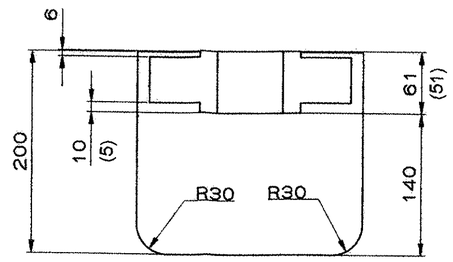
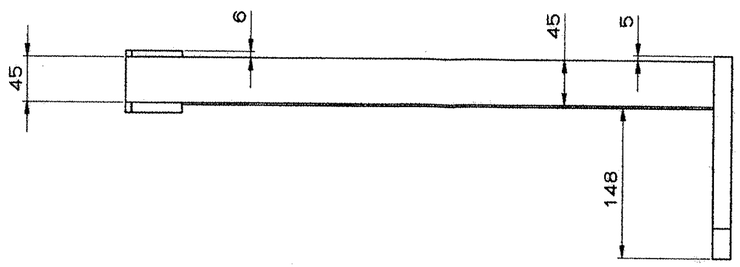
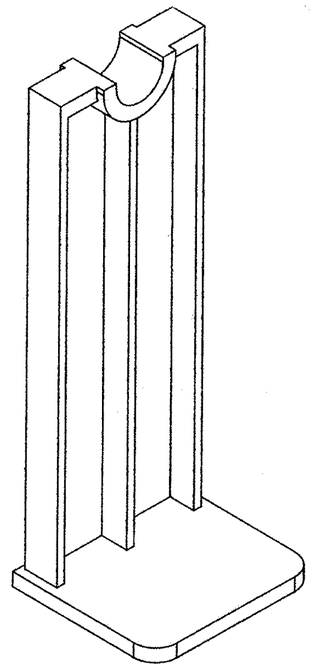
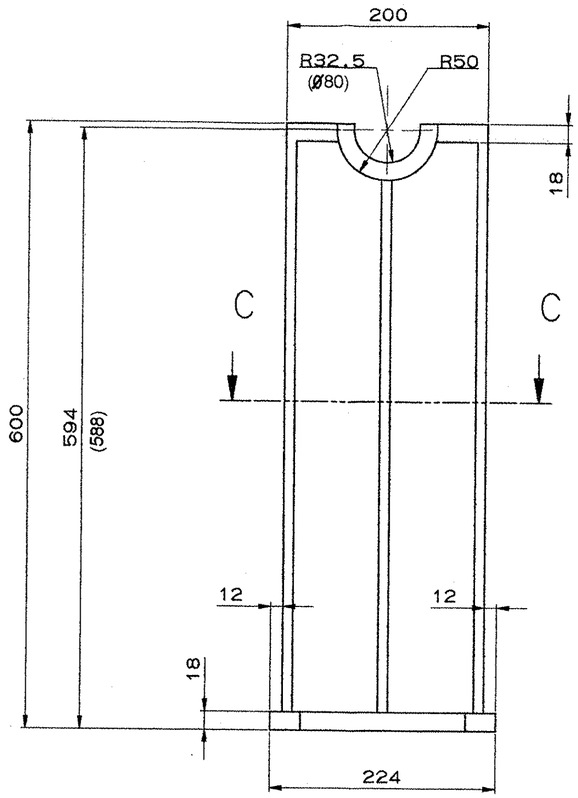
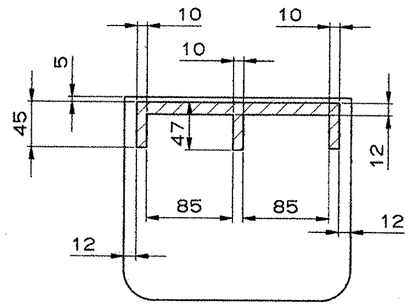










