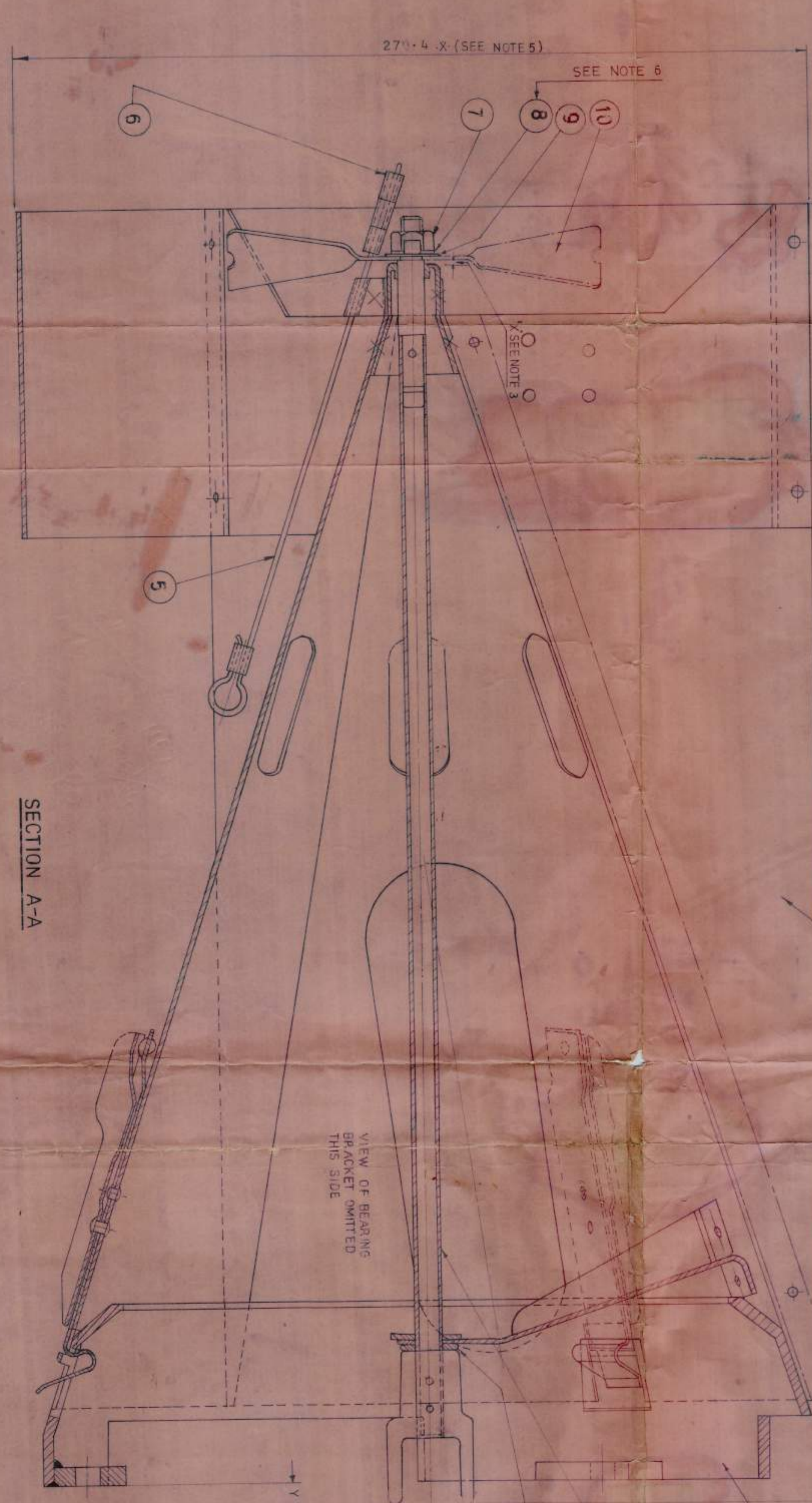
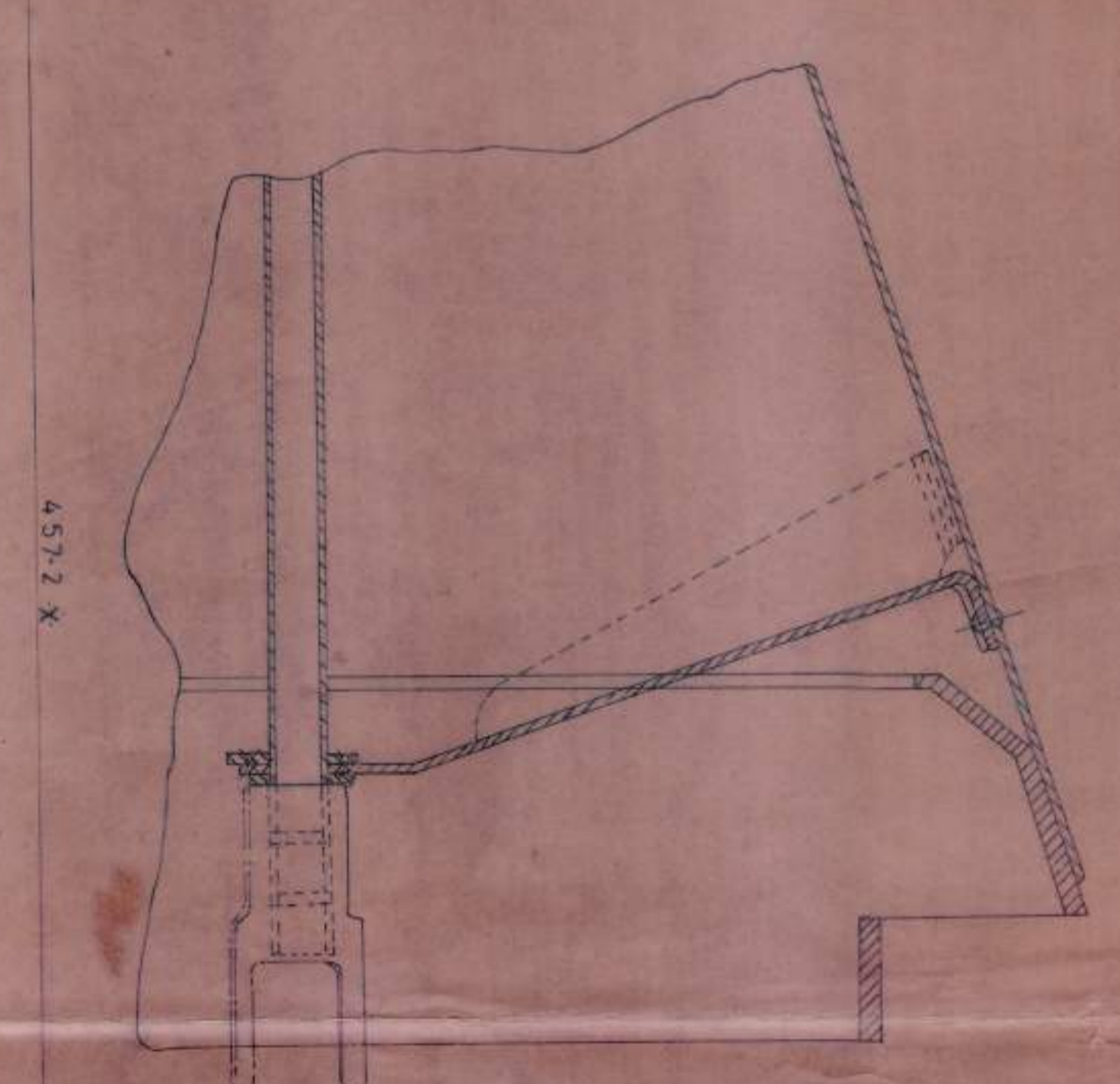


270.4 x
(SEE NOTES)



270.4 x (SEE NOTE 5)



457.2 x

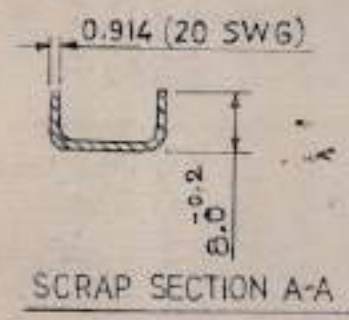
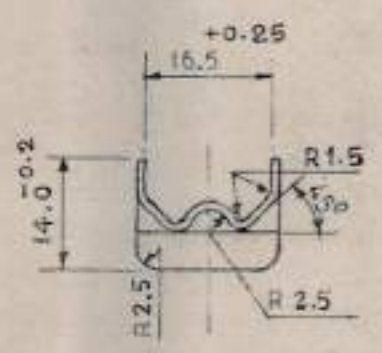
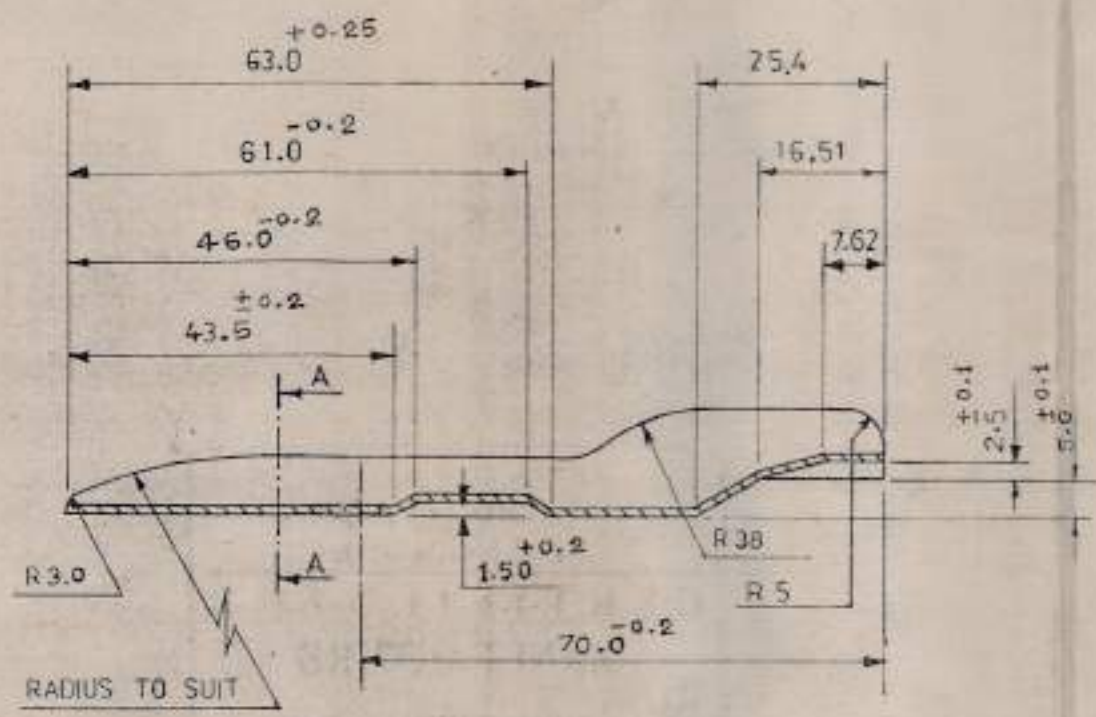
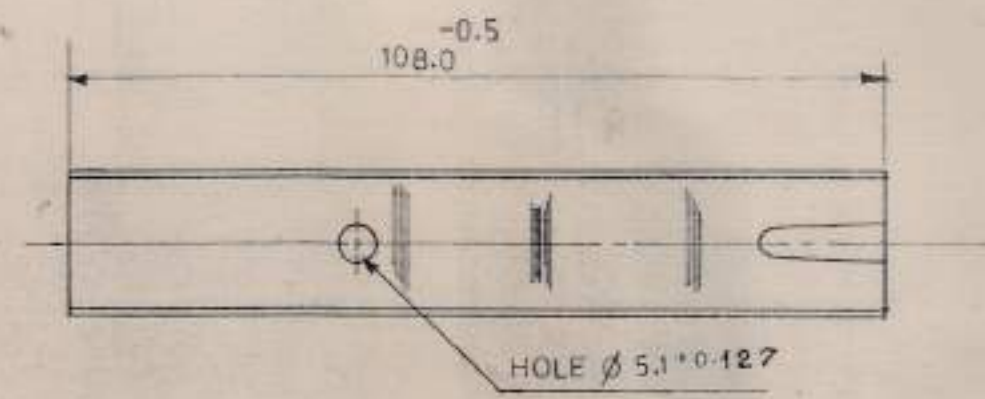
- NOTES-**
1. THE COMPLETE TAILLESS RING ADAPTOR (ITEM 2) IS TO BE FITTED TO A MASTER RING ADAPTOR MADE TO THE NOMINAL DIMENSIONS AS PER D.D. No. NAD 7533/10 AND HAVING A CENTRAL HOLE OF $\phi 34.3$ IN THE PLANE OF THE LUGS.
 2. THE TAIL WHEN SO FITTED, IT MUST BE POSSIBLE TO ROTATE FREELY THE ARMING SHAFT WITHOUT THE FORGINGS IN TO CONTACT WITH HOLE $\phi 34.3$ FOR ASSEMBLY/FITTING OF TAIL BODY (ITEM 1) ON RING ADAPTOR (ITEM 2) SEE N.A. SPEC. A1/137 (PROV.)
 3. WITH ALL THE END CLEARANCES ON THE ARMING SPINDLE TAKEN UP AS SHOWN, DIMENSIONS 'X' IS NOT TO EXCEED 1.52 AND DIMENSION 'Y' IS TO BE 4.951 \pm 0.237.
 4. THE BEARING SURFACES OF THE ARMING SPINDLE AND THE CUPS ARE USUALLY GREASED WITH ANTI-FREEZING GREASE NO. 0 TO SPEC. K 1135.
 5. THE DIMENSIONS SHOWN X ARE APPROXIMATE AND ARE NOT BE WORKED TO, BEING INFORMATIVE ONLY.
 6. TAG OF WASHER LOCKING (ITEM 9) IS TO BE BENT UP TO LOCK WIT (ITEM 7)

- MARKING-**
- THE FOLLOWING TO BE STENCILED IN 25# WHITE LETTERS-
- ✓ TAIL D.C. MK. 4*
 - * 5990
 - * MANUFACTURER'S INITIALS FOR RECOGNISED TRADE MARK.
 - ✓ DATE OF MANUFACTURE
 - ✓ LUG & ARROW
- ON TAIL SURFACE
ON END VIEW AS SHOWN

ITEM NO.	DESCRIPTION	DRG. NO.	QTY	REMARKS
1	BODY TAIL	NAD. 7533/1	1	
2	RING ADAPTOR	NAD. 7533/10	1	
3	SPINDLE ARMING (STAMP No. 6879)	NAD. 7533/11	1	
4	WASHER 10.5. IS. 2015 BRASS	N.T. DRAWN	1	
5	WIRE SAFETY No. 1 MK. 1	NAD. 7533/5	1	
6	CLIP SAFETY No. 1 MK. 1	NAD. 6097	3	
7	HEX NUT 5/16 BSW	NOT DRAWN (ST089/5)	1	
8	WASHER LOCKING (STAMP No. 6880)	NAD. 7533/15	1	
9	WASHER DISTANCE (STAMP No. 6851)	NAD. 7533/16	1	
10	VANE ARMING (STAMP No. 6879)	NAD. 7533/14	1	
11	HEX NUT 5/16 BSW	NOT DRAWN (ST089/5)	3	REQUIRED FOR
12	WASHER SINGLE COIL LOCK 8.15.1063	NOT DRAWN	3	FLYING TAIL TO
13	STUD. TAIL BEARING	NAD. 7533/17	3	DEPTH CHANGE

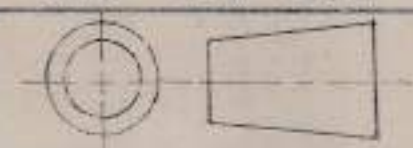
TAIL D.C. MK. 4* STAMP No. 6990

SCALE: 1:1
 DIMENSIONS ARE IN MM. TO 0.01
 D.S. C.F. NO. 60
 ASSY DRG. LIST
 DATE OF NAWAL ARRANGMENT INSPECTION N.H. NEW DELHI
 DRG. NO. NAD. 7533



PROTECTIVE FINISH: TO BE ZINC PLATED TO SPEC IS: 1573

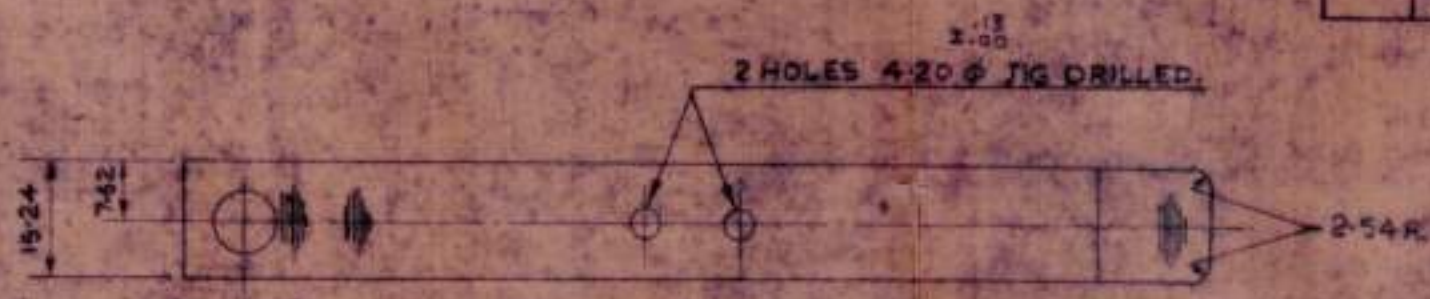
				SCALE 1:1	DIMENSIONS ARE IN mm		TOL	DS CAT N ^o	ASSY DRG N ^o NAD 7533/1
				DGN	DRN	TCD	COMP	CHD	ASSY DRG LIST
				PASSED	APPROVED				DTE OF NAVAL
6-3-91	DRAWING REVISED			ARD. 2169	CTO(D)		DNAI	GEN SPEC NA SPEC A-31 B	ARMAMENT INSPECTION
12-10-89	APPROVED (REDRAWN & METRICIZED)							STORE SPEC	NHQ NEW DELHI
R.N ^o	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS	MATL: MS	MATL SPEC: 6CQ (IS: 1570, C-20)	STORE REF N ^o	
						PROTECTIVE FINISH: SEE DRG	GAUGE SCH N ^o		



DRGN^o
NAD 7533/22

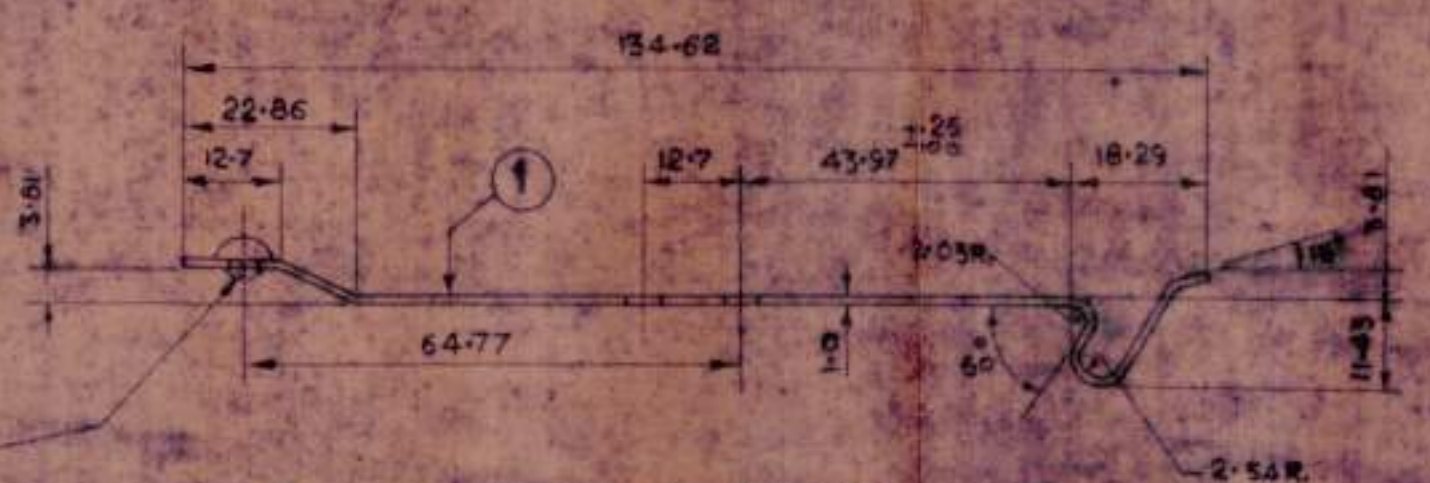
CLIP

SCHEDULE OF COMPONENTS				
ITEM NO.	DESCRIPTION	DRAWING NO.	NO OFF	REMARKS
1	SPRING	THIS DRAWING	1	
2	RIVET SNAPHEAD 4.0φ X 3.18 LONG	N.D.	1	IS: 2155



NOTES:-

1. ITEM 2 SECURELY RIVETED TO ITEM 1
2. TOLERANCE ON UNMACHINED LENGTHS:- ±0.1
3. TO BE ZINC PLATED TO IS: 1575 Fe Zn 85.



