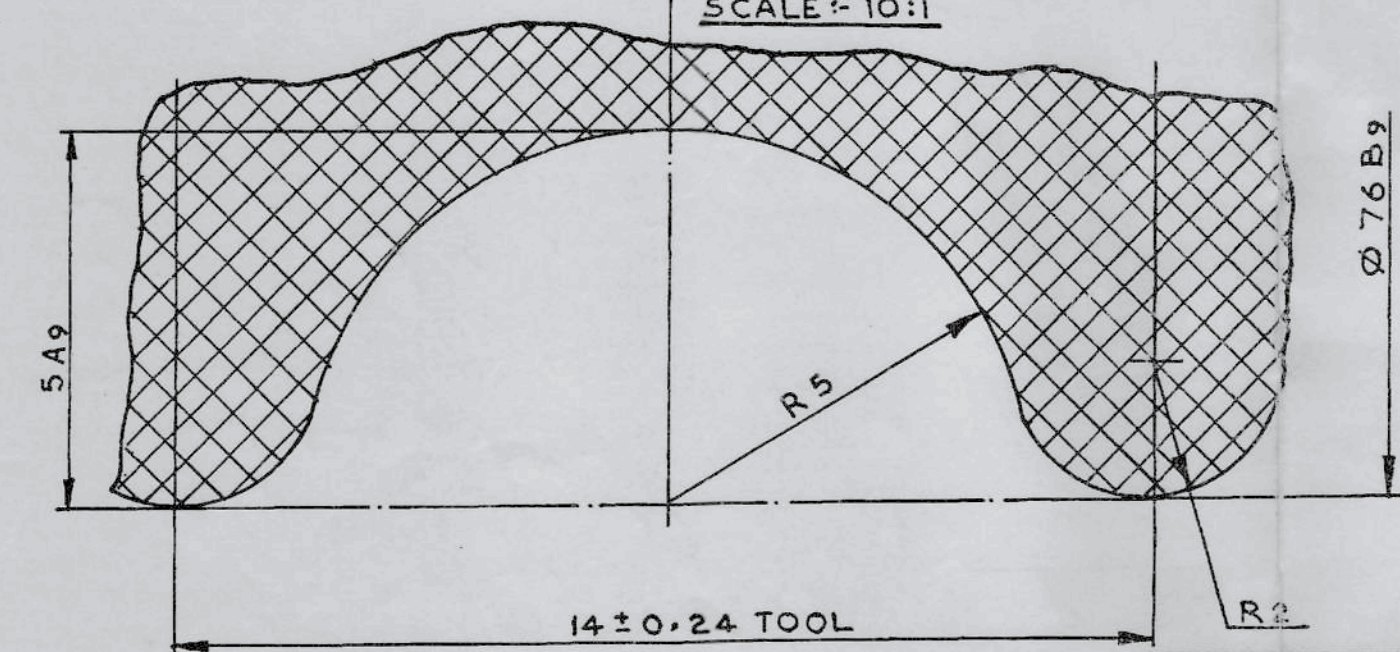
01 $\frac{2}{16}$	19481-W	A/2-4	INDIGS MATL ADDED			CQA(W) JABALPUR	
21 $\frac{2}{08}$	19113-W		HINDI NOMEN ADDED				
16-12-82			RETRACED WITHOUT CHANGE				
			PREV DC Nos. 16360-W & 17088-W, DT 4-7-91			DRAWN: -	CHD: -
						TRACED: - SRS	CHD: - <i>ADK</i>
DATE	AUTHORITY	ZONE	NATURE	SIG AHSP	SIG DO	<i>G.P. Shukla</i>	
AMENDMENTS						CHIEF DMAN	DO
DRG SEALED PROV:- 16360-W DT 3-9-85						AHSP	
SCALE:- 1:1 ESTD Mass:- 0.007 DATE: 28-5-85						FOR CQA(W)	
MATL:- WIRE 7-2-20 Ty 3-80-80						DESIGN NO.	
ASSY DRG:-						PART NO.	
						902-03-103	
						<p>SCREW रुकू</p>	

DS CAT No
1015-004159

DIMENSIONS ARE IN mm.



I
PROFILE OF SPIRAL
SCALE - 10:1



1. ALTERNATE MATERIAL A CB-2-P-2M OF GRADE O GOST 17478-72.
2. DRAFTS - 1:100
3. UNSPECIFIED CASTING RADII R3
4. ROUGHNESS OF MOULDING SURFACES $\sqrt{25}$

ALTERNATE MATERIAL:-
BAKELITE HYLAM SHEET GD G-11 NEMALI-1-1977
TO JSS 9330-05:2012

MATERIAL:- POLYAMIDE PA6-210 A/C
GRADE 1 OST 6-11-498-79.

A-2
74

CHIFF D/MAN	ASSY DRG:-	CQA (W) JABALPUR
D.O.	ESTD MASS:-	
AHSP	DATE:-	
FOR CQA (W)	SCALE:- 1:1	DESIGN No.
DRG SEALED PROV:	DRN:-	PART No.
DC (I) No 16360-W	CHD:-	902.03.104
DT-3-9-85	TRD:- RKT halwar	DS CAT No.
DOCQA (W)	CHD:-	1015-004159

7-4-16	19495-W	ALT MATL AMENDED	21	PREV DC (I) Nos- 16360-W &
21-2-08	10113-W	HINDI NOMEN ADDED	22	17008-W (DT 1-7-01)
			20	20/93 RETRACED WITHOUT CHANGE

CLEANING ROD BLOCK क्लीनिंग रॉड ब्लॉक

16360-W
3-9-85

SCH SEALED PROV

Подпись и дата

Име. N° дубл.