SECTION C-C

NOTE:
1. CASTING TO BE DULY CLEANED & FREE FROM FINS, RUNNERS, RISERS ETC.
2. CASTING TO BE FREE FROM CRACKS, BLOW HOLES & OTHER CASTING DEFECTS.
3. CASTING TO BE SUPPLIED IN HEAT TREATED CONDITION TO ACHIEVE MECHANICAL PROPERTIES AS SPECIFIED.
4. ALL UNSPECIFIED RADII ARE 5mm.
5. CASTING AND TEST BAR SHOULD BE SUPPLIED AT SAME HEAT TREATED CONDITION.
6. CASTING SHOULD BE TESTED FOR RADIOGRAPHIC TEST AS PER ASTM E-446-1998, LEVEL-II
7. MACHINING SIZE SHOWN IN BRACKET

***

MATL.: Gr A2 BS:3100
ALT. MATL:-GR 280-520W IS:1030-89

GRADE	C	Si	Mn	Cr	Ni	S Max	P Max	CU Max	YIELD STRENGTH (Min)	ULTIMATE TENSILE STRENGTH (Min)	PERCENTAGE ELONGATION % (Min)	REDUCTION OF AREA % (Min)	IMPACT STRENGTH (Min)	ANGLE OF BEND (Min)
GR 280-520 W IS:1030-89	0.25 #	0.60	1.20	0.35 +	0.40 +	0.035	0.040	0.40 +	280 MPa ❶	520 MPa	18	25	22 Kgf.m/cm2	60°
Gr A2 BS:3100	0.35 Max	0.60 Max	1.0 Max	-	-	0.060	0.060	-	260 N/mm2	490 N/mm2	18	-	20 J.Min	90°

\# FOR EACH REDUCTION OF 0.01% CARBON BELOW 0.25% AN INCREASE OF 0.04% MANGANESE ABOVE THE MAXIMUM SPECIFIED WILL BE PERMITTED UPTO A MAXIMUM OF 1.40% FOR GRADE 280-520W

\+ THE TOTAL CONTENT OF THESE RESIDUAL ELEMENTS SHALL NOT EXCEED 1.00%

❶ IF MEASUREABLE THE UPPER YIELD STRESS, OTHERWISE 0.2 PERCENT PROOF STRESS.

NOMINAL SIZE & FIT	DEVIATION

No.OFF	DESCRIPTION	PART No.	MATERIAL	STANDARD	DIMENSIONS	REMARKS
1	CASTING FOR LAUNCHER MOUNTING BRACKET-II	***				23.1 Kg

GENERAL TOLERANCE

LINEAR DIMENSIONS

0-6	±0.1
6-30	±0.2
30-120	±0.3
120-315	±0.5
315-1000	±0.8
1000-2000	±1.2

ANGULAR DIMENSION

1-10	±1°
10-50	±30'
50-100	±20'
>100	±10'

VALUE IN "um"

~	>25
▽	8-25
▽▽	1.6-8
▽▽▽	0.025-1.6
▽▽▽▽	<0.025

CONTROLLERATE OF NAVAL ARMAMENT INSPECTION MUMBAI

CTC

(G Ramesh)
Commander
Chief Inspector of Naval Armament
for Controller of Naval Armament Inspection