BEFORE CAMBERING

②
(SEE NOTE 1)



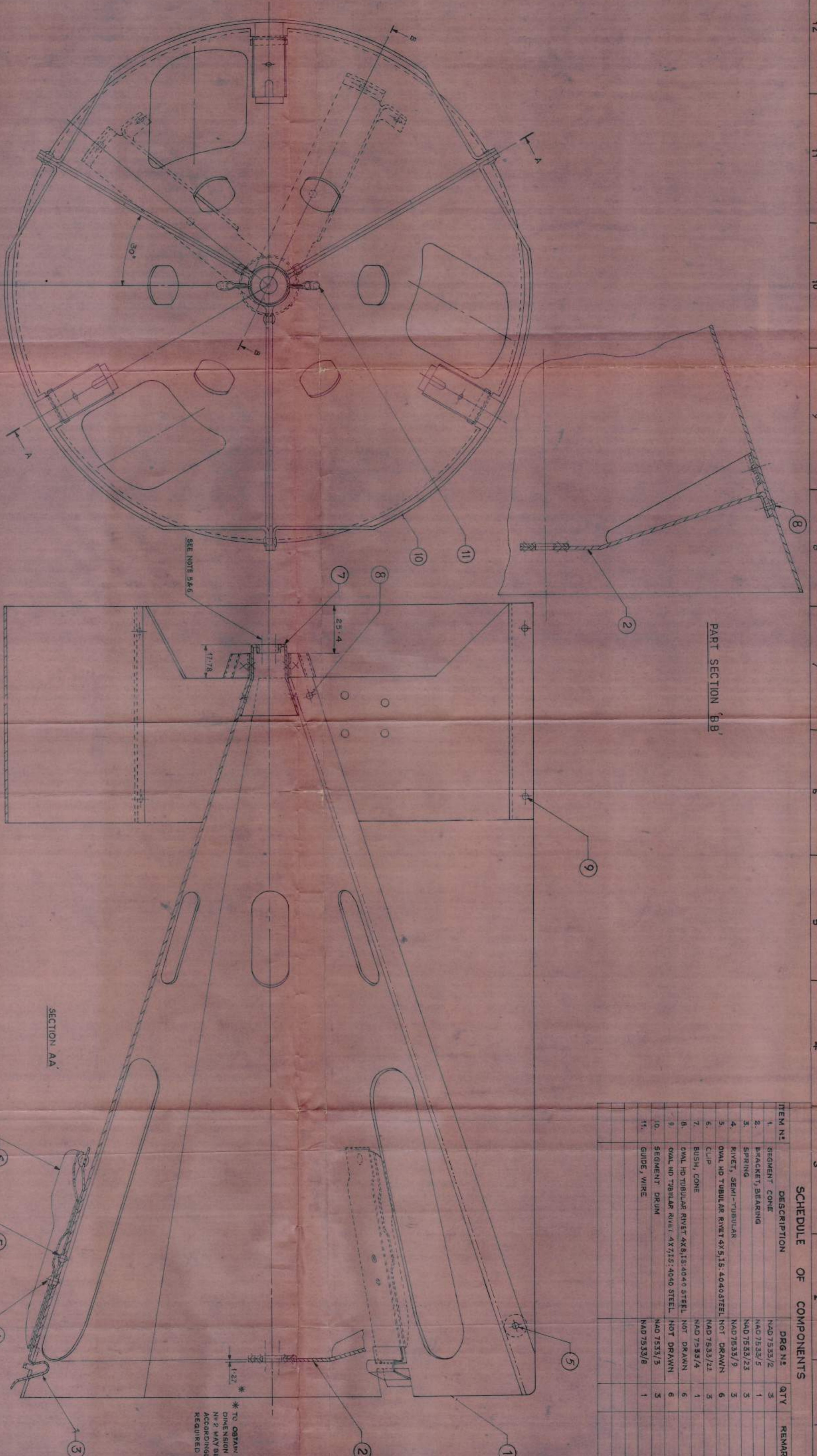
AFTER CAMBERING

				SCALE: 1:1	DIMENSIONS IN MILLIMETRES		TOL.	D.S. CAT. NO.	ASSY. DRG. NO.:
				DGN.	DRG. NO.	TCD.	COMR.	CHD.	ASSY. ORG. LIST:-
				PASSED	SIGNATURE		GEN. SPEC:- N.A SPEC. A-313	DTE. OF NAVAL ARMAMENT INSPECTION	
APPROVED (REDRAWN & METRICIZED)				MAT.:- SPRING STEEL	MATERIAL		STORE SPEC:-	N.HQ, NEW DELHI.	
DATE	ZONE	BRIEF RECORD	AUTHORITY INITIALS	MAT. SPEC:-	PROTECTIVE FINISH:- SEE NOTES		STORE REF. NO.:-	DRG. NO.	
29.2.80							GAUGE SCH. NO.:-	NAD. 7533/23	

SPRING



ITEM NO.	DESCRIPTION	DRG NO.	QTY	REMARKS
1.	SEGMENT CONE	NAD 7533/2	3	
2.	BRACKET BEARING	NAD 7533/5	1	
3.	SPRING	NAD 7533/23	3	
4.	RIVET, SEMI-TUBULAR	NAD 7533/9	3	
5.	OVAL HD TUBULAR RIVET 4X5.15:4040 STEEL	NOT DRAWN	6	
6.	CLIP	NAD 7533/22	3	
7.	BUSH, CONE	NAD 7533/4	1	
8.	OVAL HD TUBULAR RIVET 4X8.15:4040 STEEL	NOT DRAWN	6	
9.	OVAL HD TUBULAR RIVET 4X7.15:4040 STEEL	NOT DRAWN	6	
10.	SEGMENT DRUM	NAD 7533/3	3	
11.	GUIDE, WIRE	NAD 7533/8	1	



NO.	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS	MATERIAL	PROTECTIVE FINISH	SCALE	DIMENSIONS IN MM	TCD	TOE TO S	DS CAT NO	CD	ASSY DRG NO	DTE OF NAVAL ARMAMENT INSPECTION	NHQ NEW DELHI
04	8/94	B B	SPEC "K 1135" WAS "INK 1135"	ADD 2225	WJ	PASSED		1:1						NAD 7533		
31	8/92	B B	NOTE ADDED AS ITEM 3	ADD 2187	WJ	APPROVED										
12	10/89	B B	APPROVED (METRICIZED & REDRAWN)		WJ	APPROVED										

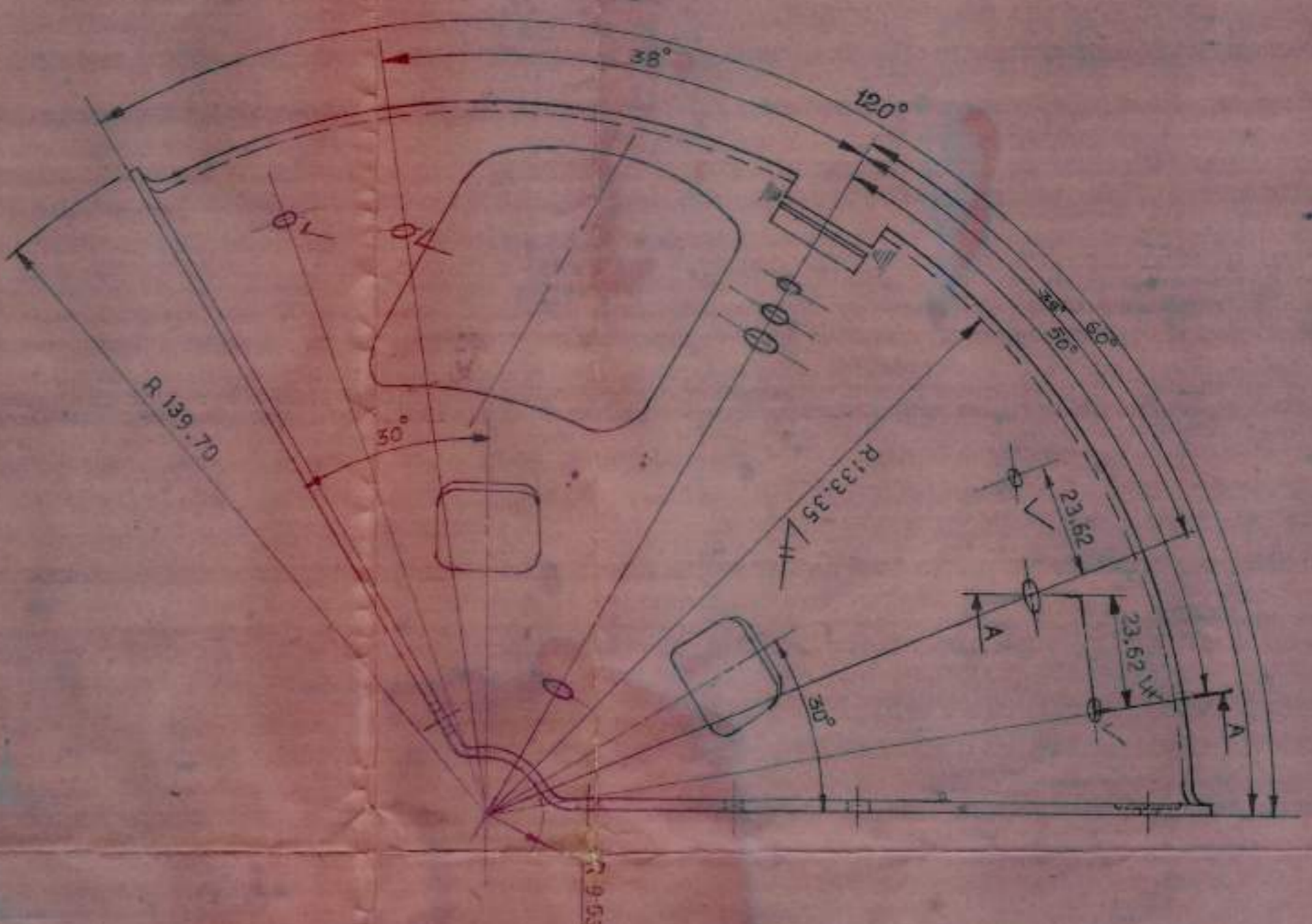
- NOTES:-**
1. HEAD OF RIVET (ITEM NO 5) MUST NOT FOUl CLIP (ITEM NO 6).
 2. THE RIVETING OF RIVETS (ITEM NO 5) IS IMPORTANT AND THE DIAMETER AND LENGTH IS TO BE ADHERED TO AT THE DISCRETION OF THE INSPECTING OFFICER. THE FOLLOWING TEST MAY BE APPLIED TO CHECK THAT THE RIVETING IS SATISFACTORY:-
ASSEMBLE THE TAIL, BODY ON AN ADAPTOR RING NAD 7533/10 AND APPLY GENTLY A LOAD BETWEEN 680-39 Kg & 952-54 Kg TO THE DRUM END ALONG THE AXIS. THE BODY MUST NOT SPLIT AT 680-39 Kg & MUST SPLIT AT THE LOWER END OF THE SEAM AT ONE OF THE RIVETS AT A LOAD OF NOT MORE THAN 952-54 Kg.
 3. AFTER RIVETING AND PAINTING, IT MUST BE POSSIBLE TO ROTATE (ITEM NO 6) BY HAND WITHOUT DIFFICULTY TO ENGAGE AND DISENGAGE THE SPRING AND THE SPRING MUST BE CAPABLE OF FULL MOVEMENT OUTWARDS.
 4. TO BE PHOSPHATED ALL OVER TO IS: 3618 CLASS B FOLLOWED BY A COATING OF DEEP BRONZE GREEN PAINT (JSC 224) TO IS: 168.
 5. ITEM NO 3 & 6 AND THE SURFACES OF ITEM NO 2 & 7 MARKED----- ARE NOT TO BE PAINTED.
 6. THE SURFACES MARKED----- ARE TO BE GREASED WITH ANTI-FREEZING GREASE NO O. TO SPECN K 1135 BEFORE RIVETING ITEM NO 3 & 6 IN POSITION.
 7. THE SURFACES OF THESE ITEMS WHICH ARE IN CONTACT WITH EACH OTHER ARE TO BE GREASED WITH ANTI-FREEZING GREASE NO O TO SPECN K 1135.

BODY TAIL

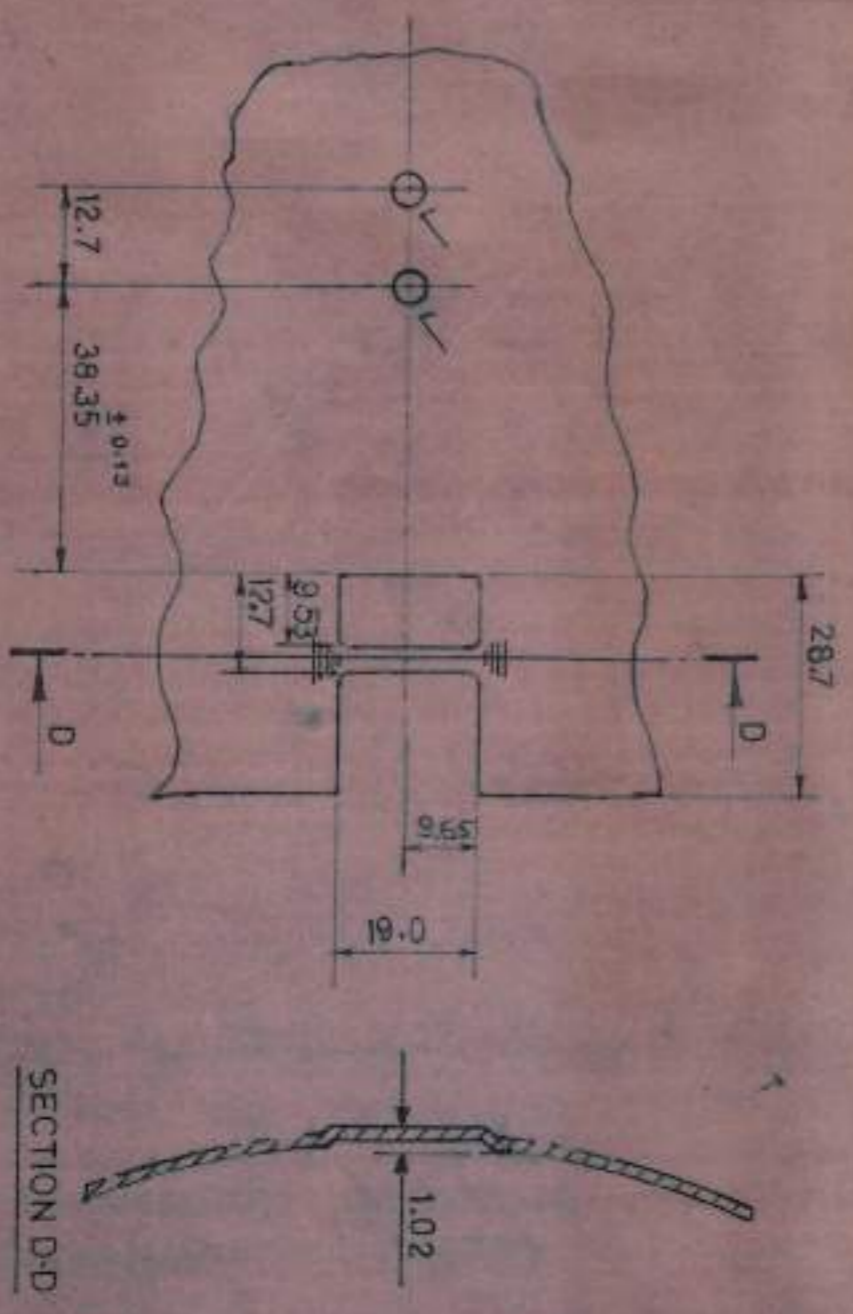
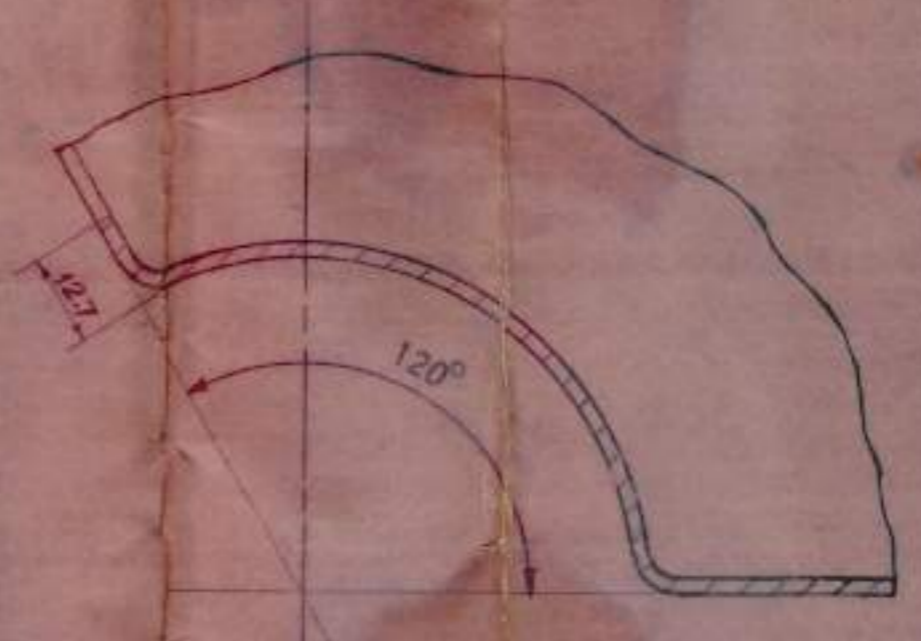
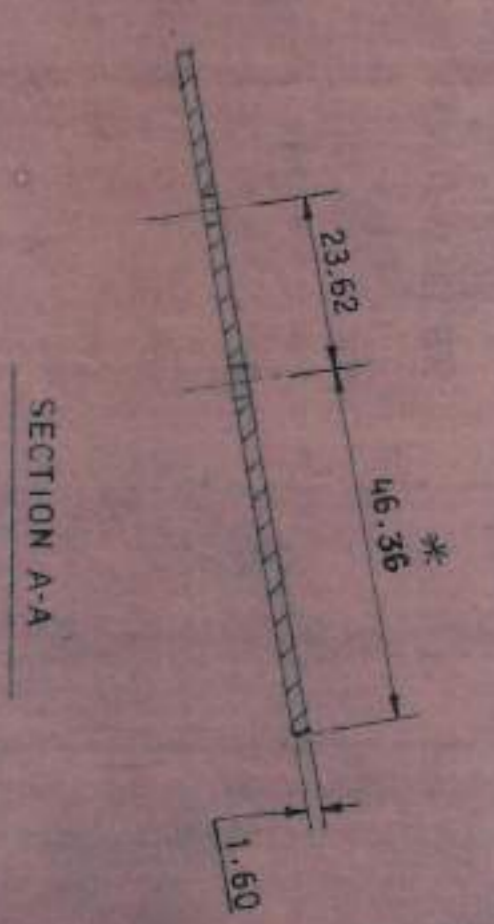
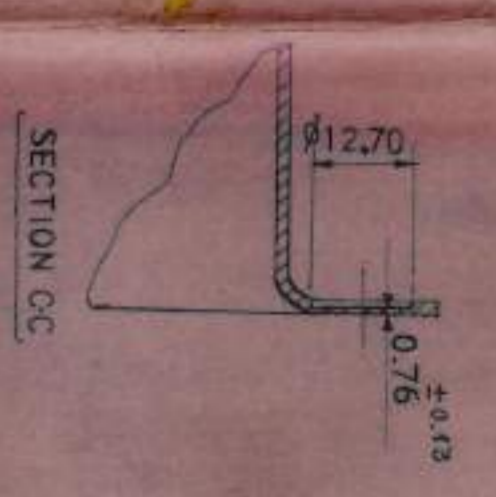
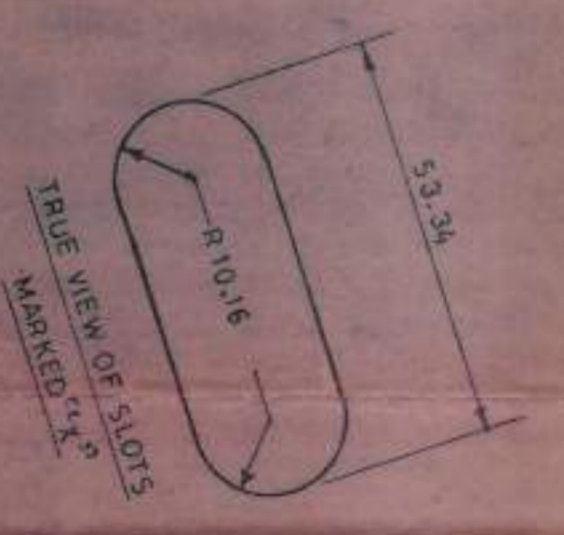
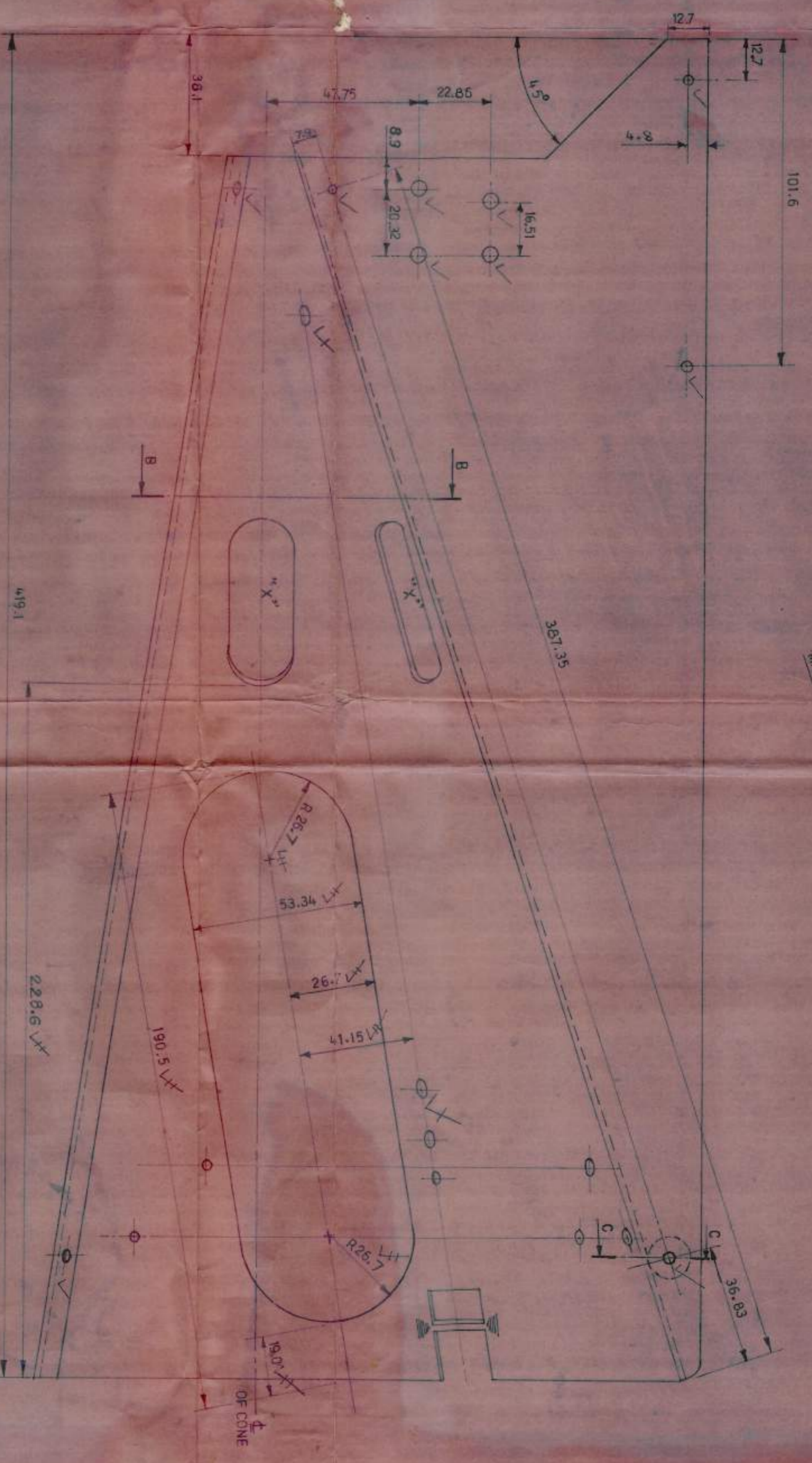
DRG NO
NAD 7533/1