Взам. инв. N°

7/198

Подпись и дата

27.04.87

Име. N° подл.

Sl. No.	30A	30B	30C	СБОЗНОЧЕНИЕ	Наименование	QTY	REMARKS
					DOCUMENTS Документация		
					ASSEMBLY DRAWING		
				902.03.11005	Сборочный чертеж		
					COMPONENTS Детали		
					CLEANING ROD TUBE		
11	1			902.03.111	Трубка банника	1	
11	2			902.03.112	Гайка NUT	1	
11	3			902.03.113	Ручка HANDLE	1	
11	4			902.03.116	Штифт PIN	1	
11	5			902.03.117	Шайба WASHER	1	

5/1-1

902.03.110

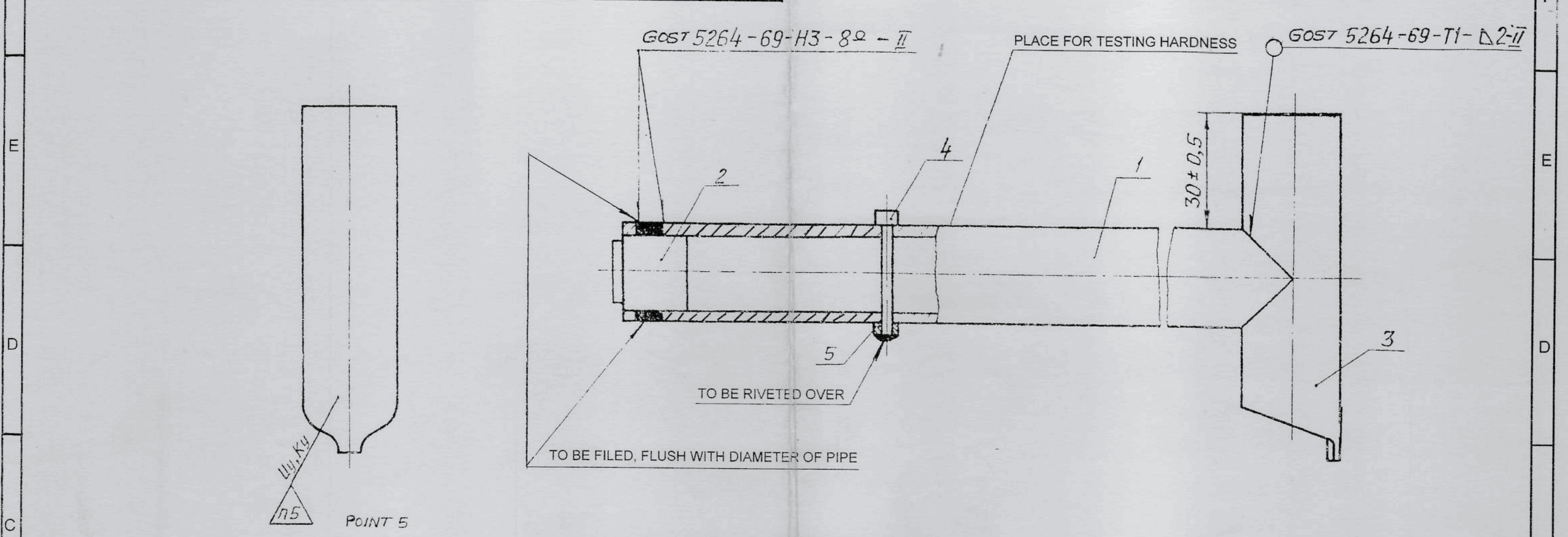
A-2
P-32

Sl. No.	Sheet No.	No. of Document	Signature	Date
DESIGNER				
CHECKED BY			<i>[Signature]</i>	31/87
CHIEF OF DSN DEPARTMENT				
INSPECTOR				
APPROVED			<i>[Signature]</i>	1/8/87

CLEANING ROD BODY

LETTER	SHEET	No. of SHEET
		1
C.Q.A.(W) JABALPUR		

PART No. 902.03.110 C Б DIMENSIONS ARE IN mm



- NOTE :-
1. ELECTRODE H_{VI} AT-3M TYPE 985- Φ 2.5 GOST 9467-75
 2. ROUGHNESS OF WELD SURFACES SHOULD BE AS PER THE STANDARD
 3. HRC 37-44
 4. COATING CHEMICAL PHOSPHATING HASTENED CHROMATIZING
1 LAYER OF VARNISH БФ-4C WITH NIGROSINE PREPARED AS PER PMO 1434-64
 5. MARK K . VI
 6. WELDING IN Co WITH WIRE 1C Б-08Г 2C GOST 2246-70 OR 1C Б.08ГC GOST 2246-70 IS ALLOWED

DATE				AUTHORITY				ZONE				AMENDMENTS				SIG. AHSP		SIG. DO		DRAWN:-		CHD:-		ASSY DRG:-		CQA(W) JABALPUR	
4.4.06				SCANNED & PRINTED WITHOUT CHANGE														DO		AHSP		DATE:-					
PREV DC Nos:-				PROTECTIVE FINISH:-				MATERIAL:-				DO		FOR CQA(W)		ESTD mass:- 0.554		SCALE:- 1:1		DESIGN No.							
DRG SEALED PROV:- 16360-W Dt 3-9-85				CLEANING ROD BODY				ASSEMBLY DRAWING				DO CQA(W)								PART No. 902.03.110 C Б							
																				DS CAT No.							