No.	ALTERATION	DATE	NAME

CASTING FOR LAUNCHER MOUNTING BRACKET-II
LAUNCHER BRACKET ASSY.-II
LRMR LAUNCHER
KAVACH MOD-II

SCALE 1:1

DRAWN	02.02.09	VIJAY
CHECKED	"	
APPROVED		

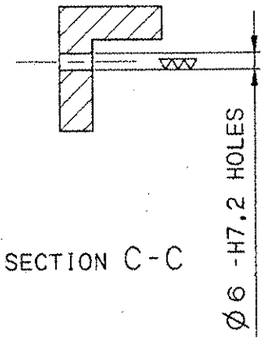
REPLACED BY

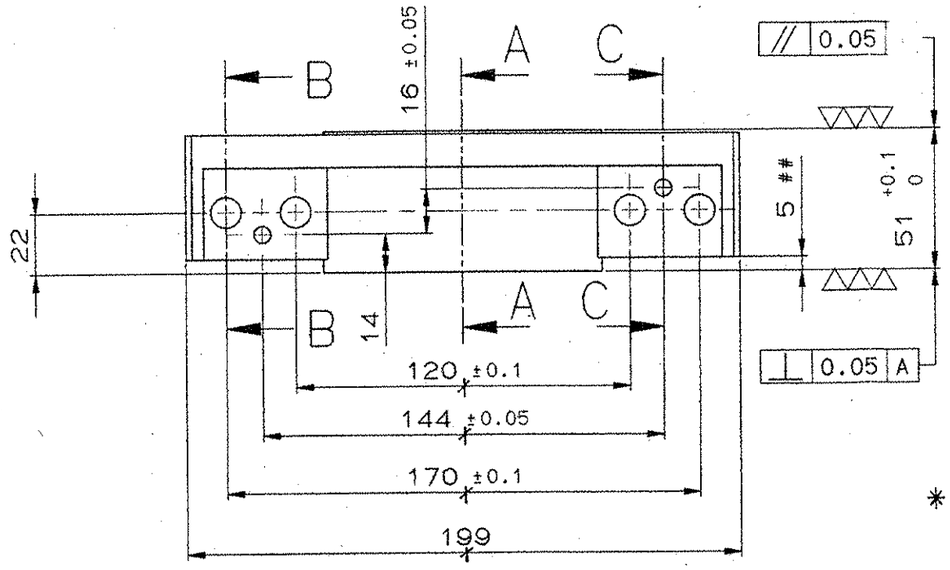
REPLACED FOR

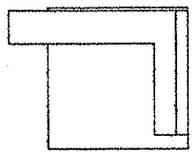
MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH

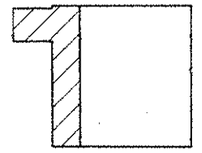
Design Office

DRAWING No. DW-1108-0903-12-2

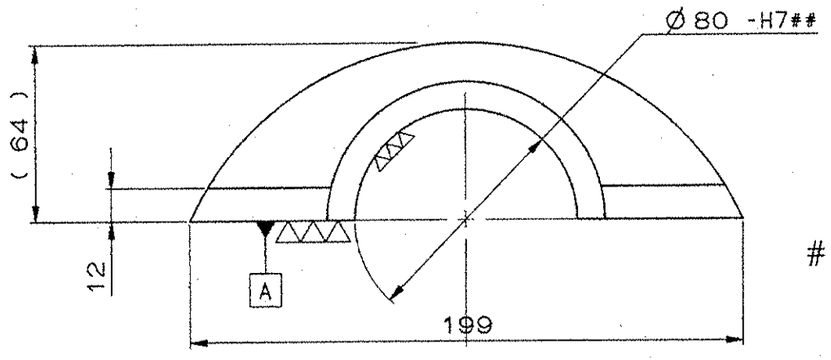


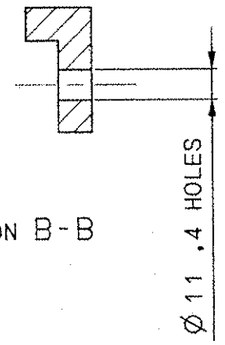


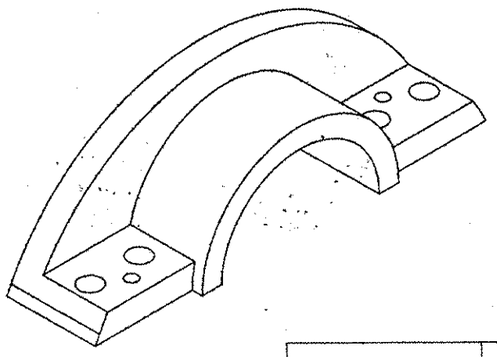




SECTION A-A







*** PHOSPHATING AND PAINTING

1. PHOSPHATING TO BE DONE AS PER IS:3618 CLASS B
2. PRIMER RED OXIDE TO STANDARD IS:12744 TO BE APPLIED BY FIRM WHO IS SUPPLYING STORE TO MPFAS PER DW-1134
3. PAINTING TO BE DONE AT MPF IN OR DURING ASSEMBLY AS PER DW-1134
4. DO NOT APPLY PRIMER AND PAINT ON BORE SURFACE

