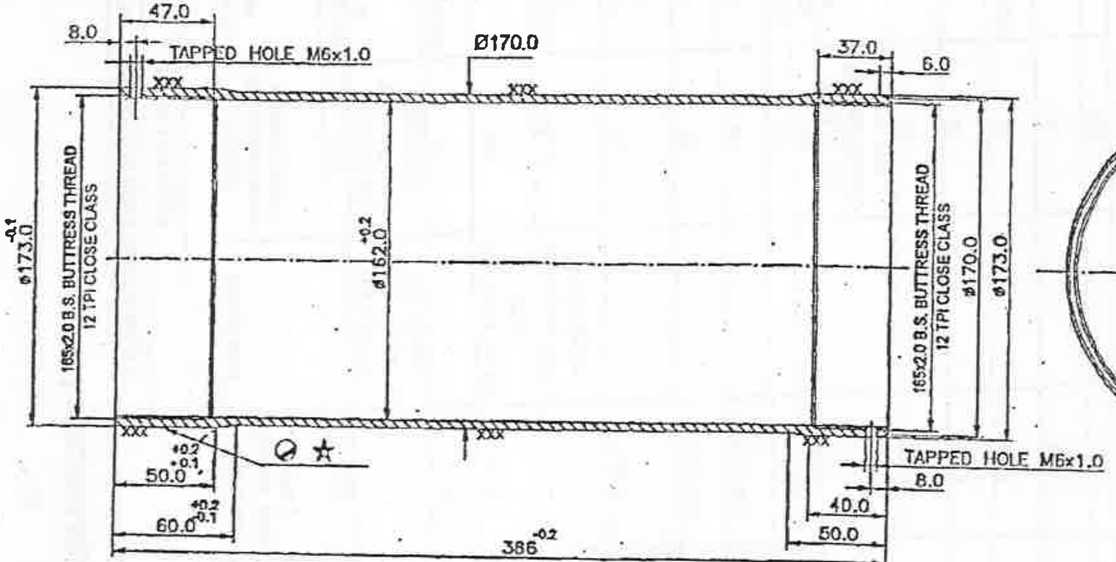
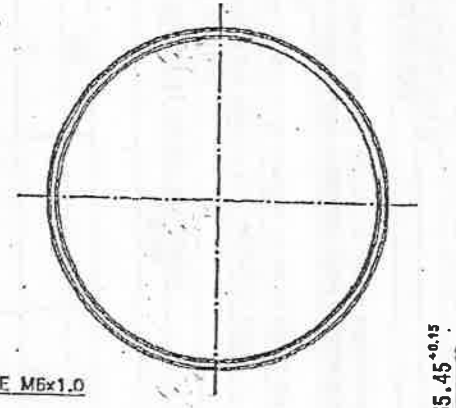
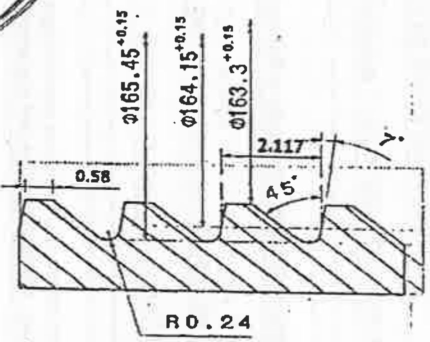
Rev No	Revision Note	Zone	Date	Authority	Sign
1.	AMENDED AS PER ARD	-	19-09-2019	ARD 2576	







DETAIL OF THREADS

NOTES:

1. MATL :- EN24(BS:970 Gde 817M40)
2. HARDENED & TEMPERED 'U' CONDITION. 'X' CONDITION
3. (a) HYDRAULIC PRESSURE TESTING TO 330 Kgf/Cm² DURATION FOR 01 MINUTE.
   (b) PROOF PRESSURE TEST OF 420±5Kgf/Cm² FOR DURATION 10 SEC, BE CARRIED OUT AS QUALIFICATION TEST ON 01 MOTOR FOR LOT SIZE QUANTITY ≤ 100 NOS.
   (c) BURST PRESSURE TEST TO BE CONTINUED AFTER SATISFACTORY PROOF PRESSURE TEST AND VALUE BE RECORDED. TEST MAY BE DISCONTINUED AFTER ACHIEVING 520±10 Kgf/Cm², IN CASE OF SAFETY/SYSTEM LIMITAIONS, WITH CONCURRENCE OF INSPECTING AUTHORITY.
5. GEN. TOL. IS:2102 EXCEPT SPECIFIED
6. SURFACES TO BE PHOSPHATED TO IS 3618 CLASS B
7. INTERNAL SURFACE BE COATED UNIFORMLY WITH ZIRCONIUM SILICATE TO APPENDIX 'C' OF SPEC N ARDE/SPEC N/334/1985 OR APC 216 TO SPEC JSS:8010-51:09
8. EXTERNAL SURFACES MARKED XXX TO BE PAINTED WITH P U PAINT DOVE GREY (ISC No. 694 TO IS:5) EXCEPT THREADED SURFACES.
9. 100% ULTRA SONIC TEST AS PER IS:8791/98 CLASS 'A' FOR FERRITIC STEEL FORGING OR ASTM E213 FOR SEAMLESS TUBE COLD CONDITION & ANNEALED CONDITION TO BE CARRIED OUT.
10. METRIC THREAD TO CONFORM TO SPEC IS:4218
11. BUTTRESS THREAD TO CONFORM TO SPEC BS:1657
12. POST HYDRAULIC PRESSURE TEST AT MAXIMUM EXPECTED OPERATING PRESSURE (MEOP i.e. 330kgf/cm²) DP TEST TO BE UNDERTAKEN.