12 11 10 9 8 7 6 5 4 3 2 1

TO OBTAIN THIS DIMENSION ITEM NO 2 MAY BE SET ACCORDINGLY IF REQUIRED



- NOTES :-**
1. 17 HOLES MARKED THUS ✓ ARE TO BE JIG DRILLED ($\phi 4.2$) OR PIERCED.
 2. 2 HOLES MARKED THUS ✓✓ SIZE AND POSITION AT THE DISCRETION OF MANUFACTURER, IF REQUIRED IN AID OF FABRICATION.
 3. DIMENSIONS MARKED THUS ✓✓ ARE ON SURFACE OF METAL.
 4. CENTRE LINE OF SLOT IS PARALLEL TO THE CENTRE LINE THROUGH THE HOLES AND THE CUT OUT FOR THE SPRING.
 5. HALF ANGLE OF CONE IS 18° .



SEE AP VIEW OF HOLES AND CUT OUT FOR SPRING
DIMENSIONS ARE ON SURFACE OF METAL.

SCALE	H1	DIMENSIONS	IN	MM	1:1	TOL	F:0.25	DS CAT	Nº	ASSY DRG	NO	NAD 7533/2
DGN	DRN	CHK	TCD	DNAI	APPROVED	COMP	DATE	CHK	DATE	QD	ASSY DRG	LIST
PASSED	(TOD)	APPROVED	DNAI	GEN SPEC	NA SPEC	A 31-B	STORE SPEC	Nº	STORE REF	Nº	GAUGE	SCHNº
MATL	Nº	MATL SPEC	C Q	CS	1570	C-20	PROTECTIVE FINISH					
R Nº	DATE	ZONE	APPROVED	(RE-DRAWN & METRICIZED)	BRIEF RECORD	AUTHOR	INITIALS					
12-10-89												

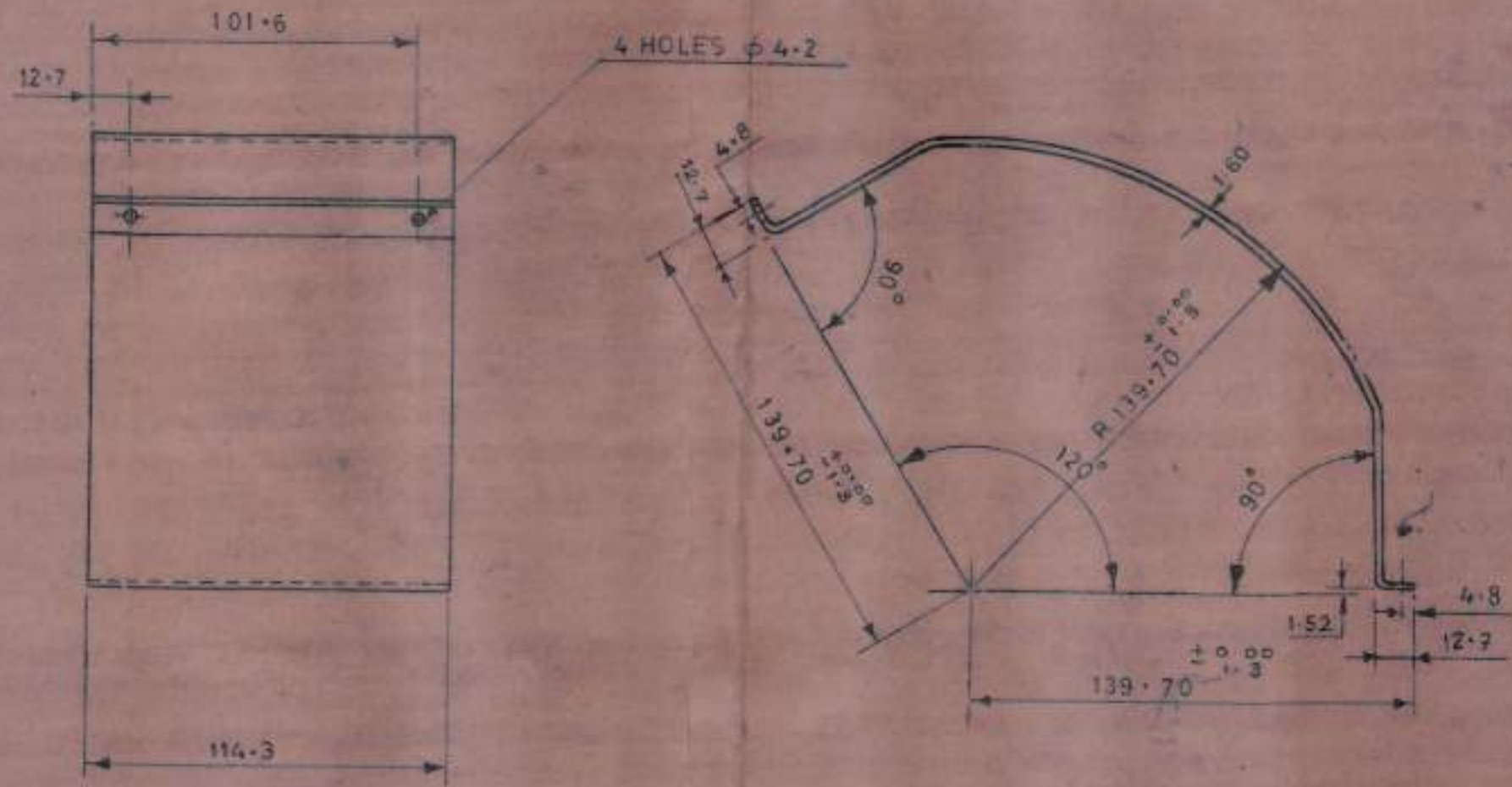
SEGMENT CONE



DRG NØ
NAD 7533/2

DTE OF NAMAL
ARMAMENT INSPECTION
NHQ NEW DELHI

* TOLERANCES ON DIMENSIONS MARKED * ARE GOVERNED BY NOTE I ON NAD 7533.



NOTES:-

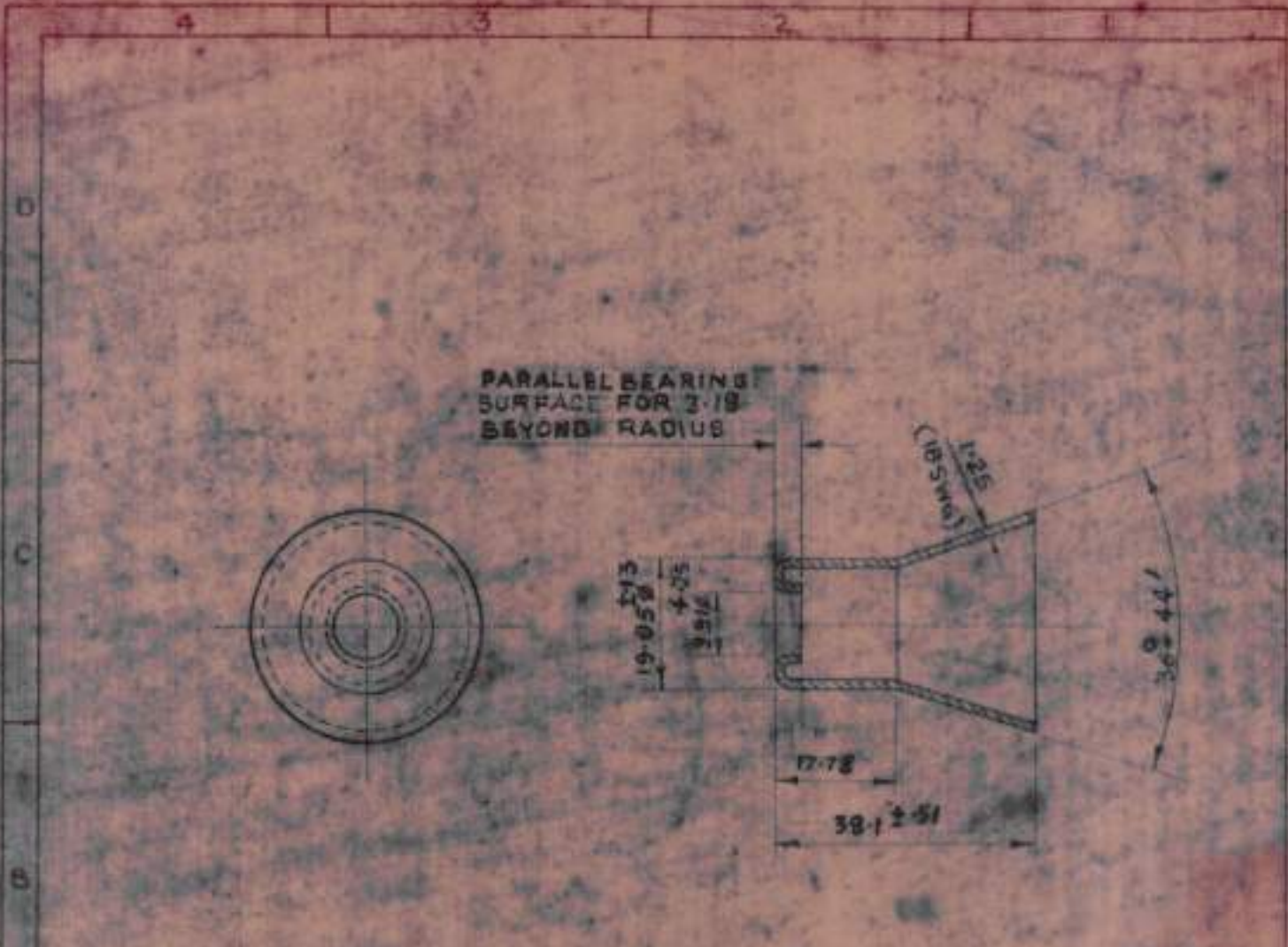
1. ALL BURRS AND SHARP EDGES TO BE REMOVED.
2. RADIUS IN CORNERS TO BE 1.5.

SCALE 1:2	DIMENSIONS IN mm	TOL ± 0.76	DS CAT No	ASSY DRG No NAD 7533/1
DGN	DRN	TCD	COMP	CHD
PASSED	APPROVED			DTE OF NAVAL
				ARMAMENT INSPECTION
				N HQ NEW DELHI
MATL MS	MATL SPEC GCG (15:1570, C-20)	PROTECTIVE FINISH	GEN SPEC N A SPEC A 31-B	
			STORE REF No	
			GAUGE SCH No	