\#\# TO BE FINISHED IN ASSY. WITH DW-1108-0903-12 AFTER SCREWING AND DOWELING

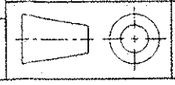
** TO BE MANUFACTURED FROM DW-1108-0904-13-2

▽▽(▽▽▽)

No.OFF	DESCRIPTION	PART No.	MATERIAL	STANDARD	DIMENSIONS	REMARKS
1	MOUNTING BLOCK		**			***

GENERAL TOLERANCE	
LINEAR DIMENSIONS	
0-6	±0.1
6-30	±0.2
30-120	±0.3
120-315	±0.5
315-1000	±0.8
1000-2000	±1.2
ANGULAR DIMENSION	
1-10	±1°
10-50	±30'
50-100	±20'
>100	±10'
VALUE IN "um"	
~	>25
▽	8-25
▽▽	1.6-8
▽▽▽	0.025-1.6
▽▽▽▽	<0.025

NOMINAL SIZE & FIT	DEVIATION
Ø6 - H7	+0.015 0
Ø80 - H7	+0.035 0



CONTROLLERATE OF NAVAL ARMAMENT INSPECTION MUMBAI

(G Ramesh)
Commander
Chief Inspector of Naval Armament
for Controller of Naval Armament Inspection

No.OFF	DRG. No. OF ASSOCIATED PART	INDEX	ALTERATION	DATE	NAME

MOUNTING BLOCK
LAUNCHER MOUNTING BRACKET ASSY-II
LR-MR LAUNCHER
KAVACH MOD-II

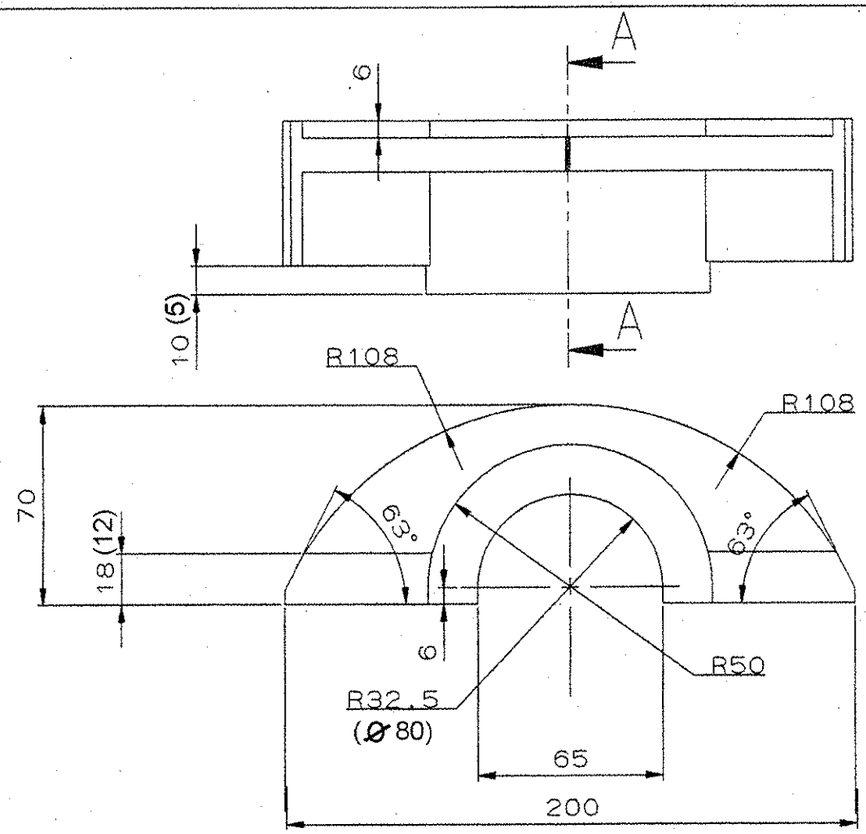
SCALE			
1:1	DRAWN	02.02.09	VIJAY
	CHECKED	〃	
	APPROVED		