16360-W
 3-9-85
 SCH SEALED PROV

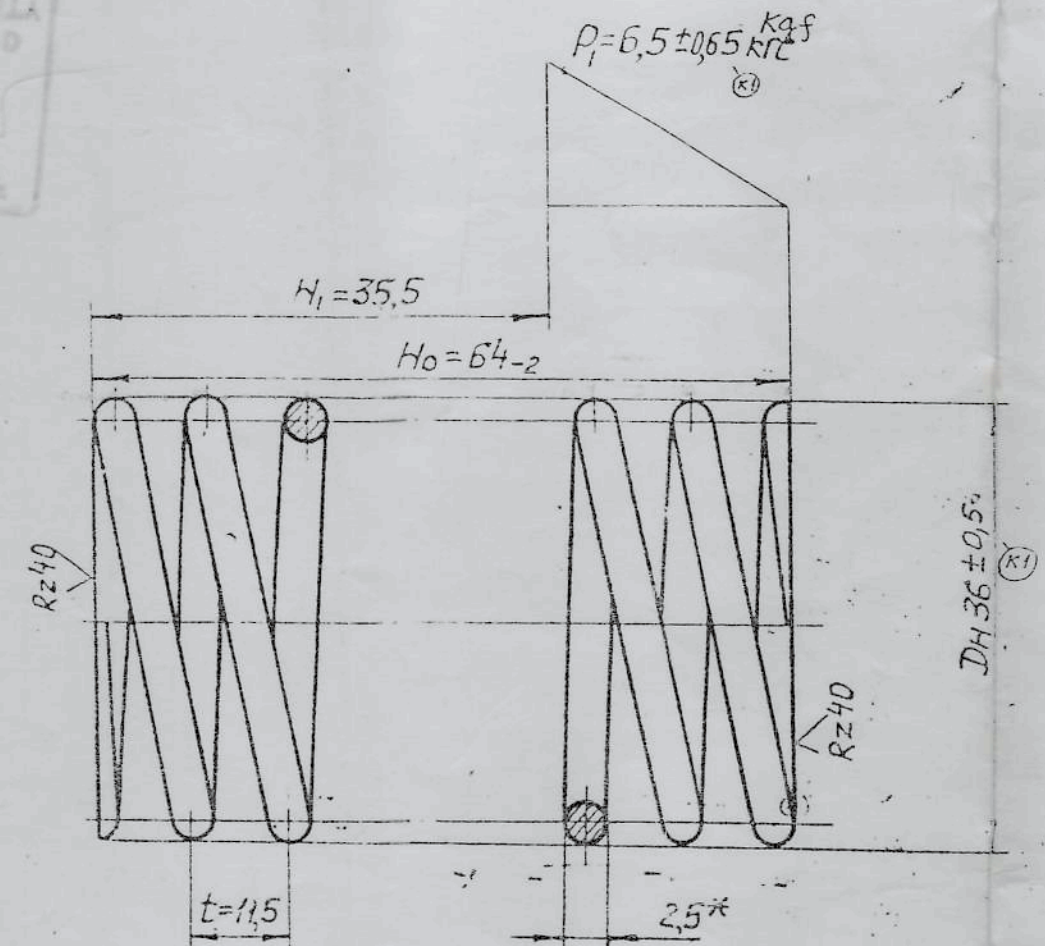
SIZE	ZONE	REF. No	PART No	NOMRNCLATURE	Qty	REMARKS
				<u>DOCUMENTS</u>		
12			902.03.100 CB	ASSEMBLY DRAWING		
				<u>ASSEMBLY UNITS</u>		
12	1		902.03.110 CB	CLEANING ROD BODY	1	
				<u>COMPONENTS</u>		
12	3		902.03.101	CLEANING ROD SPRING	1	
11	4		902.03.102	CUP	1	
11	5		902.03.103	SCREW	1	
12	2		902.03.104	CLEANING ROD BLOCK	1	

902.03.100				(A-2) 29		
ALL SHEET No.	No. OF DOCUMENT	SIGNATURE	DATE	LETTER	SHEET	No. OF SHEET
DESIGNER					1	2
CHECKED BY		<i>BSB</i>	31/5/85	CLEANING ROD CQA(W) JABALPUR		
CHIEF OF DSM. DEPARTMENT						
INSPECTOR						
APPROVED		<i>omf</i>	4/6/85			

902.03:101

1-1/5

FIRST ANGLE PROJECTION



1. SHEAR MODULUS $G = 8000 \frac{\text{kg}}{\text{mm}^2}$
2. HEAT TREATMENT : TEMPERING $210^\circ - 240^\circ$.
3. NUMBER OF COILS COMPLETE $n_1 = 6.5$.
4. NUMBER OF OPERATING COILS : $n = 4.5$.
5. SPRING WINDING - SOME OF WHATEVER KIND.
6. LENGTH OF STRAIGHTENED SPRING $L = 858 \text{ mm}$.
7. EDGE COILS SHOULD BE COMPRESSED GROUND TO $3/4$ OF THE CIRCUMFERENCE OF BASE SURFACES.
9. SPRING GROUP I.
10. TECHNICAL CONDITIONS FOR MANUFACTURERE, TEST # ACCEPTANCE OF SPRING OST 3-2561-74.
11. COATING : CHEMICAL PHOSPHATING ACCELERATED CHROMATIZING VARNISH ON THE BASIS OF b - 4 WITH NIGROSENE (1) GOST 12172-74.
12. * DIMENSION FOR REFERENCE.
13. TO BE MARKED AS PER HEAT - TREATMENT ON A TAG.
14. GROUND SECTIONS OF RING- SHAPED COILS SHOULD BE BLUNTED AS PER EXTERNAL DIAMETER OF SPRING.