R. No	DATE	ZONE	BRIEF RECORD	AUTHORITY INITIALS
	12-10-89		APPROVED (REDRAWN & METRICIZED)	

SEGMENT, DRUM

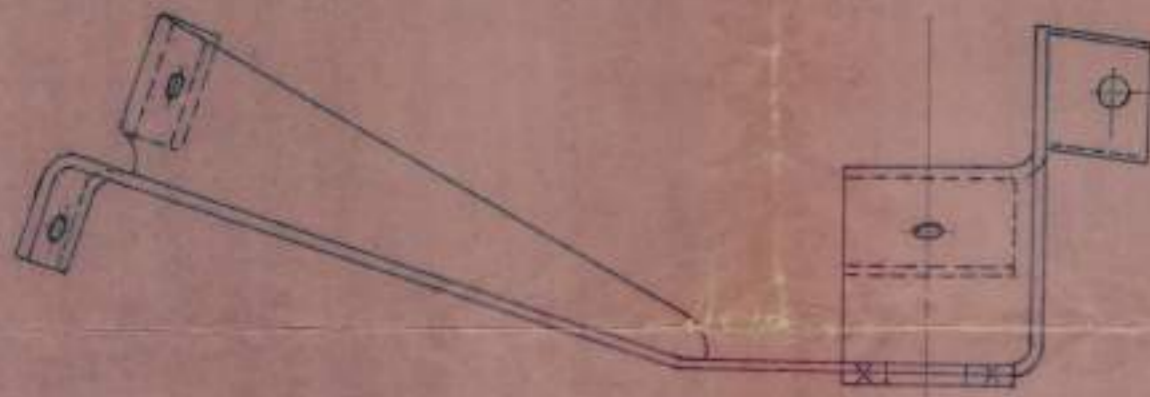
DRG No.
NAD 7533 / 3



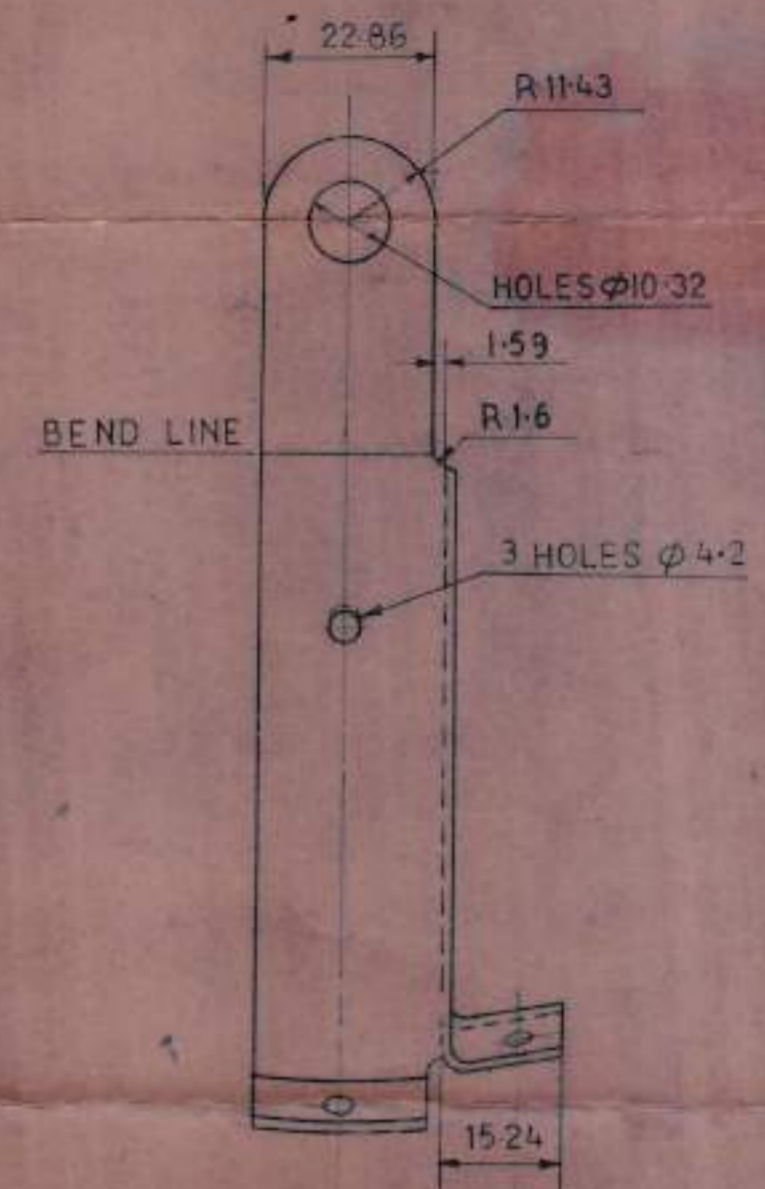
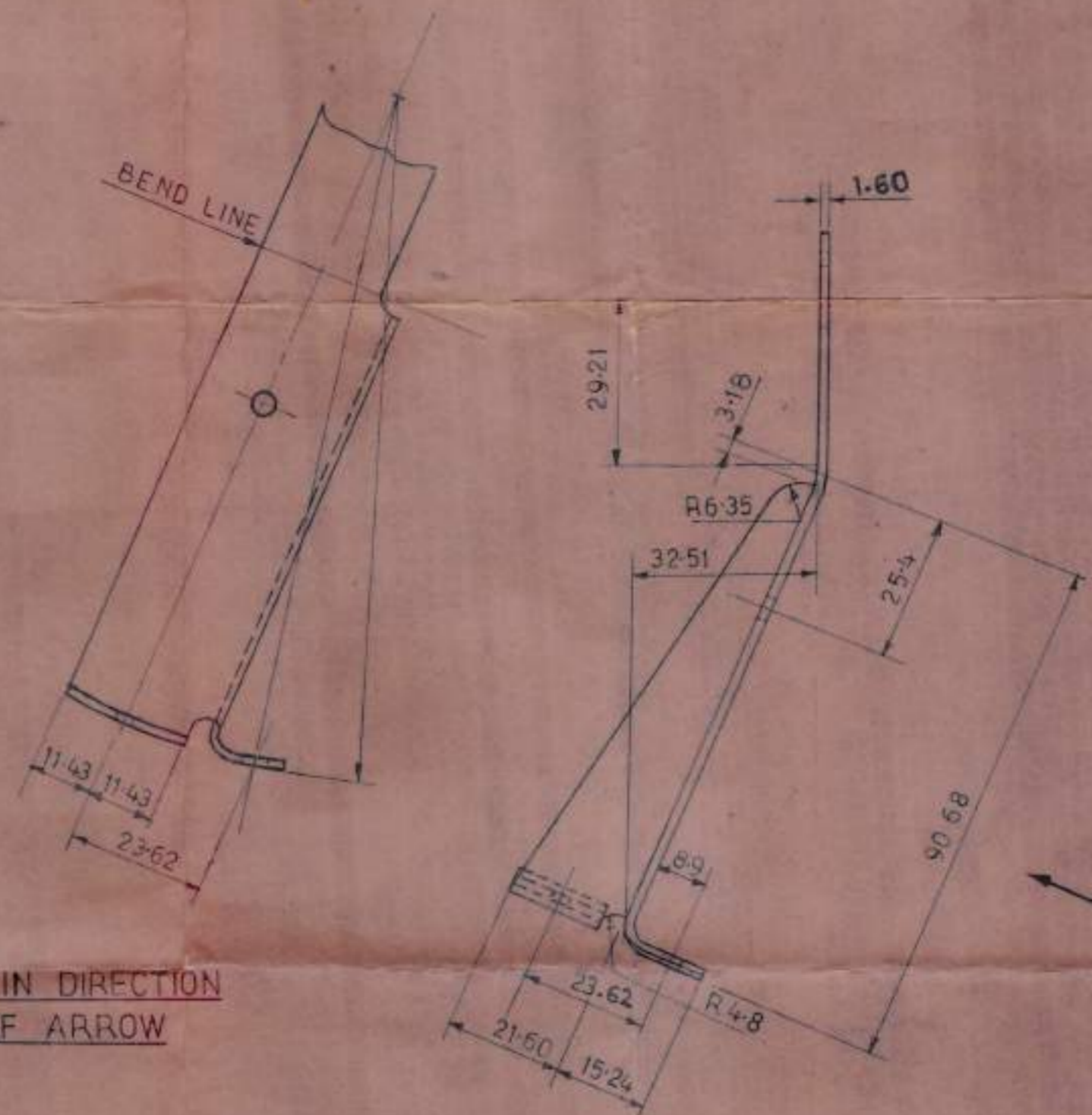
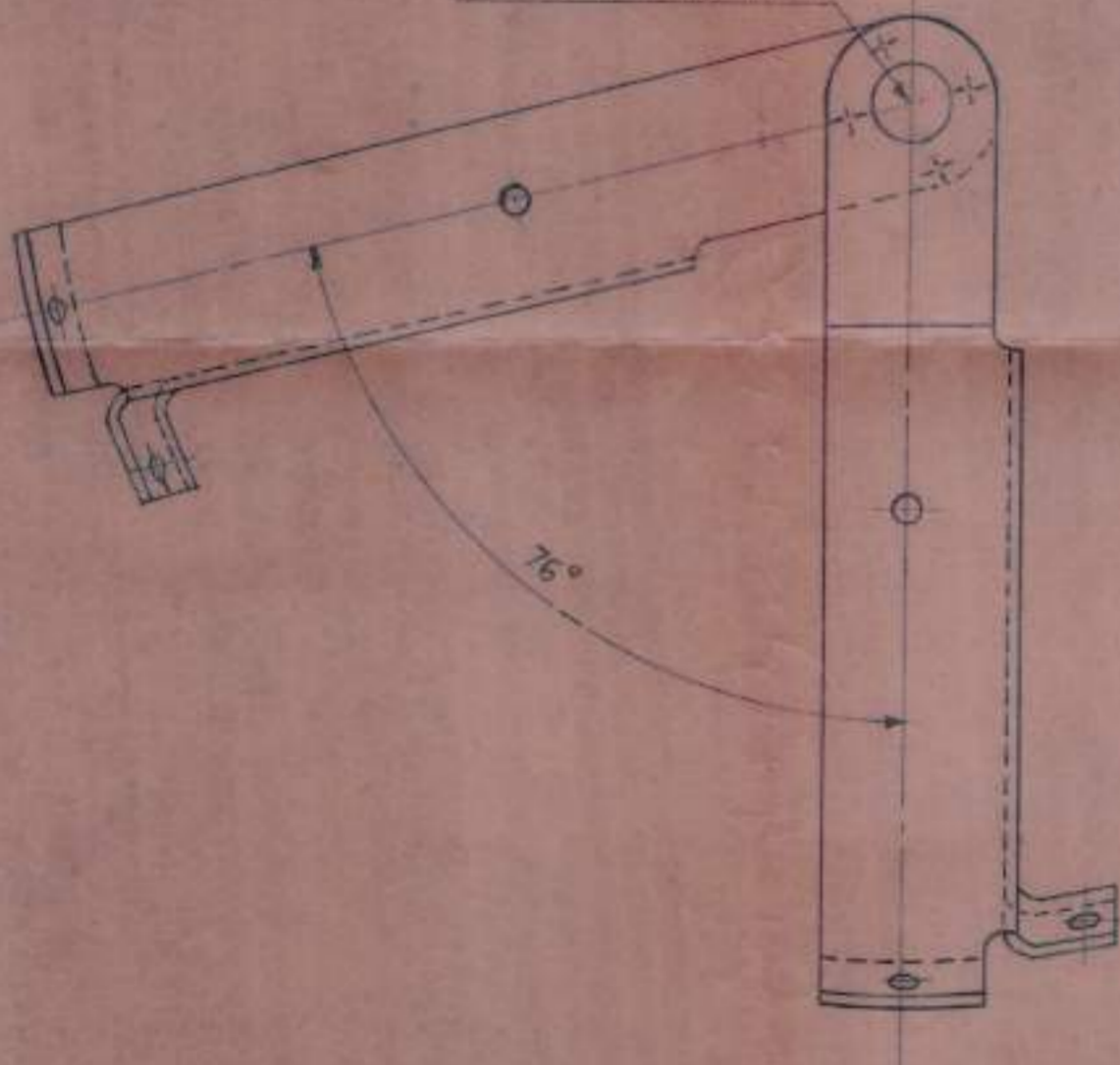
NOTE:-
BEND RADII TO BE AS SMALL AS POSSIBLE

10-10-66		APPROVED (REDRAWN & METRICIZED)			
R. NO.	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS
SCALE: 1:1		TOL: ±.25	DIMENSIONS IN MILLIMETRES		ASSY. DRG. NO.
DGN.	DRN. J. R.	TCD. Y	COMP. S. V. V.	CHD. J. S. S.	ASSY. DRG. LIST
PASSED	APPROVED	GEN. SPEC: N.A. SPEC. A. 31-B			DTE. OF NAVAL ARMAMENT INSPECTION, N.HQ. NEW DELHI.
MATL: MILD STEEL		STORE SPEC: -			
MATL. SPEC: G.C.Q. (IS. 1570-C20)		STORE REF. NO: -			
PROTECTIVE FINISH.		GAUGE SCH. NO: -			
BUSH, CONE.				D.S. CAT. NO: -	
				NAD. 7533/4	

A-4



COMMON HOLE SHOULD NOT BE LESS THAN 10.16 DIA. AFTER ASSEMBLY



VIEW IN DIRECTION OF ARROW

✕ DENOTES SPOT WELDING

				SCALE 1:1	DIMENSIONS IN mm	TOL ±0.25	D/S CAT NO	ASSY DRG NO NAD 7533/1
				DGN	DRN Ramk	TCD	COMP K...	ASSY DRG LIST
				PASSED	APPROVED			
							GEN SPEC NA SPEC A-31 B	DTE OF NAVAL
12-10-89			APPROVED (REDRAWN & METRICIZED)				STORE SPEC	ARMAMENT INSPECTION
R.N. DATE	ZONE	BRIEF RECORD	AUTHORITY INITIALS		MATL SPEC - GCO (IS:1570-C 20)		STORE REF NO.	NHQ NEW DELHI
					PROTECTIVE FINISH		GAUGE SCH NO.	

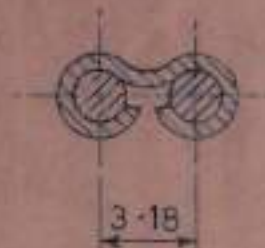
BRACKET, BEARING



DRG NO
NAD 7533/5

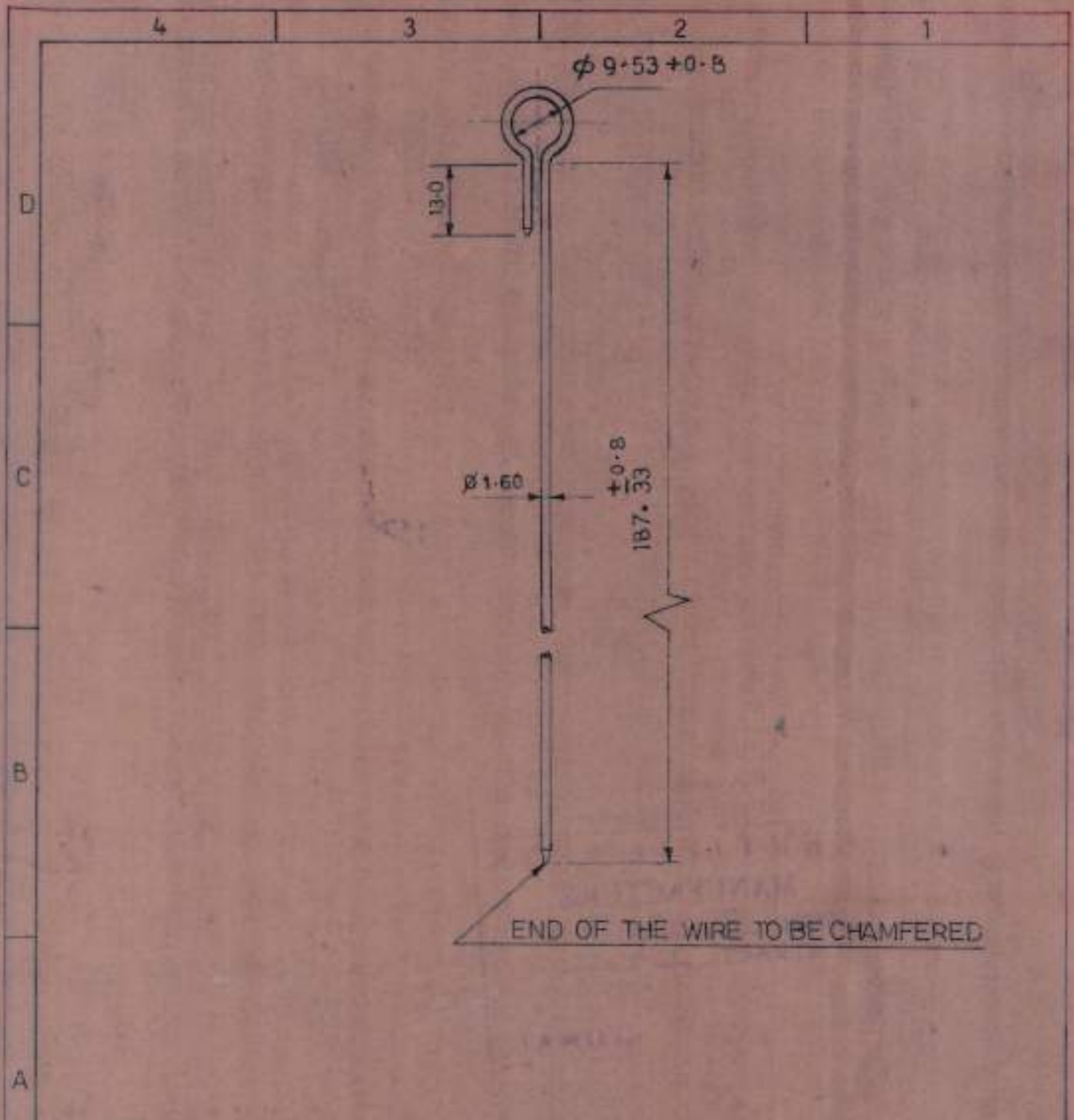
SCHEDULE OF COMPONENTS

ITEM N ^o	DESCRIPTION	DRG. N ^o	QTY.	REMARKS
1.	WIRE	NAD7533/6/1	1	
2.	FERRULE	NAD7533/6/2	1	

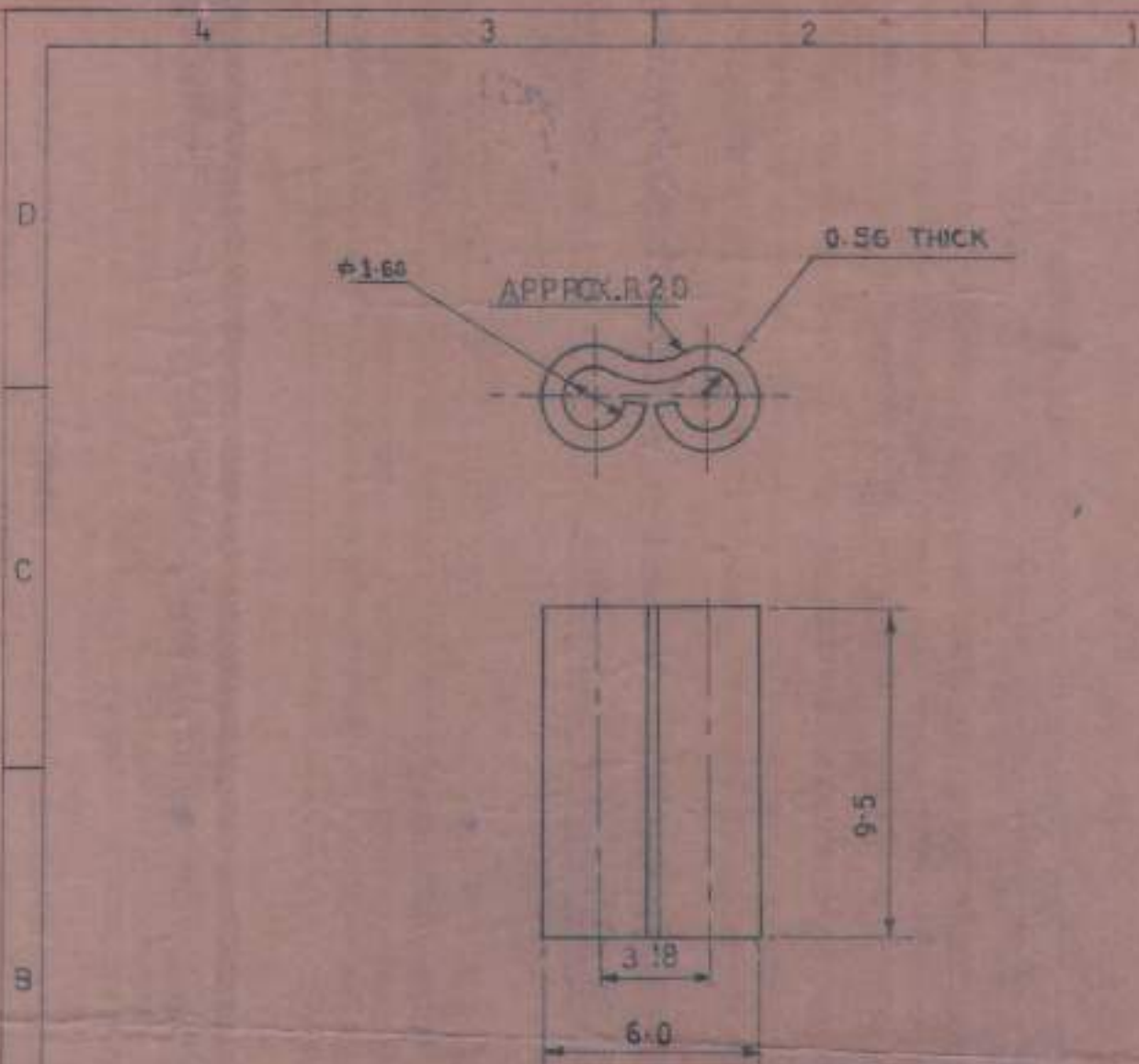


ENLARGED SECTION THROUGH FERRULE AND WIRE, FERRULE TO BE CLOSED TIGHTLY ON WIRE.

12-10-89		APPROVED			
R. N ^o	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS
SCALE : 1:1		TOL	DIMENSIONS IN MILLIMETRES		ASSY DRG N ^o . NAD 7533
DGN	DRN	TCD	COMP	CHD	ASSY DRG LIST
PASSED <i>[Signature]</i> CTO (D)	APPROVED <i>[Signature]</i> f BNAI	GEN SPEC : NA SPEC A-31 B		DTE OF NAVAL	
MATL	STORE SPEC		ARMAMENT INSPECTION		
MATL SPEC	STORE REF N ^o		NHQ NEW DELHI		
PROTECTIVE FINISH		GAUGE SCH N ^o		D S CAT N ^o	
WIRE, SAFETY, N ^o 1 MK1					
				DRG N ^o NAD 7533/6	

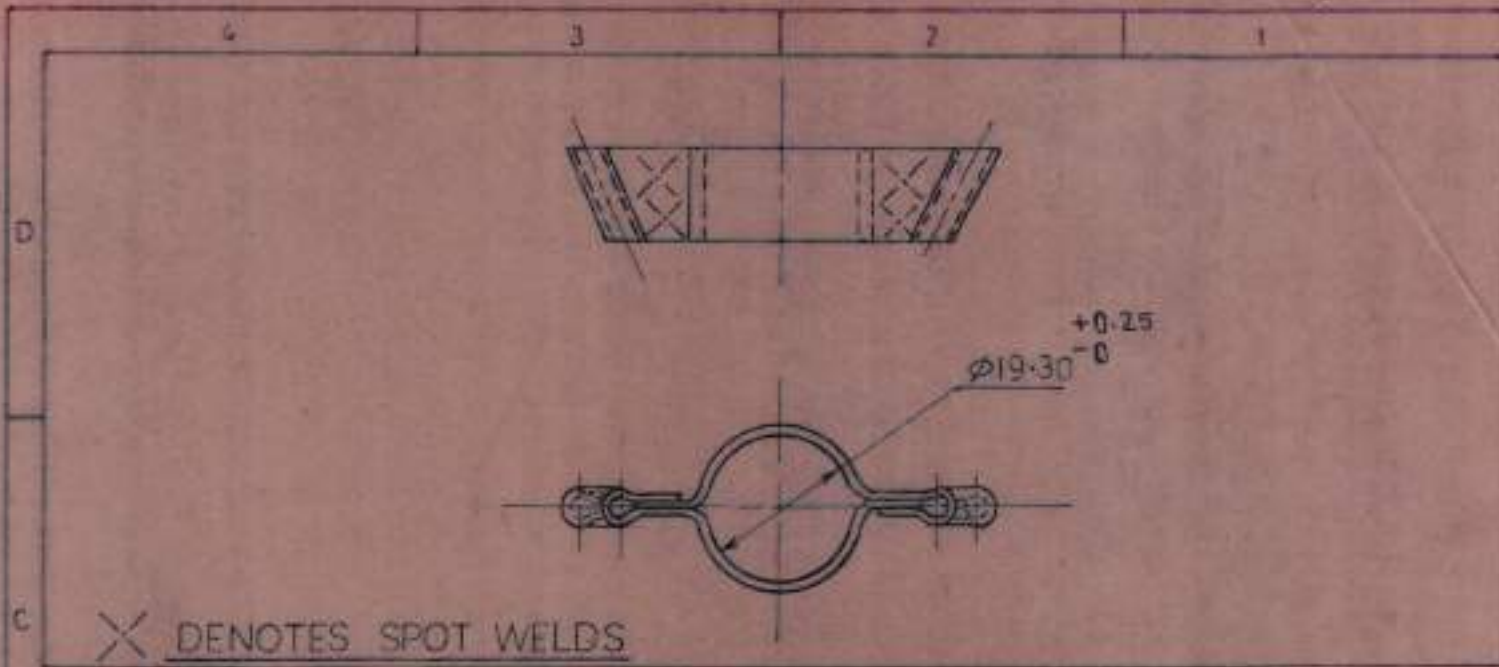


12.10.89		APPROVED			
R N°	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS
SCALE: 1:1		DIMENSIONS IN MILLIMETRES		ASSY DRG N° NAD 7533/6	
DGN	DRN <i>Sharma</i>	TCD	COMP <i>Sharma</i>	CHD <i>Sharma</i>	CD
PASSED <i>Sharma</i>		APPROVED <i>Sharma</i>		DTE OF NAVAL	
CTO(D)		DNAI		ARMAMENT INSPECTION	
MATL PHOSPHOR BRONZE		GEN SPEC NA SPEC A-31 B		NHQ NEW DELHI	
MATL SPEC IS: 7608 Gde I		STORE SPEC N°			
CONDITION HARD		STORE REF N°			
PROTECTIVE FINISH		GAUGE SCH N°			
		D S CAT N°			
WIRE				DRG N°	
				NAD 7533/6/1	