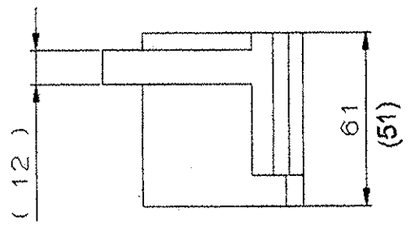
REPLACED BY
REPLACED FOR

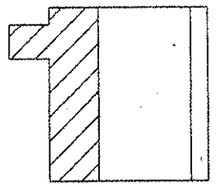
MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH

Design Office

DRAWING No.
DW-1108-0904-13



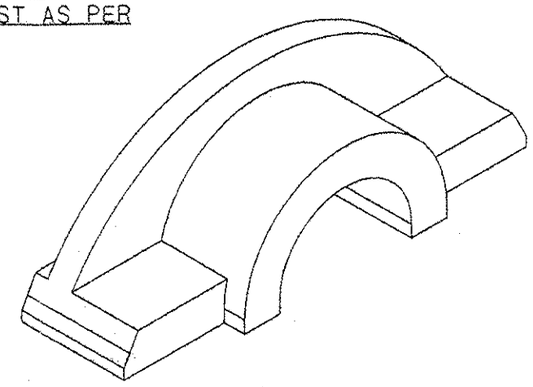




SECTION A-A

NOTE:
1. CASTING TO BE DULY CLEANED & FREE FROM FINS, RUNNERS, RISERS ETC.
2. CASTING TO BE FREE FROM CRACKS, BLOW HOLES & OTHER CASTING DEFECTS.
3. CASTING TO BE SUPPLIED IN HEAT TREATED CONDITION TO ACHIEVE MECHANICAL PROPERTIES AS SPECIFIED.
4. ALL UNSPECIFIED RADII ARE 5mm.
5. CASTING AND TEST BAR SHOULD BE SUPPLIED AT SAME HEAT TREATED CONDITION.
6. CASTING SHOULD BE TESTED FOR RADIOGRAPHIC TEST AS PER ASTM E-446-1998, LEVEL-II
7. MACHINING SIZE SHOWN IN BRACKET

* * * MATL.: Gr A2 BS:3100
ALT. MATL:-GR 280-520W IS:1030-89



GRADE	C	Si	Mn	Cr	Ni	S Max	P Max	CU Max
GR 280-520 W IS:1030-89	0.25 #	0.60	1.20	0.35 +	0.40 +	0.035	0.040	0.40 +
Gr A2 BS:3100	0.35 Max	0.60 Max	1.0 Max	-	-	0.060	0.060	-

YIELD STRENGTH (Min)	ULTIMATE TENSILE STRENGTH (Min)	PERCENTAGE ELONGATION % (Min)	REDUCTION OF AREA % (Min)	IMPACT STRENGTH (Min)	ANGLE OF BEND (Min)
280 MPa ❷	520 MPa	18	25	22 Kgf.m/cm2	60°
260 N/mm2	490 N/mm2	18	-	20 J.Min	90°

\# FOR EACH REDUCTION OF 0.01% CARBON BELOW 0.25% AN INCREASE OF 0.04% MANGANESE ABOVE THE MAXIMUM SPECIFIED WILL BE PERMITTED UPTO A MAXIMUM OF 1.40% FOR GRADE 280-520W

❷ IF MEASUREABLE THE UPPER YIELD STRESS, OTHERWISE 0.2 PERCENT PROOF STRESS.