ALT MATL :- SPRING WIRE Gde 4 TO 1S : 4454, Pt 1-81

OR Gde 5 COND 'M' TO BS : 5216 - 75

COATING :- (i) PHOSPHATING TO JSS: 0465-01, CLASS II
 (ii) ADHESIVE WITH FOLLOWING REQTS:- SOLN, POLYVINYL, ACETOL AND RESOL PHYNOL, FORMALDEHYDE, RESIN IN ALCOHOL. SOLID CONTENTS 14 TO 17% VISCOSITY 30 TO 60 SEC, SHEAR STRENGTH MIN 200 kgf/cm^2 OR DUNLOR, ADHESIVE S-758 OR ARALDITE AY 103 WITH HARDNER HY 951
 (iii) NIGROSINE TO IS : 1036

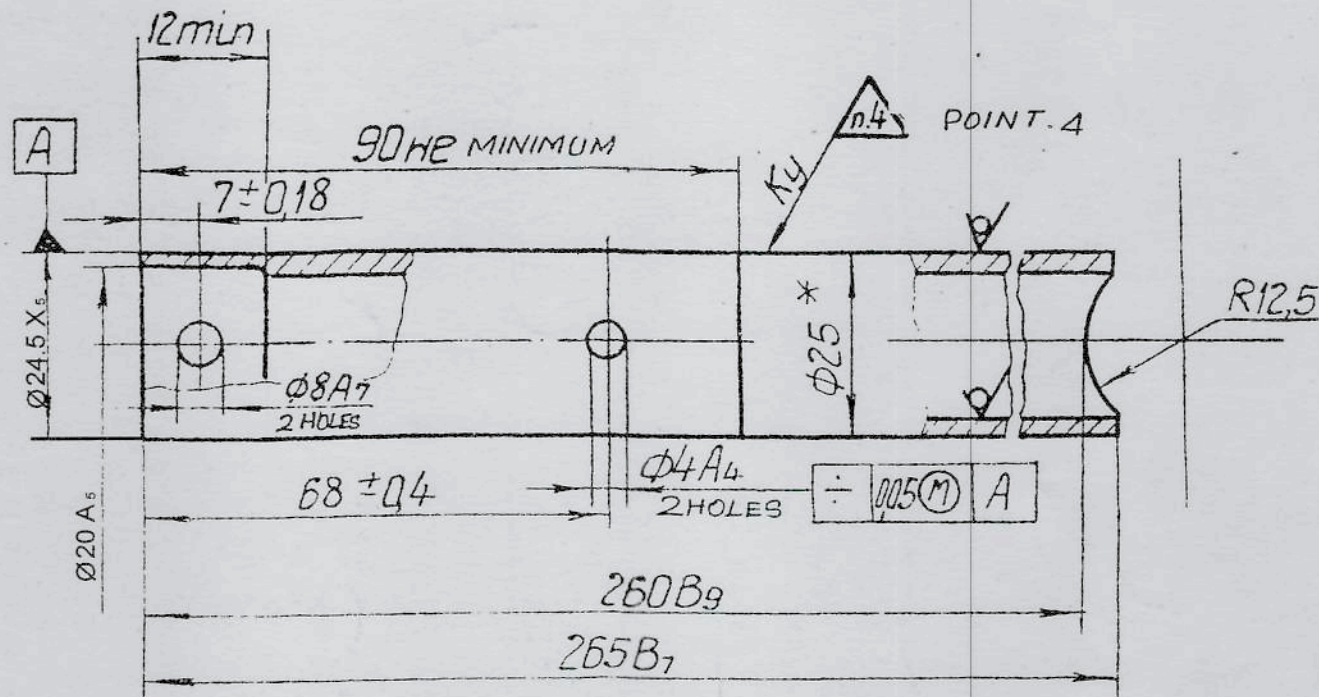
DS CAT No. 5/1-1 5360-003671

18142-W	ALT MATL & COATING	17-7-95	NOTE ADDED
17038-W	DS CAT No ADDED	4.7.91	
16360-W	DRG SEALED PROV	3-9-85	

902.03:101		CLEANING ROD		SHEET		MASS		SCALE	
SPRING.		10f1		0.034		2:1		A-2 71	
ISSUE	DATE	REFERENCE	MATERIAL:	GQA/W JABALPUR					
APPROVED			WIRE I-2.5						
CHECKED			GOST 03A9-75						
DRAWN									

902.03:101
 1-1/5
 206.302

10/1
 1/10/77



1. SHARP EDGES SHOULD BE BLUNTED TO R0.2mm.
2. POSITION OF HOLES $\phi 4A_4$ RELATIVE TO GROOVE R12.5 RANDOM.
3. DIMENSION FOR REFERENCE.
4. K SHOULD BE MARKED.