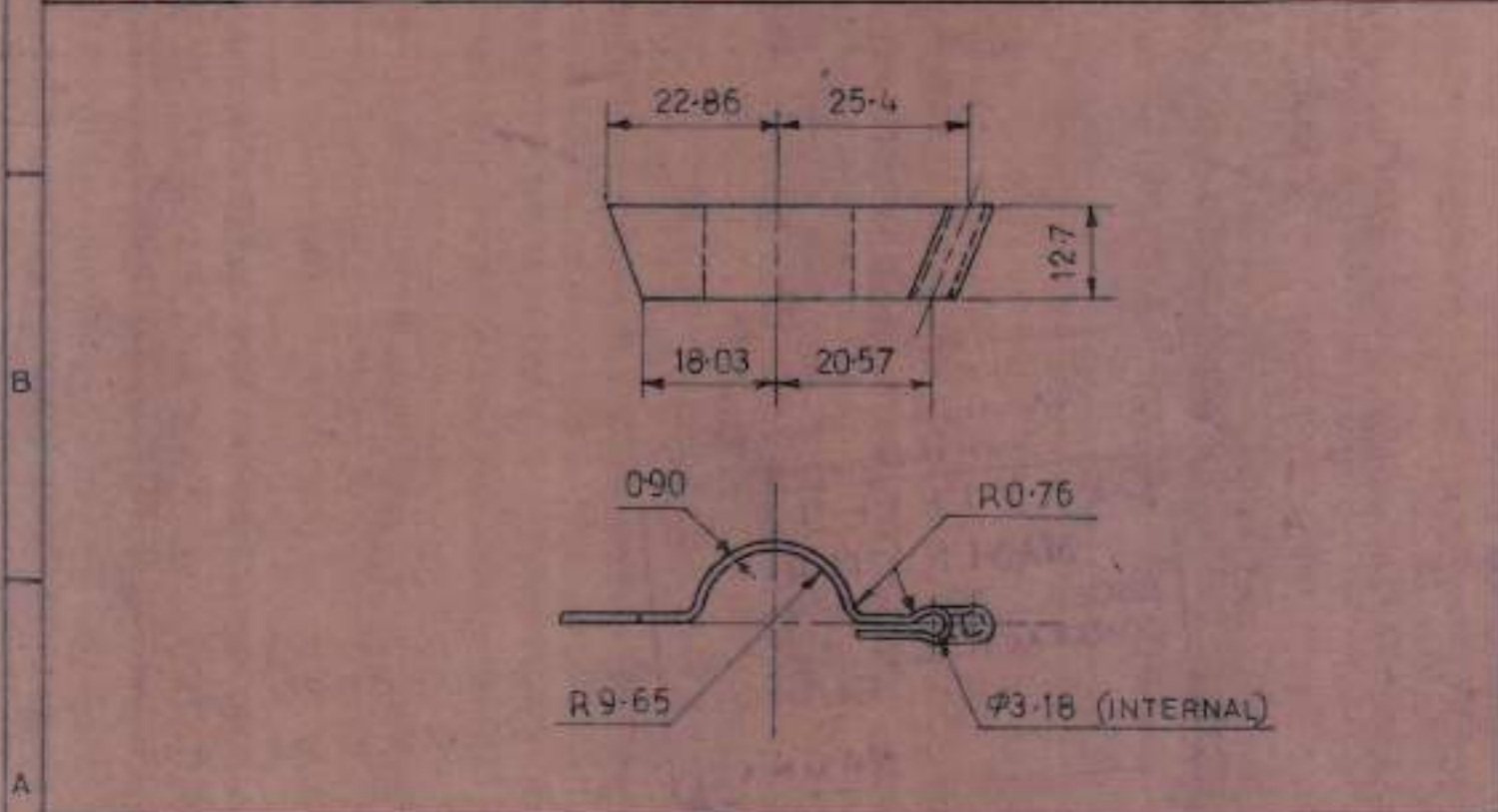


material specn - IS-7814 Gate - I Condition Hard
 Authority :- DNAI telegram NO. - A2/4053
 dt. 13 March 95

12-10-89		APPROVED		(NAVAL DEP.) (G.O. No.)	
R. N°	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS
SCALE 5:1	TOL	DIMENSIONS IN MILLIMETRES		ASSY DRG N°	NAD 7533/
DGN	DRN	TCD	COMPL. BY	CHD	CD
PASSED	APPROVED	GEN SPEC NA SPEC A-31 B		DTE OF NAVAL	
CTO (D)	DNAI	STORE SPEC N°		ARMAMENT INSPECTION	
MATL	PHOSPHOR BRONZE	STORE REF N°		NHQ NEW DELHI	
MATL SPEC	IS: 7608 Gate	GAUGE SCH N°			
PROTECTIVE FINISH	CONDITION HARD Amended as above	D S CAT N°			
FERRULE				DRG N°	
				NAD 7533/6/	



X DENOTES SPOT WELDS



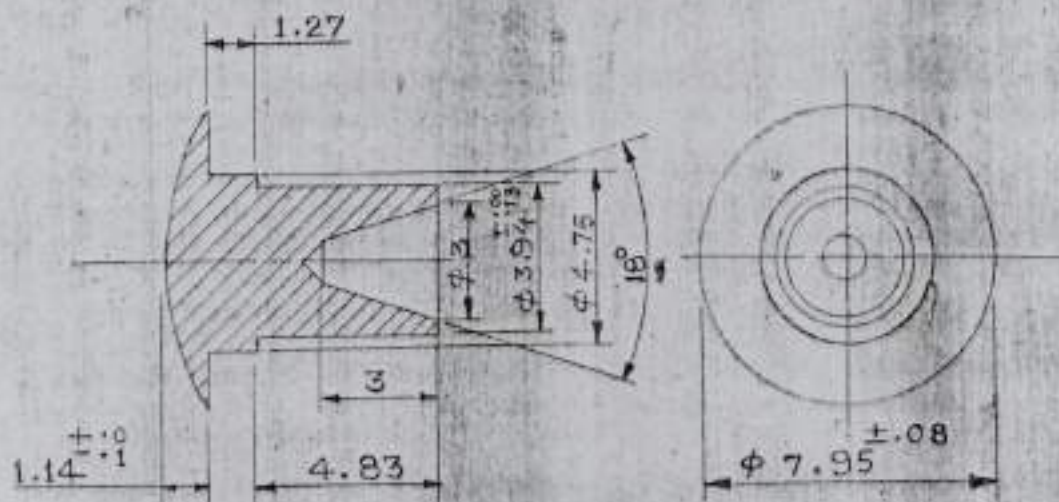
	12-10-89		APPROVED (REDRAWN & METRICIZED)		
R NO	DATE	ZONE	BRIEF RECORD		AUTHORITY INITIALS
SCALE 1:1	TOL ±0.25	DIMENSIONS IN MILLIMETRES		ASSY DRG NO NAD7533/1	
DGN	DRN Ram	TCO	COMP Ram	CHD	CD
PASSED	APPROVED	GEN SPEC NA SPEC A-31 B			DTE OF NAVAL ARMAMENT INSPECTION NHQ NEW DELHI
MATL M.S	STORE SPEC NO				
MATL SPEC.	STORE REF NO				
G.C.C (IS:1570,C 20)	GAUGE SCH NO				
PROTECTIVE FINISH	D S CAT NO				
GUIDE, WIRE					DRG NO NAD 7533/8

4

3

2

1



PROTECTIVE FINISH: ZINC PLATED TO IS: 1573, FeZn 25

6-679		APPROVED (REDRAWN & METRICIZED)			
R. NO	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS
SCALE: 5:1		TOL: DIMENSIONS IN MILLIMETRES		ASSY DRG NO MD.1292/1	
DGN.	DRN.	TCD.	COMP.	CHD sdt	cd
PASSED sdt		APPD sdt		DTE OF NAVAL	
CTO (W)		DNAL		ARMAMENT INSPECTION	
MATL: STEEL		GEN SPEC: NA SPEC A-31B		N.HQ NEW DELHI	
MATL SPEC: G.C.Q.		STORE SPEC			
(IS: 1570-C15)		STORE REF NO			
PROTECTIVE FINISH: SEE DRG		GAUGE SCH NO			
		D. S. CAT NO			

RIVET, SEMI-TUBULAR

DRG NO

NAD.7533/9

D IN BODY TAIL (MD.1292/1 ITEM:8)
TAIL D.C.MK-4*

BASED ON DRG NO MDSK 1292/
DT. 2-8-62

RACED

CHECKED

RE TRACED WITHOUT TECHNICAL CHANGE

R. Malhotra

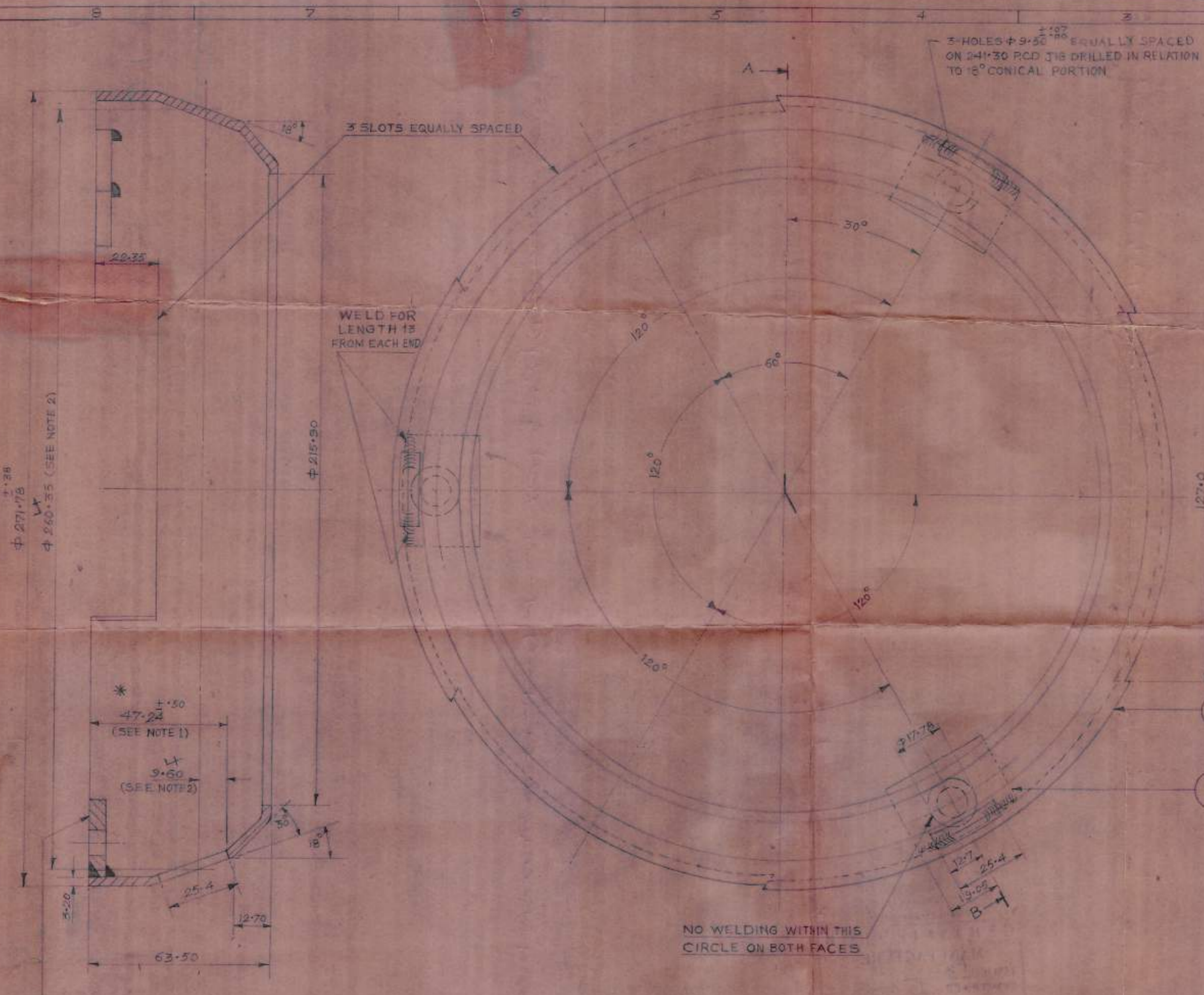
SD

SCHEDULE OF COMPONENTS

ITEM NO	DESCRIPTION	DRG NO	NO OFF	REMARKS
1	RING	THIS DRAWING	1	
2	LUG	NAD 7533/10/1	3	

NOTES:-

- 1 DIMENSION MARKED THUS * IS TO THE PLANE OF THE LUGS (ITEM-2) WHICH MAY BE JIG WELDED OR MACHINED TO OBTAIN THIS DIMENSION
- 2 DIMENSIONS MARKED THUS X ARE CONSTRUCTIONAL DIMENSIONS TO DEFINE THE POSITION OF THE EDGES WITH WHICH THE SPRING CLIPS OF THE TAIL BODY ENGAGE, SEE SPECIFICATION A1/137 (PROV)
- 3 TO BE PHOSPHATED ALL OVER TO IS:3618 CLASS B FOLLOWED BY A COATING OF PAINT TO IS:168 WITH TINT NO 224 (IS:5)



FACE OF LUGS (ITEM NO 2) MAY BE WITHIN ±.76 OF EDGE OF RING (ITEM NO 1)

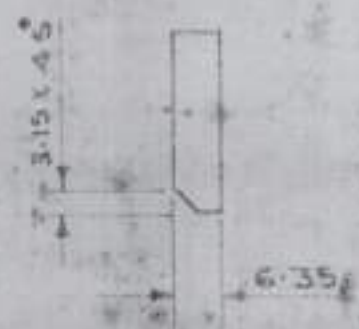
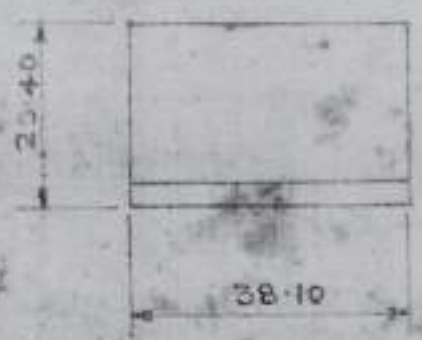
SECTION AT AB


SCALE: 1:1		DIMENSIONS ARE IN mm		TOL		D.S. CAT NO		ASSY DRG NO	
DGN	DRN	SAT	TCD	SAT	COMP	SAT	CHD	SAT	CD
PASSED		APPD		CTO(D)		D/NAI		GEN SPEC: NA SPEC A-3/ B	
4-8-84A-2 (1-2)		STORE SPEC: A1/137 (PROV)		RD 4225		ARD 2225		DTE OF NAVAL	
30-8-79		APPROVED (NE DRAWING)		MATT: STEEL		MATT SPEC: IS:1679 St 42-1079		STORE SPEC: A1/137 (PROV)	
R/N	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS	PROTECTIVE FINISH: SEE DRG		STORE REF NO	
								GAUGE SCH NO	

RING ADAPTOR

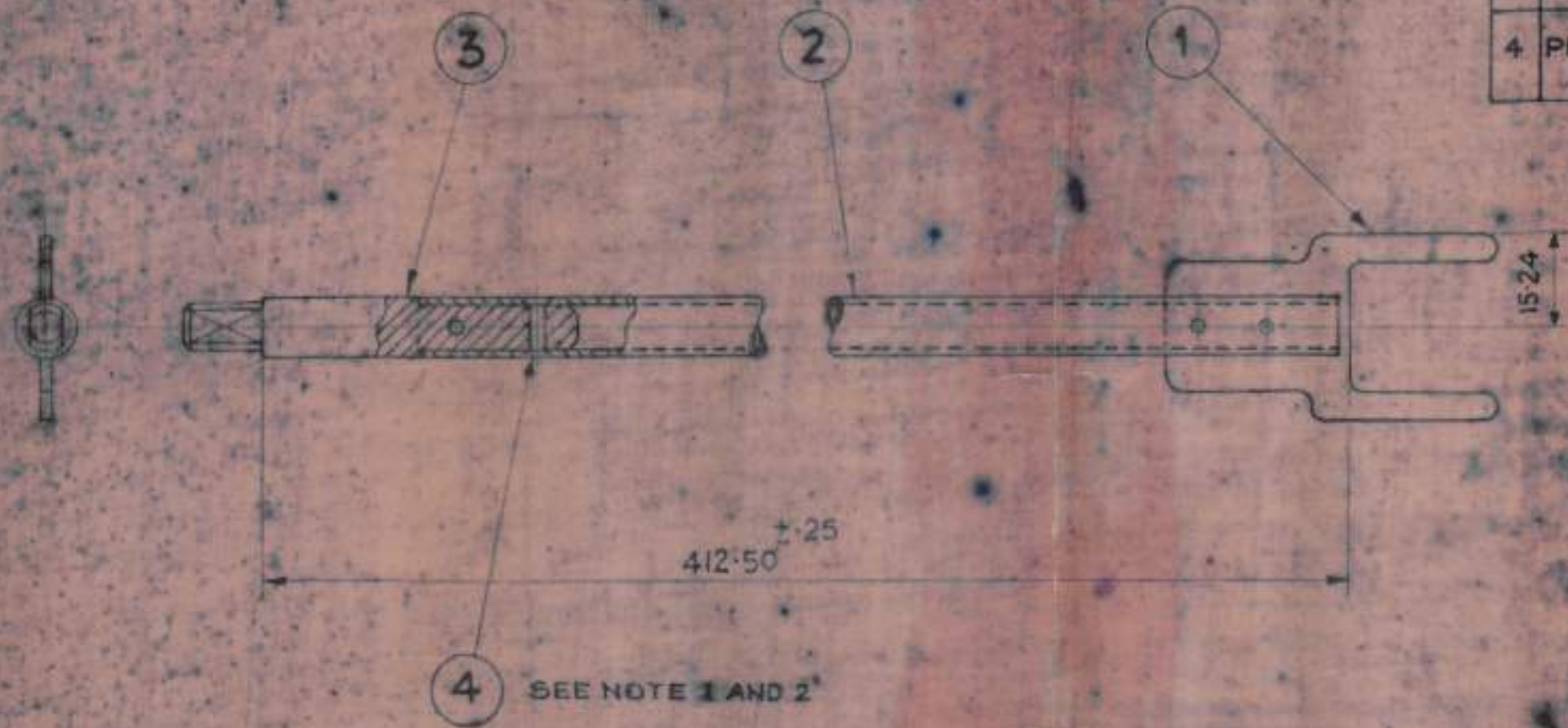
DTE OF NAVAL
ARMAMENT INSPECTION
NHQ NEW DELHI

DRG NO
NAD 7533/10



ISO 8-79		APPROVED (REDRAWN & METRICIZED)			
R. NO.	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS
SCALE: 1:1		TOL.		DIMENSIONS ARE IN MM.	
DWG.	DRN.	DES.	TCL.	CHKD.	APPD.
PASTED		APPD.		DTE. OF NAVAL ARMAMENT INSPECTION N. HQ., NEW DELHI	
MATERIAL: STEEL		GEN. SPEC. N.A. SPEC. A31-B			
MATE. SPEC. IS: 2062 (SE 42)		STORE SPEC.			
PROTECTIVE FINISH		STORE REF. NO.			
		GAUGE SCH. NO.			
		D.S. CAT. NO.			
LUG				DRG. NO. NAD7533/10	