+ THE TOTAL CONTENT OF THESE RESIDUAL ELEMENTS SHALL NOT EXCEED 1.00%

NOMINAL SIZE & FIT	DEVIATION

No.OFF	DESCRIPTION	PART No.	MATERIAL	STANDARD	DIMENSIONS	REMARKS
1	CASTING FOR MOUNTING BLOCK		* * *			2.435 Kg

GENERAL TOLERANCE	
LINEAR DIMENSIONS	
0-6	±0.1
6-30	±0.2
30-120	±0.3
120-315	±0.5
315-1000	±0.8
1000-2000	±1.2
ANGULAR DIMENSION	
1-10	±1°
10-50	±30'
50-100	±20'
>100	±10'
VALUE IN "um"	
~	>25
▽	8-25
▽▽	1.6-8
▽▽▽	0.025-1.6
▽▽▽▽	<0.025

CONTROLLERATE OF NAVAL ARMAMENT INSPECTION MUMBAI

(G Ramesh)
Commander
Chief Inspector of Naval Armament
for Controller of Naval Armament Inspection

No.OFF	DRG. No. OF ASSOCIATED PART	INDEX	ALTERATION	DATE	NAME

CASTING FOR MOUNTING BLOCK
LAUNCHER MOUNTING BLOCK ASSY.-II
LRMR LAUNCHER
KAVACH MOD-II

MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH

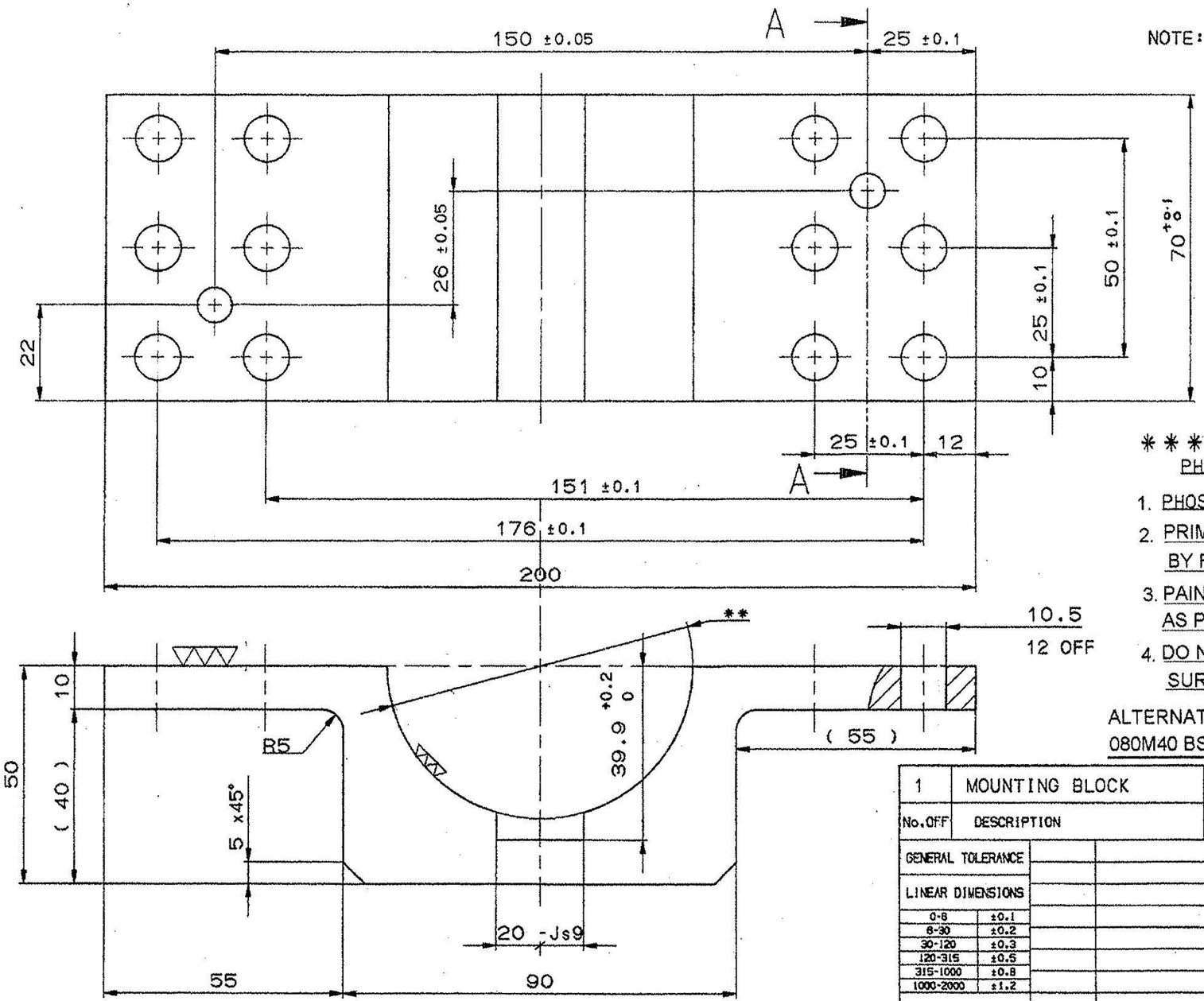
Design Office

SCALE			
1:1	DRAWN	02.02.09	VIJAY
	CHECKED	"	
	APPROVED		

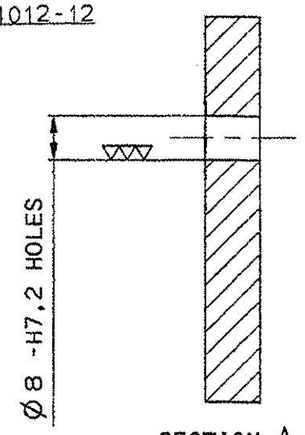
REPLACED BY

REPLACED FOR

DRAWING No.
DW-1108-0904-13-2



NOTE:- 1. ** MARKED DIMENSION Ø 70 -H7 (TO BE FINISHED IN ASSY. WITH DW-1108-1012-12



SECTION A-A