ALT MATL :- STEEL TUBE CFS-11 TO BS:6323 Pt-4:1982 WITH MECHANICAL PROPERTIES AS UNDER:-

Rm in kgf/mm ²	ELONGATION 4%	HARDNESS (HB)
50 (Min)	18 (Min)	229 (Max)

MATERIAL :-
 TUBE 25x2.5 GOST 8734-75
 B 30xTCA GOST 8733-74

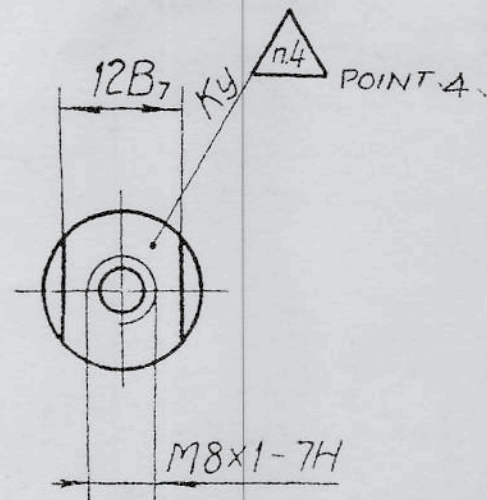
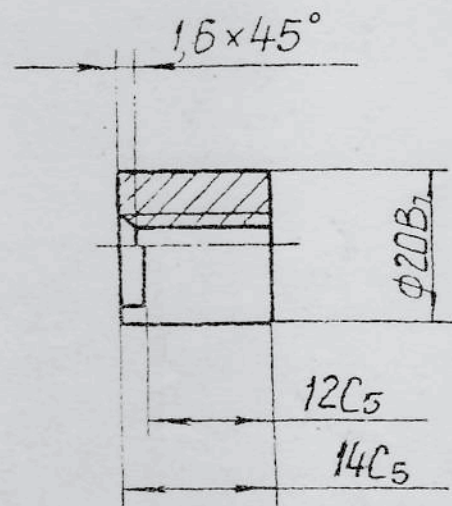
				DRAWN:-		CHD:-		ASSY DRG:-		CQA(W), JABALPUR
				SCANNED:- P < A		CHD:-		DATE:-		
21.2.08 19113-W HINDI NOMEN ADDED				C/D'MAN		DO		AHSP FOR CQA(W)		
28.4.06 SCANNED & PRINTED WITHOUT CHANGE				SIG. AHSP		SIG. DO		ESTD mass:- 0.208		
DATE	AUTHORITY	ZONE	AMENDMENTS	MATERIAL:- AS ABOVE		DESIGN No.				
PREV DC Nos:-16360-W,17955-W,17973-W & 18606-W DT 28-12-2000				PROTECTIVE FINISH:-		PART No.				
DRG SEALED;- 16360-W DT 3-9-85 PROV				CLEANING ROD TUBE क्लीनिंग रॉड ट्यूब		902.03.111				
DO CQA(W)						DS CAT No.		1015-011675		

DS CAT No.

5310-014741

DIMENSIONS ARE IN mm

Rz40



1. EDGES SHOULD BE BLUNTED TO R APPROXIMATELY 0.2mm.
2. COATING: CHEMICAL PHOSPHATING HASTENED VARNISH Bφ-4C WITH NIGROSENE (I) GOST 12172-74.
3. ALTERNATE MATERIAL: STEEL 25 GOST 1050-74.
4. K SHOULD BE MARKED.

ALT MATL :- 070 M 20 OR 070 M 26 TO BS: 970 PE1-83 'NORM'

COATING :- (i) PHOSPHATING TO JSS : 0465-01, CLASS II

(ii) ADHESIVE WITH THE FOLLOWING REQTS:-

SOLN. POLYVINYL, ACETOL AND RESOL, PHYNOL
 FORMALDEHYDE, RESIN IN ALCOHOL, SOLID CONTENTS 1A TO 17%
 VISCOSITY 30 TO 60 SEC. SHEAR STRENGTH MIN 200 Kg f/cm²
 OR DUNLOP ADHESIVE S-758 OR
 ARALDITE AY103 WITH HARDNER HY-951

(iii) NIGROSIN TO IS: 1036

				DRAWN:-		CHD:-		ASSY DRG:-		CQA(W), JABALPUR	
				SCANNED:- PkA		CHD:-		DATE:-			
21.2.08	19113-W	HINDI NOMEN ADDED		C/D'MAN		AHSP		SCALE:- 1:1			
28.4.06		SCANNED & PRINTED WITHOUT CHANGE		DO		FOR CQA(W)		ESTD mass:- 0.039			
DATE	AUTHORITY	ZONE	AMENDMENTS	SIG AHSP	SIG DO	MATERIAL:- STEEL 20 GOST 1051 - 73				DESIGN No.	
PREV DC Nos:- 16360-W, 17088-W & 18142-W DT 17-7-95						PROTECTIVE FINISH:-				PART No.	
DRG SEALED:- 16360-W DT 3-9-85 PROV						<h1>NUT नट</h1>				902.03.112	
										DS CAT No.	
										5310-014741	

DO CQA(W)