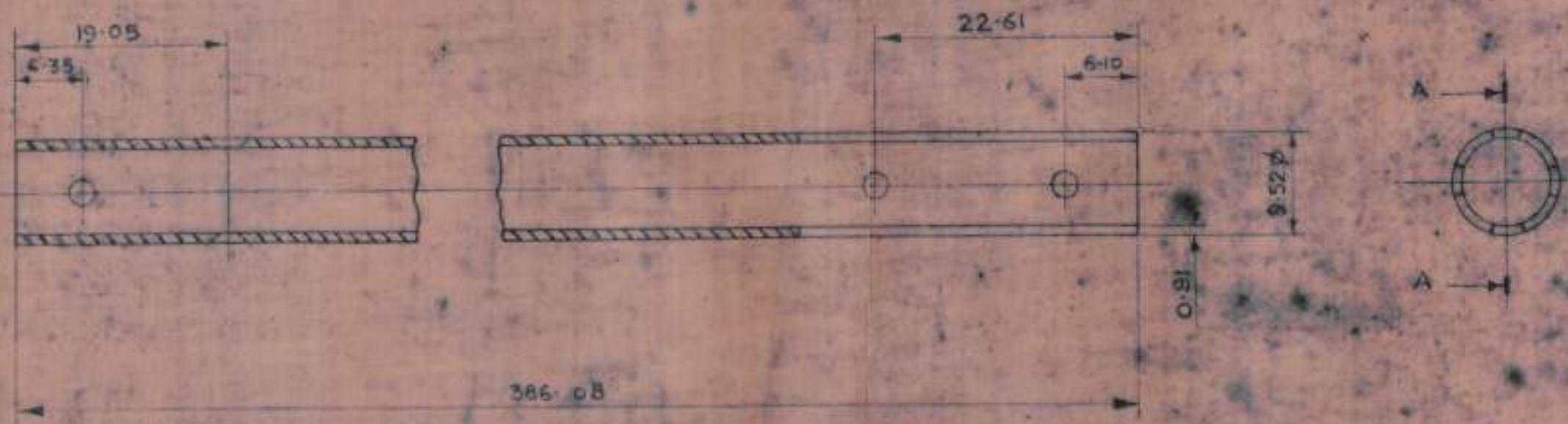
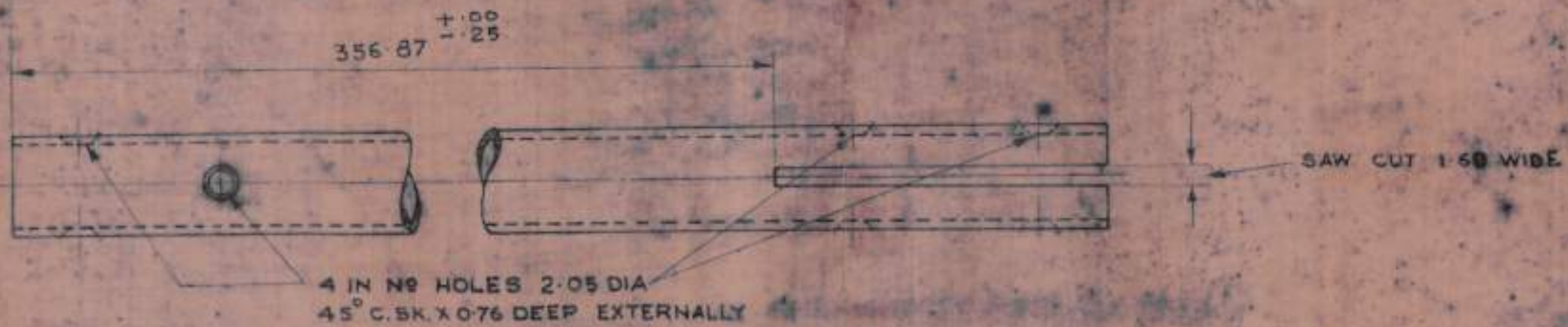
SCHEDULE OF COMPONENTS				
1. NO.	DESCRIPTION	DRG. NO.	NO. DET.	REMARKS
1	FORK	NAD.7533/10	1	
2	TUBE	NAD.7533/12	1	
3	ROD	NAD.7533/13	1	
4	PIN 2.0 ϕ X 14 LONG.	N.D.	4	BRASS LOT BY PBI



- NOTES:**
- FOUR HOLES 2.05 DIA. TO BE DRILLED THROUGH ON ASSEMBLY OF FORK ITEM 1 AND ROD ITEM 3 WITH TUBE ITEM 2 AS SHOWN.
 - FORK ITEM 1 AND ROD ITEM 3 TO BE RIVETED BY PINS ITEM 4 TO TUBE ITEM 2 AND FINISHED FLUSH WITH EXTERNAL SURFACE OF TUBE ITEM 2.

				SCALE:-	DIMENSIONS ARE IN MM TOL:-	D.S. CAT. NO.	ASSY. DRG. NO. MD.1292
				DGN. --	DRN. --	TCD. Pabu.	ASSY. DRG. LIST
				PASSED. <i>[Signature]</i>	APPD. <i>[Signature]</i>	GEN. SPEC.:- N.A. SPEC. A. 31-B	DTE. OF NAVAL ARMAMENT INSPECTION N. HQ., NEW DELHI
				MATL.:-	STORE SPEC.:-		
6-6-79	APPROVED (REDRAWN & METRICISED)			MATL. SPEC.:-	STORE REF. NO.:-		DRG. NO. NAD.7533/11
R. NO.	DATE	ZONE	BRIEF RECORD	AUTHORITY INITIALS	PROTECTIVE FINISH:-	GAUGE SCH. NO.:-	

SPINDLE ARMING.
(STAMP NO: 6879)

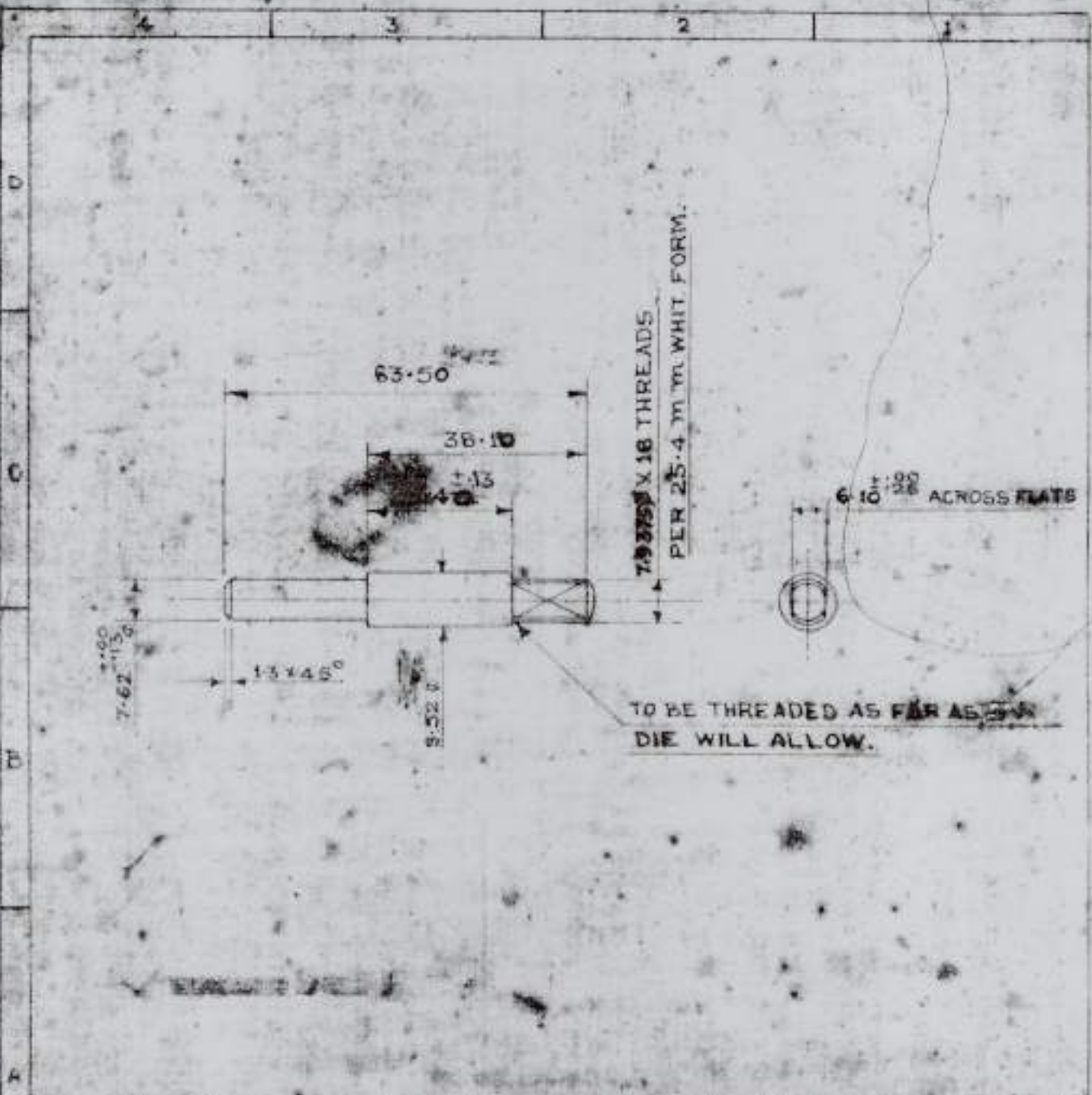


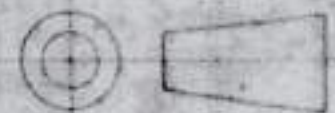
SECTION AA

PROTECTIVE FINISH:-
ZINC PLATED TO IS 1736

SCALE:-2:1		DIMENSIONS ARE IN MM		TOL:-		D.S. CAT. NO:-		ASSY DRG. NO. NAD 7533/12	
DRN. S. N. I. T. C. D. P. D. U. Y.		COMP. 4		CHD. 1		CHD. 1		ASSY DRG. LIST:-	
PASSES. H. J. S. B. C. T. O. P.		APPD. S. D. N. A. I.		GEN SPEC:- N.A. SPEC. A 31-3		STORE SPEC:-		DTE. OF NAVAL ARMAMENT INSPECTION, N. HQ., NEW DELHI	
6-6-79		APPROVED (REDRAWN & METRICIZED)		MATE. SPEC:- G.C.Q. (7.5.1970)		STORE REF. NO.		DRG. NO. NAD. 7533/12	
R. NO	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS	PROTECTIVE FINISH:- SEE DRG. (C.T.O.)		 	

TUBE



6-6-79		APPROVED			
R.Nº	DATE	ZONE	BRIEF RECORD		AUTHORITY, INITIALS
SCALE 1:1	TOL.	DIMENSIONS IN MILLIMETRES		ASSY DRG. Nº NAD.7533/11	
DGN.	DRN.	TCD.	CHKD.	ASSY. LIST Nº.	
PASSED	APPD.	GEN. SPEC. - NA. SPEC. A 31 B		DTE. OF NAVAL ARMAMENT INSPECTION N.HQ. NEW DELHI.	
MATH. BRASS		STORE SPEC.			
MATH. SPEC. G.C.G.		STORE REF. Nº.			
PROJECTIVE FINISH		GAUGE SCH. Nº.			
		D.S. CAT. Nº.			
ROD				DRG. Nº.	
				NAD.7533/13	

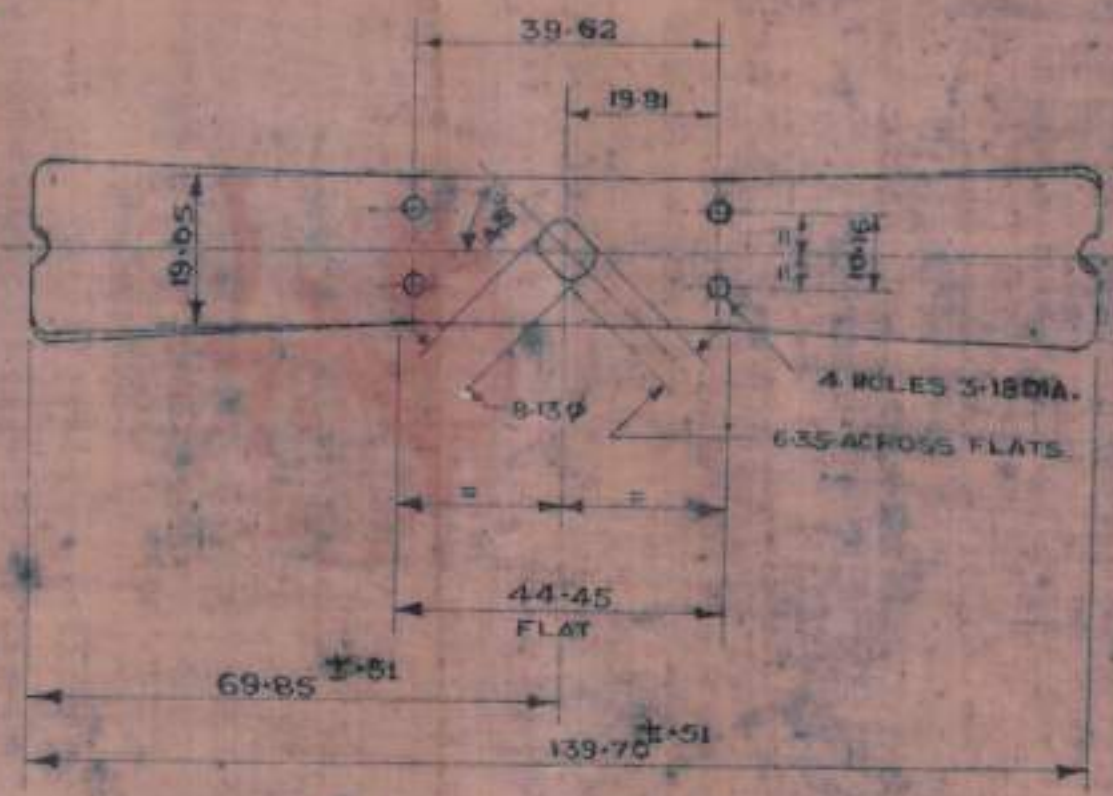
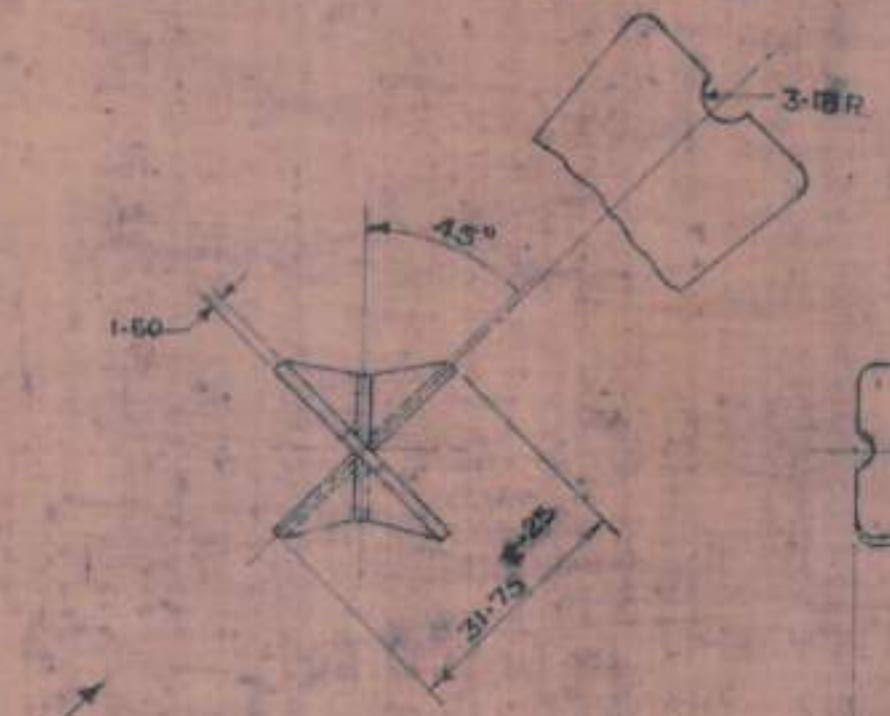
8 7 6 5 4 3 2 1

F
E
D
C
B
A



NOTES:-
 TO BE PHOSPHATED TO IS:3618 C
 B AND PAINTED WITH PAINT TO IS:
 WITH A TINT NO.537 TO IS:5.

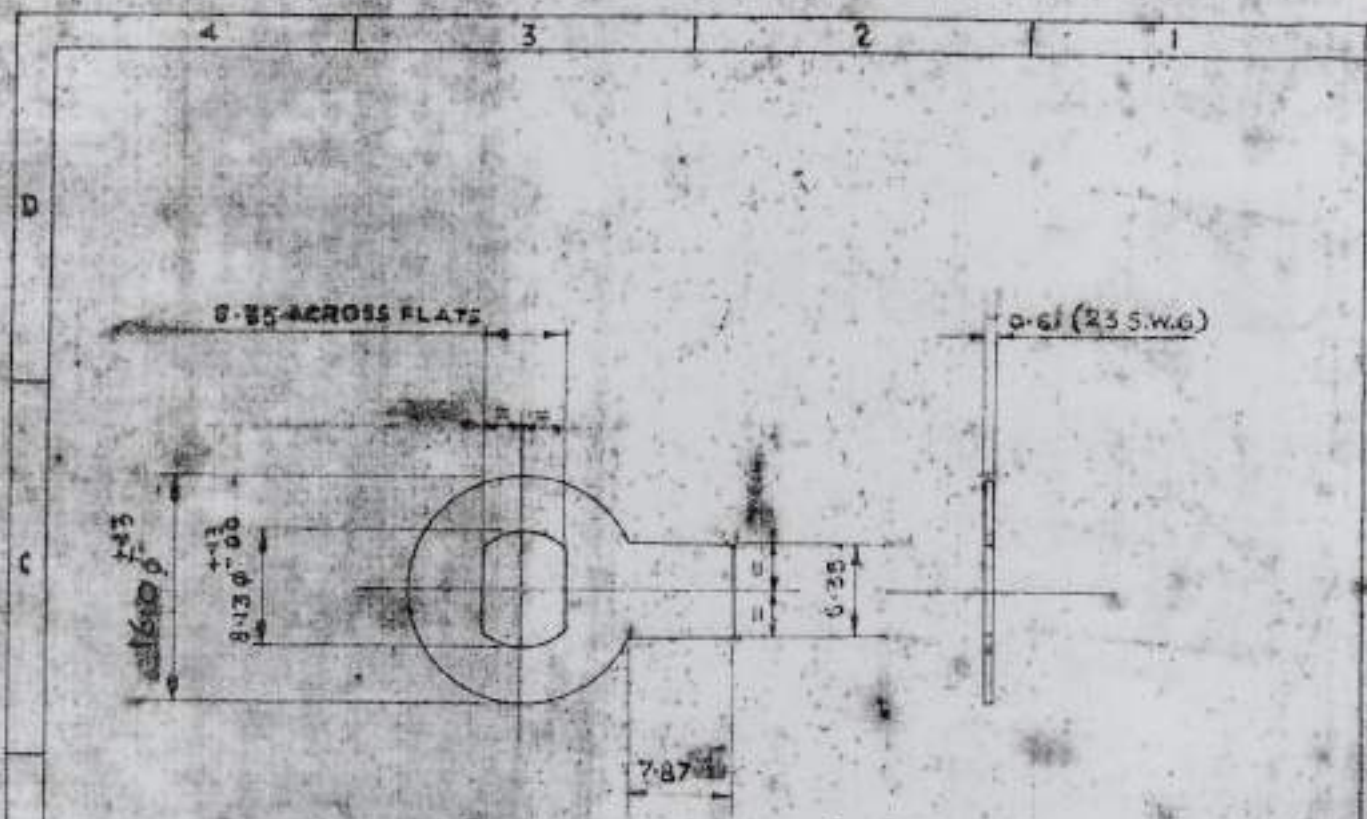
SCRAP VIEW IN DIRECTION
 OF ARROW



				SCALE:- 1:1	DIMENSIONS ARE IN MM		TOL:-	D.S. CAT. NO.	ASSY. DRG. NO.
				DGN. -	DRN. <i>[Signature]</i>	CHKD. <i>[Signature]</i>	COMP. <i>[Signature]</i>	CHD. <i>[Signature]</i>	ASSY. DRG. LIST.
				PASSED. <i>[Signature]</i>	APPROVED. <i>[Signature]</i>		GEN. SPEC.:- NA. SPEC. A 31-B		DTE. OF NAVY
15.1.80				APPROVED (REDRAWN & METRICIZED)		MATERIAL:- STEEL		STORE SPEC.	ARMAMENT INSPECTION
R. NO.	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS	MATERIAL SPEC.:- IS: 1079-D		STORE REF. NO.	N.HQ., NEW DELHI
						PROTECTIVE FINISH:- SEE NOTES		GAUGE SCH. NO.	