*** PHOSPHATING AND PAINTING

1. PHOSPHATING TO BE DONE AS PER IS:3618 CLASS B
2. PRIMER RED OXIDE TO STANDARD IS:12744 TO BE APPLIED BY FIRM WHO IS SUPPLYING STORE TO MPF AS PER DW-1134
3. PAINTING TO BE DONE AT MPF IN OR DURING ASSEMBLY AS PER DW-1134
4. DO NOT APPLY PRIMER AND PAINT ON THREAD AND BORE SURFACE

ALTERNATE MATERIAL :- EN-8 OR 080M40 BS:970 PART-I 1983

▽▽ (▽▽▽)

No.OFF	DESCRIPTION	PART No.	MATERIAL	STANDARD	DIMENSIONS	REMARKS
1	MOUNTING BLOCK		40C8, IS:5517			***

GENERAL TOLERANCE	
LINEAR DIMENSIONS	
0-6	±0.1
6-30	±0.2
30-120	±0.3
120-315	±0.5
315-1000	±0.8
1000-2000	±1.2
ANGULAR DIMENSION	
1-10	±1°
10-50	±30'
50-100	±20'
>100	±10'
VALUE IN "um"	
~	>25
▽	8-25
▽▽	1.6-8
▽▽▽	0.025-1.6
▽▽▽▽	<0.025

No.OFF	ORG. No. OF ASSOCIATED PART	INDEX	ALTERATION	DATE	NAME

70 Ø -H7	+0.030 0
20-Js9	±0.026
NOMINAL SIZE & FIT	DEVIATION

MOUNTING BLOCK
LAUNCHER ASSEMBLY
LRMR LAUNCHER
KAVACH MOD-II.

MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH

Design Office

SCALE	DRAWN	24.01.09	
1:1	CHECKED	"	
	APPROVED	27/1/2009	

REPLACED BY
REPLACED FOR
REVISION 0

DRAWING No.. DW-1108-1011-13

APPROVED