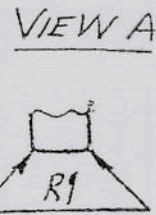
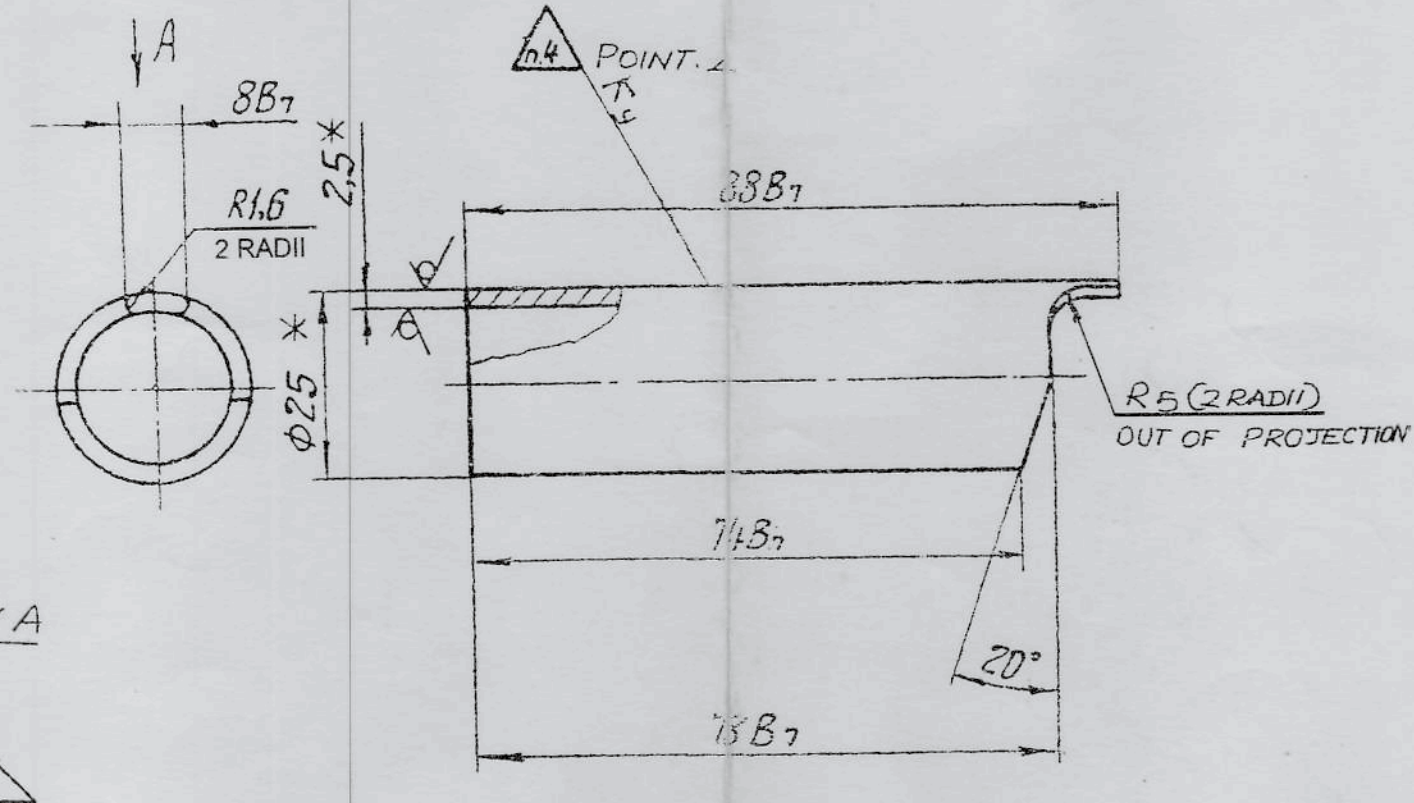
47

DS CAT No

5340-137629

DIMENSIONS ARE IN mm

Rz40 ✓ (✓)



1. EDGES SHOULD BE BLUNTED TO R APPROXIMATELY 0.6mm.
2. CONJUNCTION R 1.6 WITH R5 SHOULD BE MADE AS PER THE STANDARD
- 3* DIMENSION FOR REFERENCE
- 4 K SHOULD BE MARKED.

ALT MATL:- STEEL TUBE CFS-11 TO BS: 6323 Pt-4: 1982 WITH MECHANICAL PROPERTIES AS UNDER :-

Rm in Kgf/mm² 50(MIN) ELONGATION A% 18(MIN) HARDNESS (HB) 229 (MAX)

DRAWN:-	CHD:-	ASSY DRG:-	CQA(W), JABALPUR
SCANNED:-	CHD:-	DATE:-	
MATERIAL:- TUBE 2.5 X 2.5 GOST 8734-75 B 30 X Γ CA GOST 8733-74		SCALE:- 1:1	DESIGN No.
PROTECTIVE FINISH:-		ESTD mass:- 0.117	
HANDLE हैंडल			PART-No. 902.03.113
DRG SEALED:- PROV 16360-W DT 03-09-85			DS CAT No. 5340-137629