VANE, ARMING
 (STAMP NO. 6879)

DRG. NO.
NAD. 753

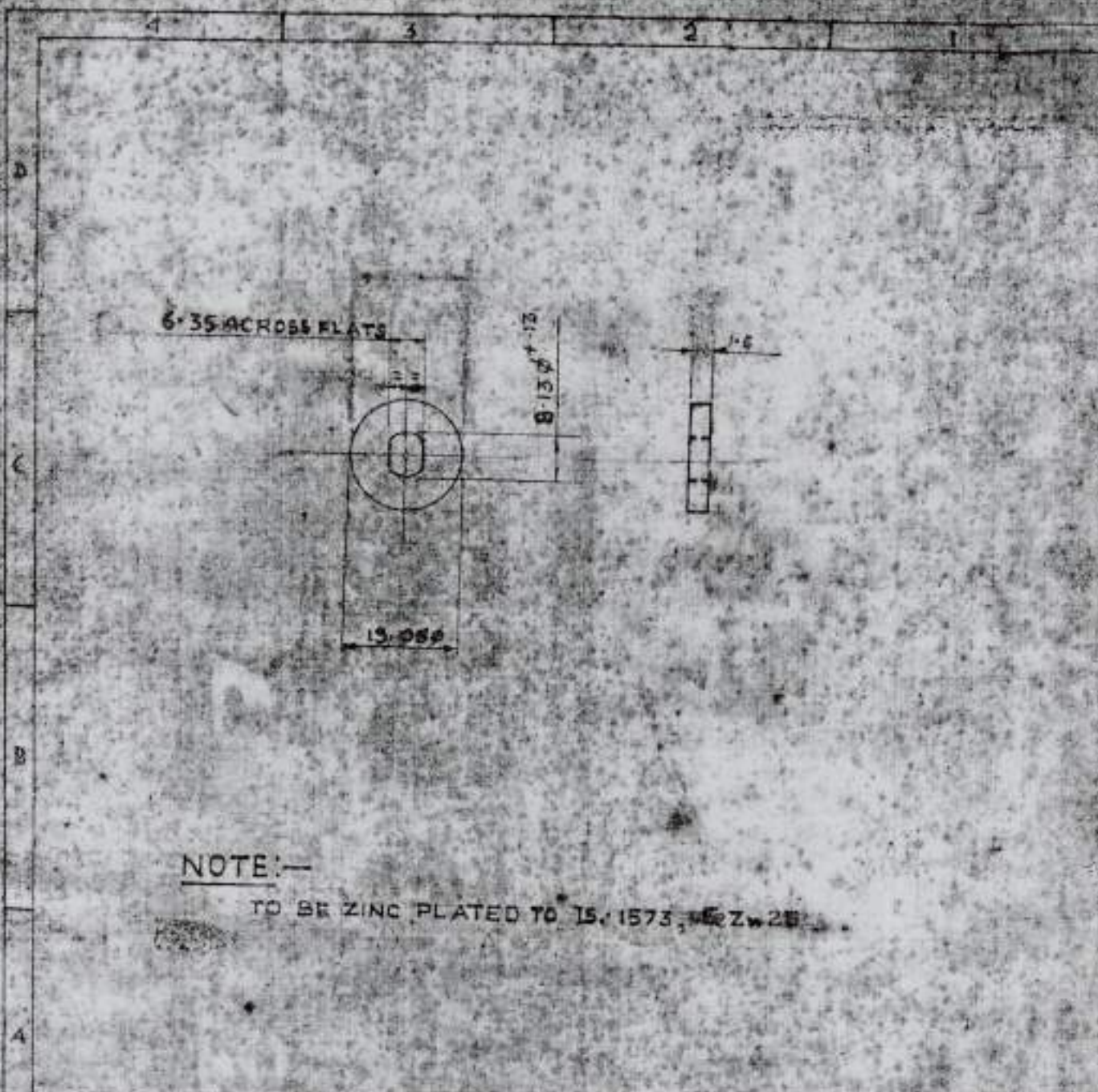


NOTE:-

TO BE ZINC PLATED TO IS. 1573, F₂ Z₂₅

19-10-58		APPROVED (REDRAWN & METRICIZED)			
R.NQ.	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS
SCALE:-		TOL: ±.25	DIMENSIONS IN MILLIMETRES		ASSY. DRG. NO. NAD. 7533
DGN.	DRN. V. R.	TCD.	COMP. [initials]	ASSY. DRG. LIST	
PASSED. [initials]	APPD. [initials]	GEN. SPEC. N.A. SPEC. A-31 B		DTE. OF NAVAL ARMAMENT INSPECTION N.HQ., NEW DELHI  	
MATE. MILO STEEL		STORE SPEC.			
MATE. SPEC. G.C.G. (IS. 1570 - C20)		STORE REF. NO.			
PROTECTIVE FINISH:-SEE NOTE		D/S-CAT. NO.			
WASHER LOCKING (STAMP NQ 6880)				DRG. NO. NAD. 7533/15	

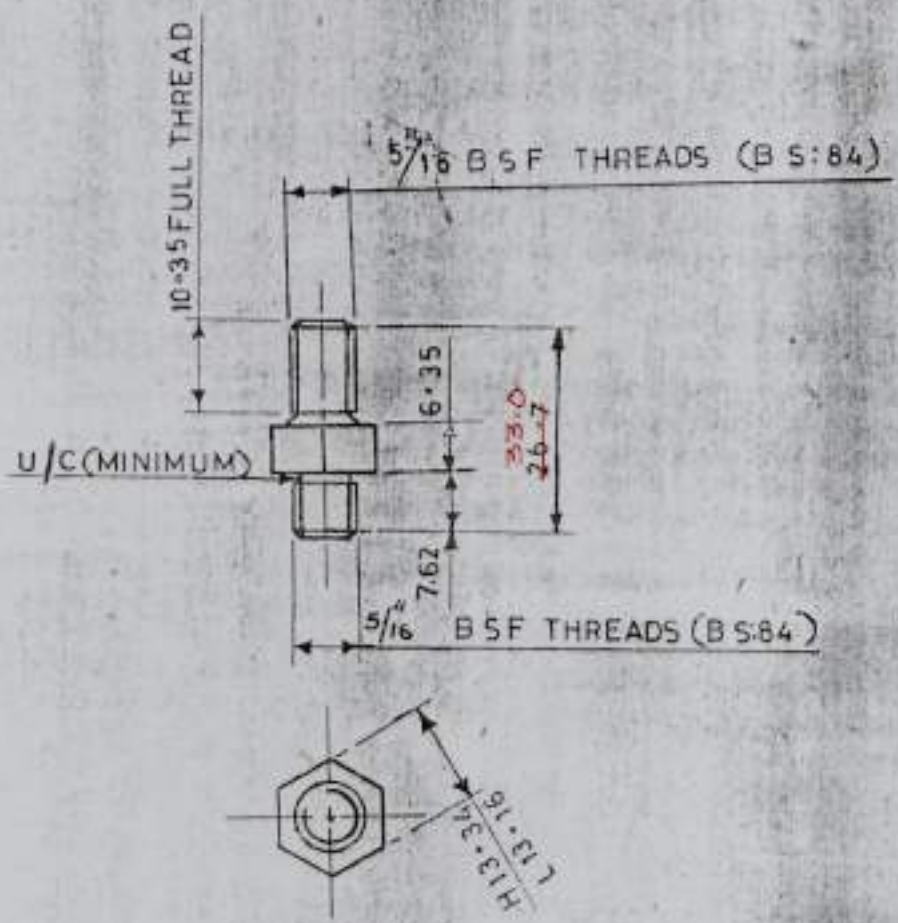
A-4



NOTE:—
 TO BE ZINC PLATED TO IS. 1573, Z-25

10.10.80		APPROVED (SI-MAN & METRICIZED)			
R. NO.	DATE	ZONE	BRIEF RECORD	AUTHORITY	INITIALS
SCALE - 1:1	TOL - 25	DIMENSIONS IN MILLIMETRES		ASST. DRG. NO. NAD. 7553	
DGN.	DRN. OF XT.	TCD.	COMP.	ASST. DRG. DLT	
PASSED BY	APPROVED	GEN. SPEC. NA. SPEC. A-31-B		DTE OF NAVAL ARMAMENT INSPECTION	
MATE. MILD STEEL		STORE SPEC		N. HQ. NEW DELHI	
MATE. SPEC.		STORE REF. NO.			
G.C.O. (IS. 1570 - C20)		GAUGE. SCH. NO.			
PROTECTIVE FINISH - SEENOTE		D.S. CAT. NO.			
<p>WASHER, DISTANCE. (ST. NO. 6801)</p>					
				DRG. NO. NAD. 7533/16	

D
C
B
A

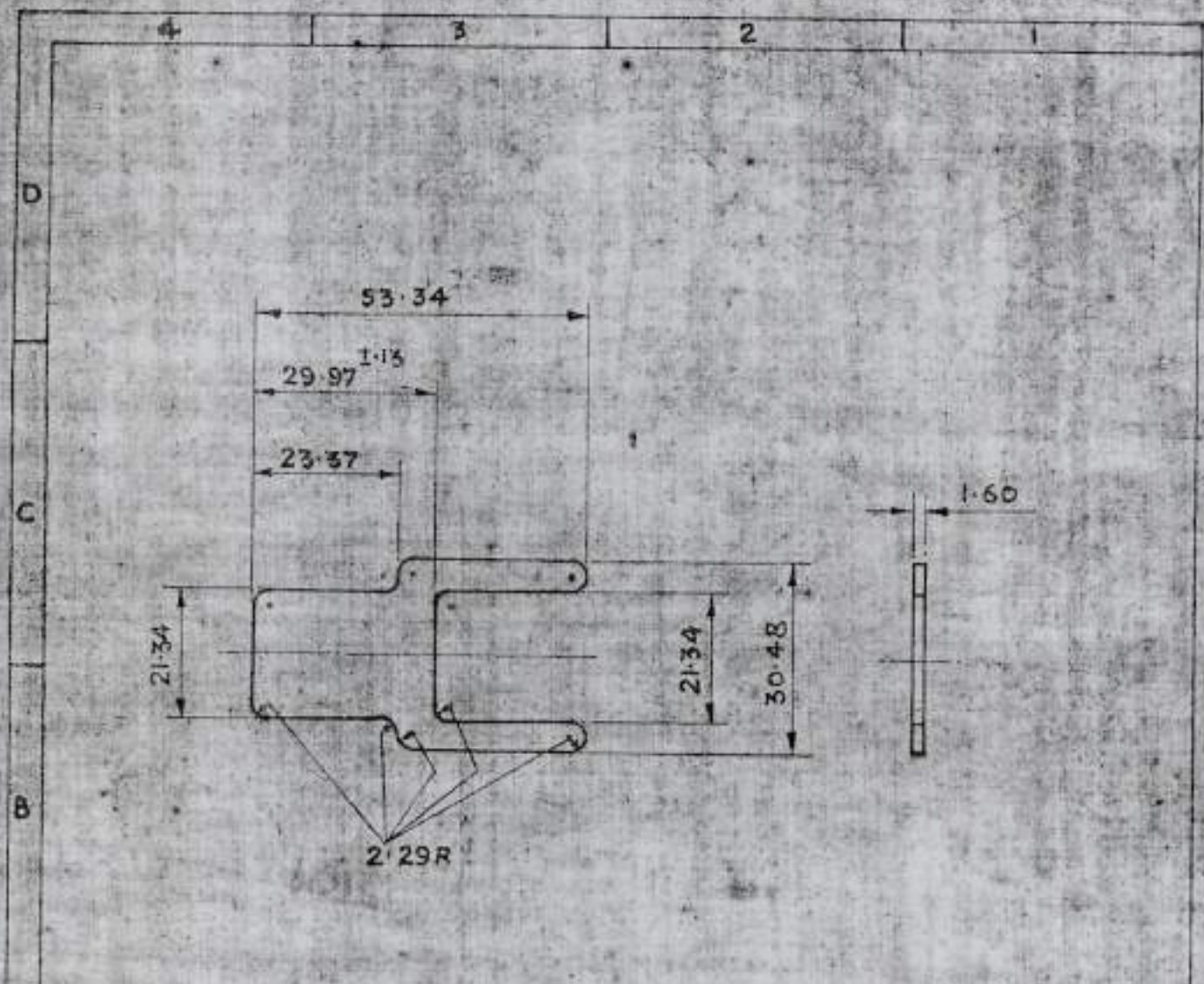


NOTE:-

THE TWO THREADED DIAMETERS SHOULD BE CONCENTRIC WITHIN 0.13.

Copy 37/17
CP

	6.6.95		DIMN. 2617 Amended		ARD No. 2235
	12-10-89		APPROVED (REDRAWN & METRICIZED)		
R No.	DATE	ZONE	BRIEF RECORD		AUTHORITY INITIALS
SCALE	1:1	TOL ± 0.5	DIMENSIONS IN mm UNLESS OTHERWISE STATED		ASSY DRG No. NAD 7533
DGN	DRN	TCD <i>shank</i>	COMPL <i>shank</i>	CHD <i>shank</i>	ASSY DRG LIST
PASSED <i>shank</i>	APPROVED <i>shank</i>	CTO (C)	DNAI	DTE OF NAVAL ARMAMENT INSPECTION	
MATL M.S.	GEN SPEC NA SPEC A-31 B		STORE SPEC		
MATL SPEC	STORE REF No		N HQ NEW DELHI		
G C Q (IS:1570 C-20)	GAUGE SCH No				
PROTECTIVE FINISH	D.S. CAT No				
STUD, TAIL RETAINING (ST No. (6393))					DRG No. NAD 7533/17

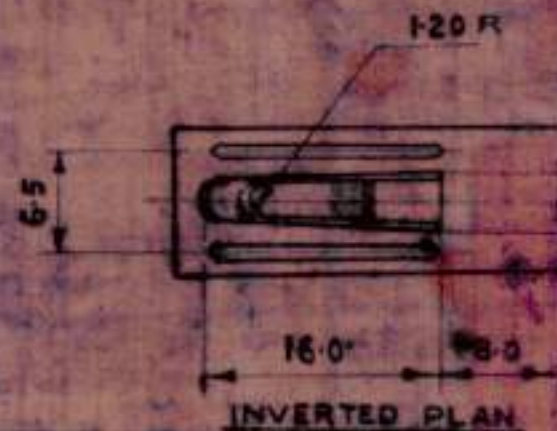
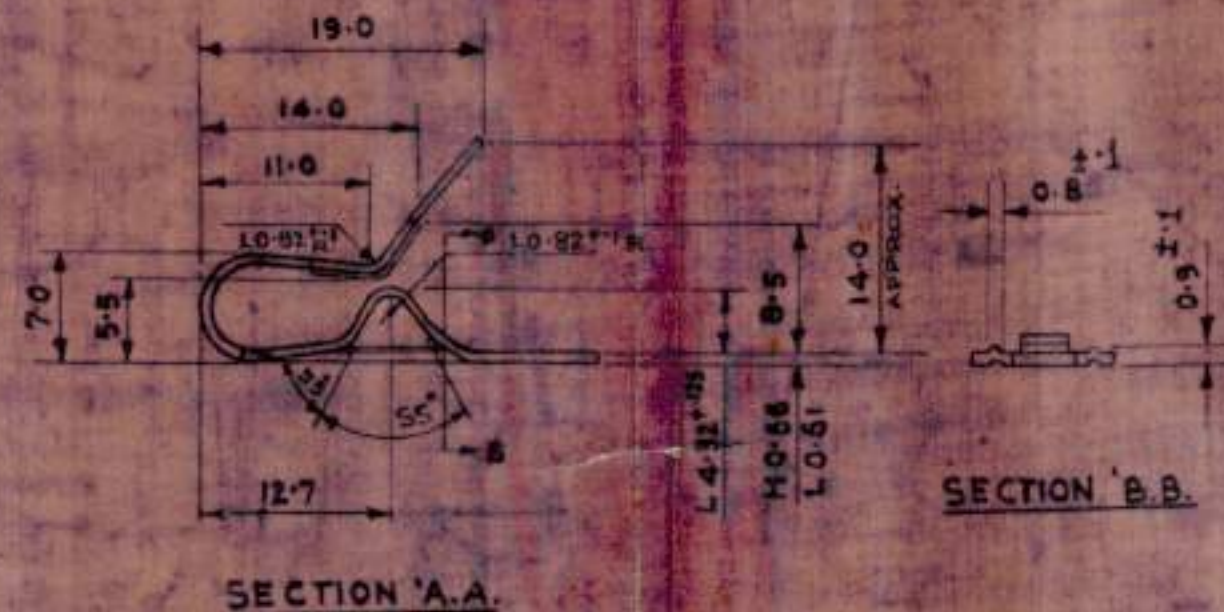
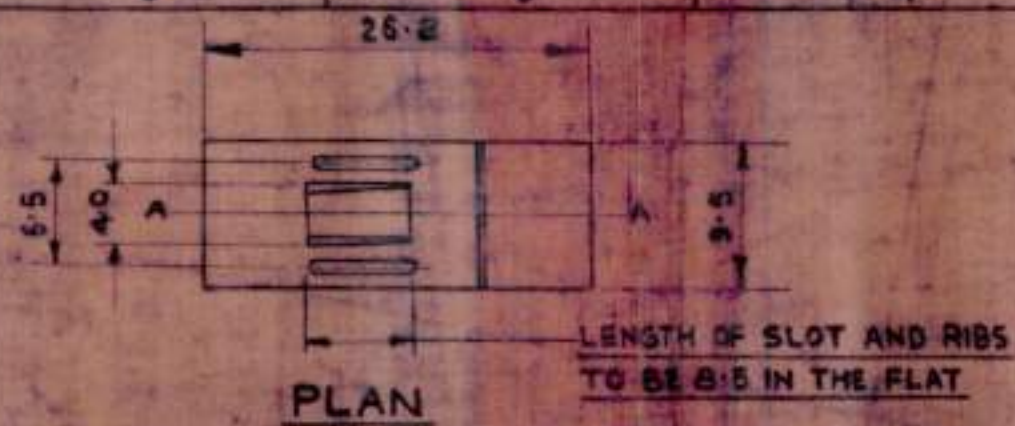


PROTECTIVE FINISH:-

ZINC PLATED TO IS: 1573. Pz 2m. 25.

6-6-79		APPROVED (REDRAWN & METRICIZED)			
R. NO	DATE	ZONE	BRIEF RECORD		AUTHORITY INITIALS
SCALE:- 1:1	TOL.		DIMENSIONS IN MILLIMETRES		ASSY. DRG. NO. NAD.7533/1
DGN. -	DRN. BY	TCO BY	COMP. BY	CHD. BY	ASSY. DRG. LIST
PASSED BY	APPD.	GEN. SPEC.:- N.A. SPEC. A-31 B			DTE. OF NAVAL ARMAMENT INSPECTION, N. HQ., NEW DELHI
MATL.:- STEEL STRIP		STORE SPEC.:-			
MATL. SPEC.:- G.C.Q. (IS: 1578; C-20)		STORE REF. NO.:-			
PROTECTIVE FINISH:- SEE DRG.			D.S. CAT. NO.:-		Gauge Sch. No.:-
FORK					
					DRG. NO NAD.7533/1B

A-4



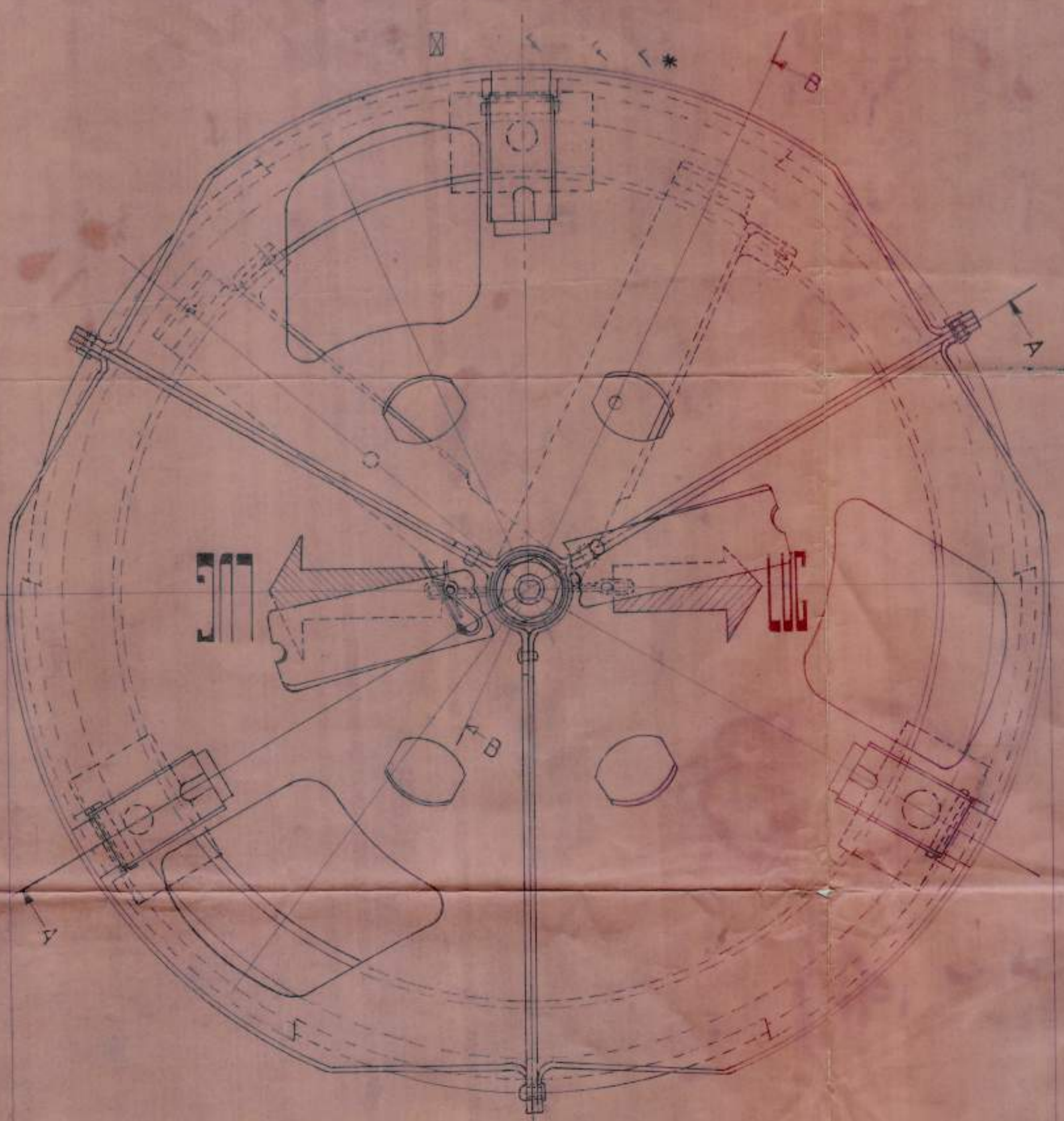
TESTS

1. CLIP TO BE FULLY DEPRESSED THREE TIMES. IT MUST THEN SHOW NO SIGN OF PERMANENT SET OR EVIDENCE OF CRACKING.
2. WIRE SAFETY NO. 1 MK 3 WHEN FITTED TO CLIP MUST SUPPORT A LOAD OF 1.6 KG. (MM).