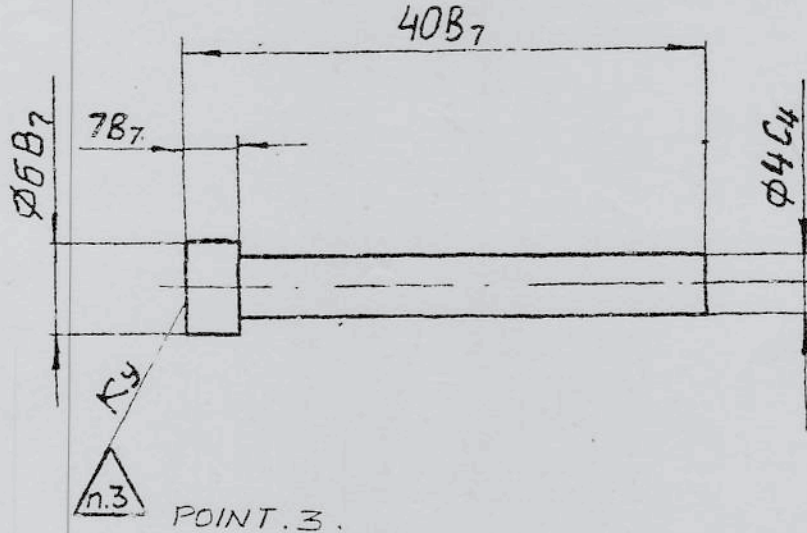
DO CQA(W)

4 3 2 1
D S CAT No

5315-005491

ALT.MATL :- 070 M 20 OR 070 M 26 TO BS : 970 Pt-1 83 ' NORMAL ' Rz80 ✓

COATING :- PHOSPHATING TO JSS : 0465 - 01 , CLASS - II , FINISH 13 (g)

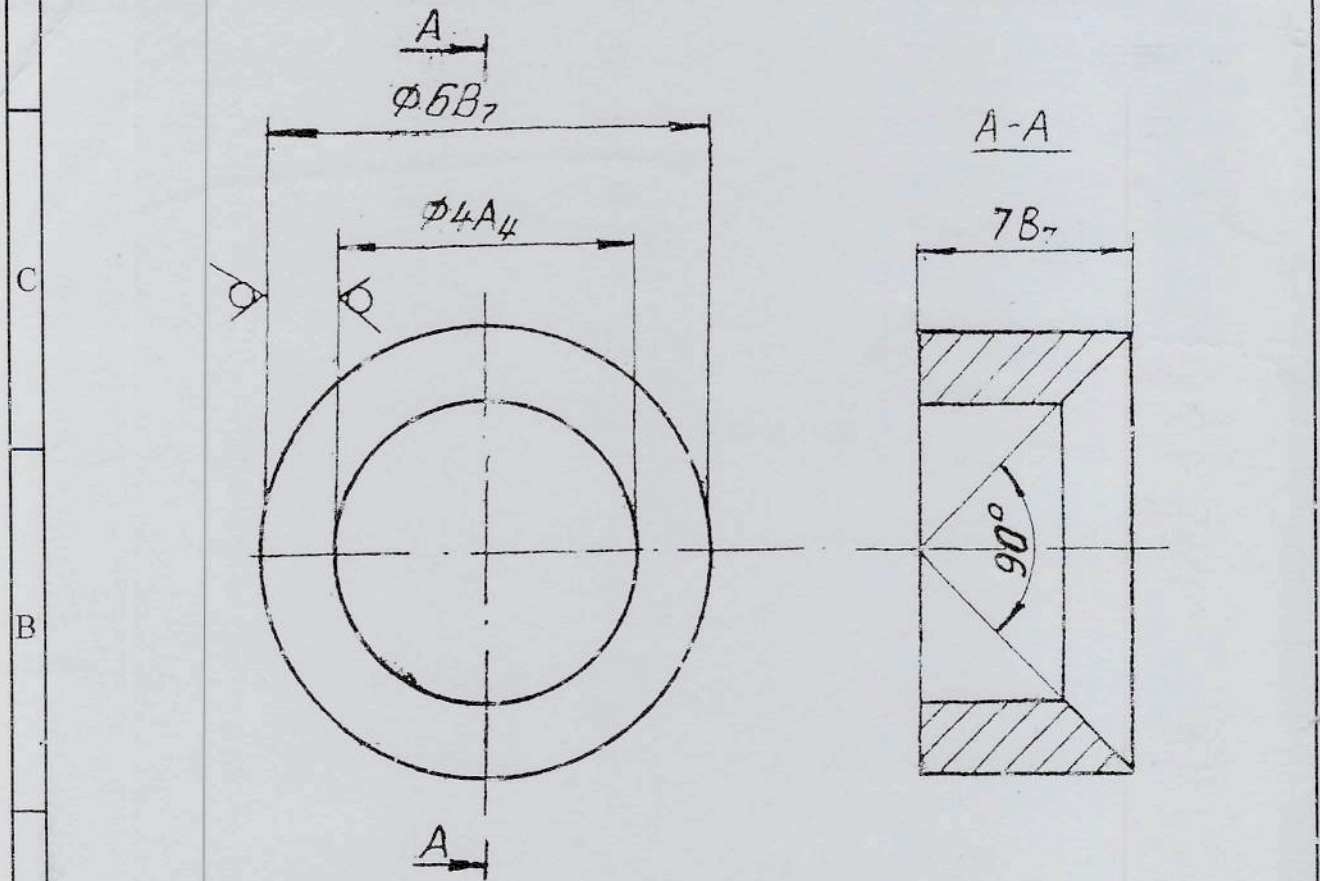


- 1. COATING: CHEMICAL PHOSPHATING HASTENED OIL FINISHING.
- 2. ALTERNATE MATERIAL: STEEL 25 GOST 1050-74.
- 3. K SHOULD BE MARKED.