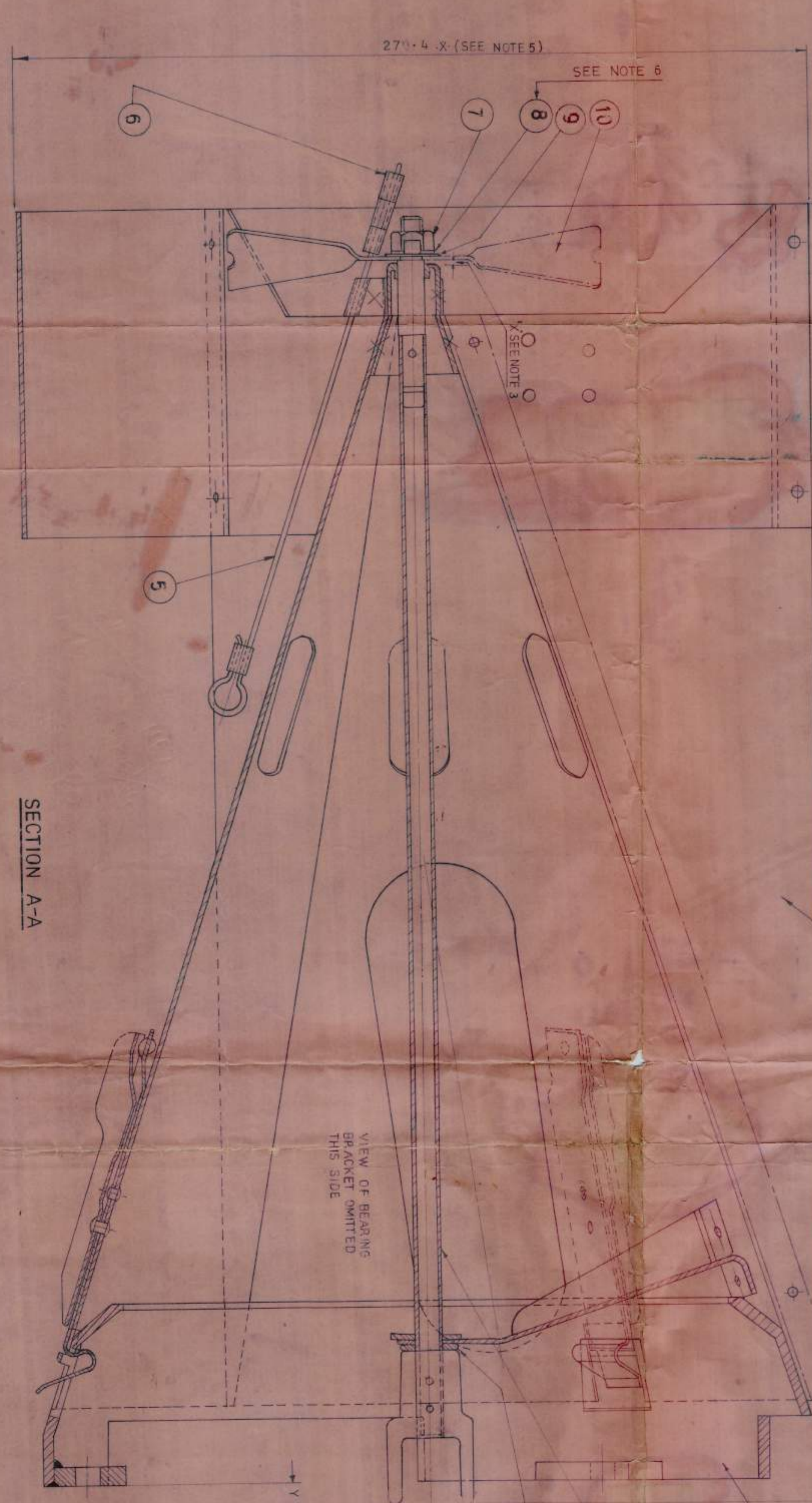
SCALE: 2:1		DIMENSIONS IN MILLIMETRES TOL.		D.S. CAT. NO.		ASSY. DRO. NO.	
DGN. —		DRN. —		TCD. <i>Quality</i>		COMP. <i>...</i>	
PASSED <i>7/1/52</i>		APPROVED. <i>M. K. ...</i>		GEN. SPECN. NO. N.A. SPECN. A 31 B		ASSY. DRG. LIST	
MATERIAL: PHOSPHOR BRONZE		MATERIAL SPEC. 1-155-402-15 P5 103 EXTRA HARD		STORE SPECN. NO.		STE. OF NAVAL ARMAMENT INSPECTION N.H.Q., NEW DELHI.	
PROTECTIVE FINISH: P.		AUTHORITY INITIALS		STORE REF. NO.		GAUGE SCH. NO.	

CLIP SAFETY AIRCRAFT, BOMB, FUZE OR PISTOL, NO. MARK I / AIR /

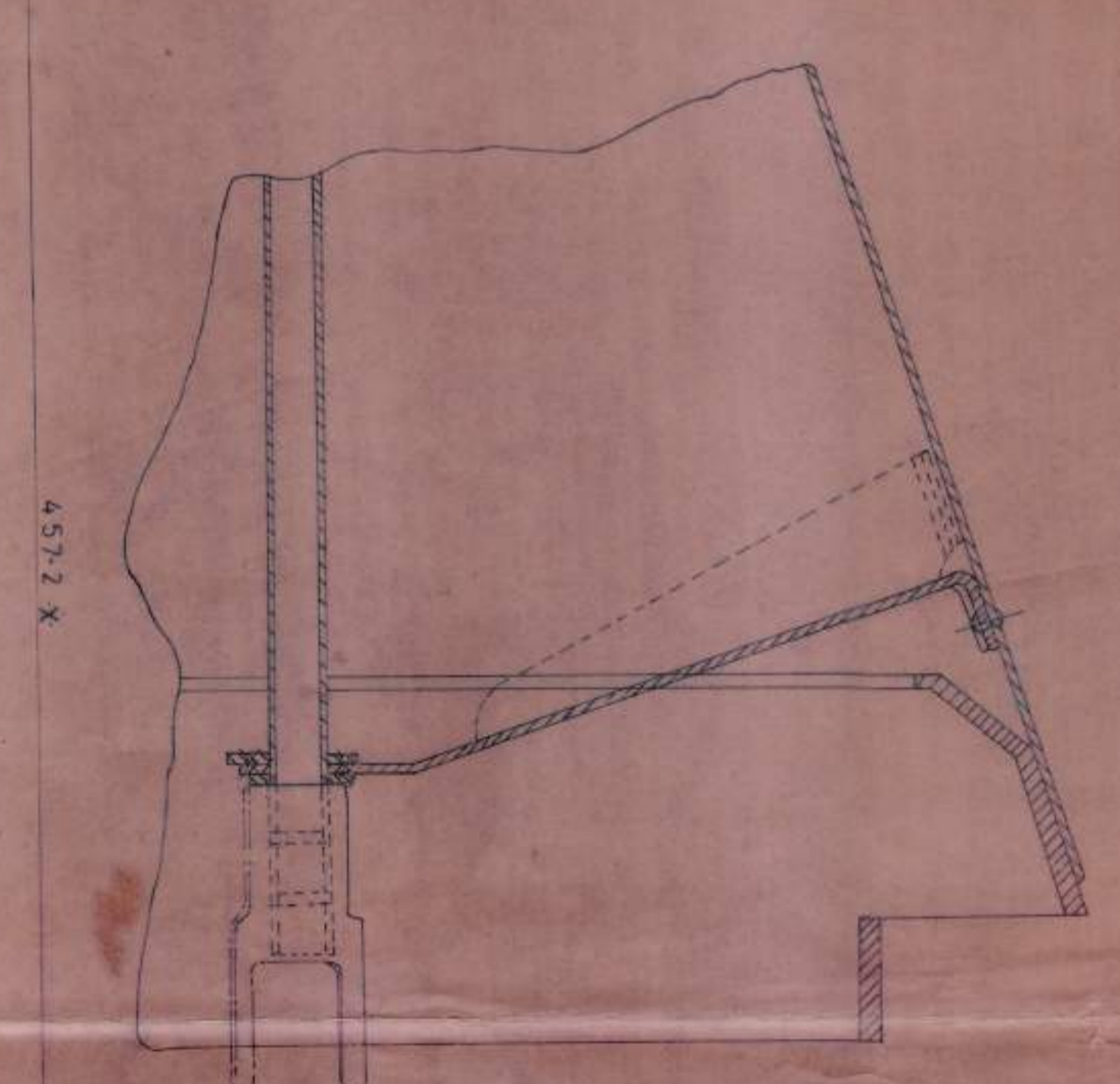
DWG. NO. NAD. 8097



270.4 x
(SEE NOTES)



270.4 x (SEE NOTE 5)



457.2 x

- NOTES-**
1. THE COMPLETE TAILLESS RING ADAPTOR (ITEM 2) IS TO BE FITTED TO A MASTER RING ADAPTOR MADE TO THE NOMINAL DIMENSIONS AS PER D.D. No. NAD 7533/10 AND HAVING A CENTRAL HOLE OF $\phi 34.3$ IN THE PLANE OF THE LUGS.
 2. THE TAIL WHEN SO FITTED, IT MUST BE POSSIBLE TO ROTATE FREELY THE ARMING SHAFT WITHOUT THE FORGINGS IN TO CONTACT WITH HOLE $\phi 34.3$ FOR ASSEMBLY/FITTING OF TAIL BODY (ITEM 1) ON RING ADAPTOR (ITEM 2) SEE NA SPEC. A1/197 (PROV.)
 3. WITH ALL THE END CLEARANCES ON THE ARMING SPINDLE TAKEN UP AS SHOWN, DIMENSIONS 'X' IS NOT TO EXCEED 1.52 AND DIMENSION 'Y' IS TO BE 4.951 \pm 0.237.
 4. THE BEARING SURFACES OF THE ARMING SPINDLE AND THE CUPS ARE USUALLY GREASED WITH ANTI-FREEZING GREASE NO. 0 TO SPEC. K 1135.
 5. THE DIMENSIONS SHOWN X ARE APPROXIMATE AND ARE NOT BE WORKED TO, BEING INFORMATIVE ONLY.
 6. TAG OF WASHING LOCK (ITEM 6) IS TO BE SENT UP TO LOCK KIT (ITEM 7)

- MARKING-**
- THE FOLLOWING TO BE STENCILED IN 25# WHITE LETTERS-
- ✓ TAIL D.C. MK. 4*
 - ✓ 5990
 - ✓ MANUFACTURER'S INITIALS FOR RECOGNISED TRADE MARK.
 - ✓ DATE OF MANUFACTURE
 - ✓ LUG & ARROW
- ON TAIL SURFACE
- ON END VIEW AS SHOWN

ITEM NO.	DESCRIPTION	DRG. NO.	QTY.	REMARKS
1	BODY TAIL	NAD. 7533/1	1	
2	RING ADAPTOR	NAD. 7533/10	1	
3	SPINDLE ARMING (STAMP No. 6879)	NAD. 7533/11	1	
4	WASHER 10.5. IS. 2015 BRASS	N.T. DRAWN	1	
5	WIRE SAFETY No. 1 MK. 1	NAD. 7533/5	1	
6	CLIP SAFETY No. 1 MK. 1	NAD. 6097	3	
7	HEX NUT 5/16 BSW	NOT DRAWN (ST089/5)	1	
8	WASHER LOCKING (STAMP No. 6880)	NAD. 7533/15	1	
9	WASHER DISTANCE (STAMP No. 6851)	NAD. 7533/16	1	
10	VANE ARMING (STAMP No. 6879)	NAD. 7533/14	1	
11	HEX NUT 5/16 BSW	NOT DRAWN (ST089/5)	3	REQUIRED FOR
12	WASHER SINGLE COIL LOCK 8.15.1063	NOT DRAWN	3	FLYING TAIL TO
13	STD. TAIL BEARING	NAD. 7533/17	3	DEPTH CHANGE

TAIL D.C. MK. 4* STAMP No. 6990

NAD. 7533

SCALE	DATE	BY	CHKD.	APP'D.	REV.	REVISION
1:1	12/08/89					

DATE	BY	CHKD.	APP'D.	REV.	REVISION
12/08/89					



Quality Assurance Plan



Document ID	QAP-00028
Subject	TAIL D.C. MK-4-STAMP NO. 6990 TO DRAWING NO. NAD-7533.
Revision	A
Release Date	04-Aug-2023 15:28
Effective From	04-Aug-2023 10:30

Prepared By	Checked By	Approved By
970566	970566	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-00028 A	TAIL D.C. MK-4-STAMP NO. 6990 TO DRAWING NO. NAD-7533.	Page 1 of 6
	Quality Assurance Plan	



Quality Assurance Plan



QAP/ATP

This quality assurance 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 applicable, 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. Nomenclature & Drawing No.:

Tail D.C. MK-4-Stamp No.6990 & Drawing no. NAD. 7533

2. Dimension & Tolerance:

As per relevant IS/BS/BIS standard etc. mention in drawing of item/component. In case of assembly or subassembly drawings the type of fit should be follow as per relevant drawings. Angular or linear attachment or fitting at any location should be as per drawings.

3. Material & Heat Treatment Condition:

As mentioned in drawing no. **NAD. 7533**

3.1 Test/Checks and Acceptance criteria for Material.

SL. NO	TEST/CHECK	PARAMETER	ACCEPTANCE/AS PER APPLICABLE SPECIFICATION
1	Chemical composition	Composition	As per Standard/Specification mentioned in drawings
2	Mechanical properties	Tensile Strength	As per Standard/Specification mentioned in drawings
		Yield Stress	As per Standard/Specification mentioned in drawings
		% Elongation	As per Standard/Specification mentioned in drawings
		Hardness	As per Standard/Specification mentioned in drawings
3	Environmental impact test	Corrosion test, Oil /grease résistance, Water Resistance test, etc.	As per Standard/Specification mentioned in drawings

3.2 Manufacturer has to supply one test piece from bulk of material used for manufacturing along with item/component etc. supplied to GCF for testing as per specification. (Factory may check chemical/ mechanical and other properties whenever required)

QAP-00028 A	TAIL D.C. MK-4-STAMP NO. 6990 TO DRAWING NO. NAD-7533.	Page 2 of 6
	Quality Assurance Plan	



Quality Assurance Plan



4. Method of manufacture *:

4.1 Manufacturer has to strictly follow the Scope of Design and Manufacturing if given in the drawing.

4.2 Item/component made by casting/machining/forging /welding etc. should meet the dimension, tolerances, surface finish, surface treatment etc. as specified in drawing. If there is any ambiguity in relation to drawing of items/components/specification, then he has to consult the GCF factory before mass production of item/component.

4.3 Manufacturer has to specify the method of manufacturing of items/components/assembly/subassembly like Casting/Forging/Machining/Welding etc. other operations used so that final outcome has specified chemical and mechanical properties. During and after machining, all dimensions and surface finish should be maintained as per specified drawing/standards.

5.0 Inspection:

Following methodology is to be followed for inspection.

5.1 Mode of Inspection & Sample Size/Selection:

5.1.1 **At Firm Premises:** A team from GCF end will be deputed for Inspection of material/components/items at firm premises. Sample from bulk quantity will be selected by the team and will be send for inspection at NABL/GOVT laboratory for testing's as per specification. The bulk quantity before dispatch will be sealed and sign by the team and Firm representative. The manufacturer will also provide 100% pre inspection report of item /components/material along with the lot of material supplied As per input material inspection SOP.

5.1.2 **At Receipt End:** Inspection at GCF end will be done by Material inspection department as per sampling plan specified in IS standard 2500 part-II, 1965. Selected sample from bulk will be tested in GCF laboratory or any other NABL/GOVT lab to ensure the quality as applicable. Firm has to provide sample of raw material used for manufacturing along with each lot supplied. As per AWEIL input material inspection SOP.

QAP-00028 A	TAIL D.C. MK-4-STAMP NO. 6990 TO DRAWING NO. NAD-7533.	Page 3 of 6
	Quality Assurance Plan	



Quality Assurance Plan



5.2 Visual Inspection

S.NO.	DETAILS OF FEATURE	ACCEPTANCE CRITERIA
A	All Sharp Edges & Burrs	To be rounded off/chamfered and burrs to be removed
B	Surface finish.	Rust /pit marks not allowed and coating & plating is to be applied as per standard in drg.

The visual condition of item supplied by vendor should be in acceptable condition and free from corrosion, rust and other environmental impact. The item /component surface or subsurface supplied should be free from pits, cracks, flaws and other defects which may affect its functionality in future.

5.3 Dimensional Inspection:

All dimensions (critical, major & minor in nature) & geometrical features of drawings are to be covered in check sheet and should be duly inspected by concerned quality control section. Components, having dimensions as per drawing, should only be accepted by inspectorate. No deviation in dimension or in geometrical feature is permitted. Latest and calibrated measuring instrument with high accuracy as possible to be used for measurement. If computerized measuring machine like coordinate measuring machine etc. are used for measurement their details along with tolerance and least count to be provided along with the report or mentioned in report.

5.4 Quality Assurance officer - Controllerate of naval armament

6. Other Test on Semi-finished/finished Component.

6.1 Details of tests /check on Semi-finished/ finished items and acceptance criteria:

S No.	TEST / CHECK	SAMPLE SIZE	ACCEPTANCE CRITERIA
A	Hardness Test (In process Inspection)	100%	If applicable, Hardness Within Specified hardness Range as per Standard.
B	Surface Treatment /Coatings	100%	As per standard if applicable
C	Environmental /Corrosion test	As applicable	If applicable as per standard specified

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6.2 It is to be ensured by vendor that item/component /material supplied having homogeneous chemical/mechanical/physical properties and having uniform surface coating/ treatment /hardness throughout the cross section as mentioned in relevant drawing/standard or specification.

6.3 Surface treatment as per specification mentioned in drawing.

7. List of Documents:

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

- (1) Pre inspection report of material/component/item as per specification and standard mentioned in drawing.
- (2) Certificate of conformity by supplier if applicable.
- (3) Vendor should submit dimensional report of material/item/component along with details of instrument and their tolerances as applicable as per Para 4.3 (sample 100%)
- (4) In material test report Heat treatment process and condition should be clearly mentioned and as per specification mentioned in drawing,
- (5) Material Chemical/Mechanical/Physical/ Microstructure/Load test report as per relevant standard and specification mentioned in drawings of supply order from authorized GOVT/NABL /DGQA Laboratory.
- (6) Vendor should ensure at least 90% reliability of item/component.
- (7) Guarantee/ Warranty certificate as per relevant supply order.
- (8) Life testing/Reliability report for items like bearings etc. as applicable for items which are specially designed or developed for GCF factory.

8. Important Note:

- (1) Hardware items of best trade Quality to be used.
- (2) Final authority of acceptance is based on the Fit for Trial (FFT) report of item/material/component.
- (3) Use rust preventative after integration, location specified as per drawings specification; if applicable.
- (4) If any query arises pertaining to dimensions, standards (viz. mechanical properties, chemical composition, Heat treatment etc.) or any other aspects which are mentioned in QAP but the same is mismatched with actual drawings/standards, then the firm should intimate GCF with details explanation. The commencement of bulk production only be initiated after the proper clarification received from GCF Jabalpur.

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SUMMARY OF CHANGES

SL No	Document	Rev	Change
1	TAIL D.C. MK-4-STAMP NO. 6990 TO DRAWING NO. NAD-7533.	A	Initial Release

SUMMARY OF CHANGES

“Summary of Change and Signoff History”

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