						CQA(W) JABALPUR	
						DRN	CHD <i>hohayudo</i>
						SCANNED <i>[initials]</i>	CHD <i>[initials]</i>
21-2-08	19113-W	HINDI NOMEN ADDED			<i>[initials]</i>	APPROVED	AHSP
8-5-06		SCANNED & PRINTED WITHOUT CHANGE			<i>[initials]</i>	DO	FOR CQA-W
DATE	AUTH	ZONE	AMENDMENTS	CHD AHSP	SIG DO	ASSY DRG.	
PREV DC No. 16360-W, 17088-W, 18142-W DT 17-07-85							
DRG. SEALED PROV - 16360-W DT 03-09-85						DESIGN No.	
SCALE 2:1 ESTD MAR 0020						FOR CQA(W)	
MATERIAL :- STEEL 20 GOST 1051-73						PART No.	
PIN पिन						902.03:116	
						DS CAT No.	
						5315-005491	

4 3 2 1
 D S CAT No
5310-014742

ALT MATL :- PIPE CFS 4/HFS-4 TO BS: 6323-PE1-82
 COATING:-PHOSPHATING TO USS: 0465, CLASS II, FINISH 13(8)



1. COATING: CHEMICAL PHOSPHATING HASTENED OIL FINISHING.
 2. K SHOULD BE MARKED ON A BATCH TAG. Rz30

						CQA(W) JABALPUR	
						DRN	CHD <i>Arka...</i>
						SCANNED SKB.	CHD OPS
21-2-08	19113-W	HINDI NOMEN ADDED				APPROVED	AHSP
28-3-06		SCANNED & PRINTED WITHOUT CHANGE				DO	FOR CQA/W
DATE	AUTH	ZONE	AMENDMENTS	SIG AHSP	SIG DO	ASSY DRG.	
PREV DC Nos: 16360-W 17088-W & 18142-W DL 07-95							
DRG SEALED PROV: 16360-W D: 03-09-85						DESIGN No.	
SCALE: 1:10.1 ESTD MASS: 0.002 DATE						PART No.	
MATERIAL: TUBE 5 x 1 GOST 8734-75 B GOST 9...						902.03.117	
WASHER वाशर						D S CAT No.	
						5310-014742	



QUALITY ASSURANCE PLAN



Document ID	QAP-00313
Subject	CLEANING ROD ASSY TO DRG.NO 902.03-100CB(DS.1015-004164)
Revision	A
Release Date	08-Nov-2023 17:47
Effective From	

Prepared By	Checked By	Approved By
903241	903241	992034

GUN CARRIAGE FACTORY
A GOVT. OF INDIA ENTERPRISE
MINISTRY OF DEFENCE
(A UNIT OF ADVANCED WEAPONS AND EQUIPMENT INDIA LTD)

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A Summary of Changes section appears at the end of this specification

QAP-00313 A	CLEANING ROD ASSY TO DRG.NO 902.03-100CB(DS.1015-004164)	Page 1 of 3
	QUALITY ASSURANCE PLAN	



QUALITY ASSURANCE PLAN



SCOPE

This quality plan is a general guide to meet the quality requirements of product. It consists of applicable procedures (describing production processes, inspection & testing instructions), applicable workmanship standards, the measurement tolerances acceptable, the description of material standards and so forth. It also mentions the list of documents, test certificates that will be submitted by firm to GCF along with finished component.

1. **Drawing No. & Nomenclature:** [902.03-100CB& CLEANING ROD ASSEMBLY.](#)

2. **Method of manufacture & Inspection schedule.**

SL. NO	SEQUENCE OF OPEARTION/PROCESS/FUNCTIONAL/CHECK/INSPECTION.	REMARKS(SAMPLE PLAN OR ANY OTHER APPLICABLE INSTRUCTION
1	FIT ASSEMBLE ALL DETAILS AS PER DRG.	ASSY SHOULD CONFIRM
2	ACCEPTANCE TEST	ACCEPTANCE TEST

3. **Inspection:** Following methodology is to be followed for inspection.

3.1 **Mode of Inspection & Sample Size/Selection:**

(a) **At Firm Premises:** Inspection by the manufacturer for 100% quantities of lot size.

(b) **At receipt End:** Inspection by MID/QC (GCF Rep.) at receipt at GCF. Sample selection as per existing IS standard 2500 part-II, 1965.

4. **List of Documents:**

(To be submitted by firm along with finished product during factory end inspection)

(1) Acceptance test report after functional trail.

(2) NABL/Govt. approved Lab certificate required for material.

QAP-00313
A

CLEANING ROD ASSY TO DRG.NO 902.03-
100CB(DS.1015-004164)
QUALITY ASSURANCE PLAN

Page 2 of 3



QUALITY ASSURANCE PLAN



SUMMARY OF CHANGES

SL No	Document	Rev	Change
1	CLEANING ROD ASSEMBLY TO DRG.NO. 903.03-100CB	A	Initial Release

GCF Released

QAP-00313 A	CLEANING ROD ASSY TO DRG.NO 902.03- 100CB(DS.1015-004164)	Page 3 of 3
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