MARKING NOTES:-
THE FOLLOWING MARKINGS TO BE STENCILLED WITH BLACK COLOUR PAINT TO SPEC IS:138 IN 10MM LETTER SIZE LEAVING 20MM SPACE FROM BODY BASE SIDE ON OUTER SURFACE HAVING Ø173.0 -0.1 TAPPED HOLE AREA TO BE AVOIDED DURING STENCILLING:-

- Q SERIAL NO.
- ★ MANUFACTURE'S LOGO

Items	Qty	Description	Drawing No	Remarks
SCHEDULE OF COMPONENTS				

Matl & Spec	SEE DRG	Protective Finish	SEE DRG.	Dimension In MM	Gen Spec A318 / Gen Tol IS:2102
Assy Drg No	NASK 1134/1(P)	Store Ref		DCAN No	Gauge Sch No
Scale	NTS	Date	12.6.18		

नौसेना आयुध निरीक्षण महानिदेशालय
एकीकृत मुख्यालय रक्षा मंत्रालय (नौसेना)
नई दिल्ली
Dte Gen of Naval Armament Inspection
IHQ/ MoD (NAVY), New Delhi

Title: CHAMBER FORE MOTOR MOD 1

Drg No: NASK 1134/1/2(P)

SHEET

USED ON : RGB-60 MOD 1

BASED ON: NASK 1064(P)

Inspection Report

Description of the item	**CHAMBER FORE MOTOR MOD 1**
Drawing No.	NASK 1134/1/2(P)

Ser	Description of parameter	Nominal dimension as per drawing in mm	Gauge used	Tolerance (As per drg/ spec.)	Nature of Parameter	Observed dimension in mm	Deviation in mm	Remarks
1	Outer dia.at first end	173		-0.1	Major			
2	Internal thread at first end	165 x 12 TPI Butress Thread Close class	165 x 12 TPI Butress Thread 12 TPI Gauge		Major			
3	Internal thread length at first end	47		±0.3	Minor			
3	Inner dia.	162	Plug 'Go' & 'No Go' gauge	+0.2	Major			
4	Tapped hole (2 nos.) One hole per end	M6 x 1	Screw plug 'Go' & 'No Go' gauge		Minor			
5	Centre distance of tapped hole from both ends	8		±0.2	Minor			
6	Outer step length (first end)	50		+0.2 / -0.1	Major			
7	Outer step length (first end)	60		+0.2 / -0.1	Minor			
8	Other end outer dia.	173		-0.1	Major			
9	Other end step dia.	170		±0.2	Major			
10	Other end Internal thread	165 x 12 TPI Buttress Thread close class			Major			
11	Outer step length (Other end)	40		±0.3	Minor			
12	Outer step length (Other end)	50		±0.3	Minor			
13	Internal thread length at other end	37		±0.3	Minor			
14	Outer step length (Other end)	6		±0.1	Minor			
15	Overall length	386		-0.2	Major			

Special notes :

Ser	Note	Observations
1	Material:-Steel to spec BS 970 (Pt.3)-91 Gde 817 M40 (EN24)	
2	Hardened and Tempered 'X' condition	
3	(a) Hydraulic pressure testing at 330 kgf/cm² for 1 minute on 100%.	
	(b) Proof pressue test of 420±5 Kgf/cm² for duration 10 sec be carried out as qualification test on 01 motor for lot size quantity≤100 Nos.	
	(c) Burst pressure test to be continued after satisfactory proof pressure test and value be recorded. Test may be discontinued after achieving 520±10 Kgf/cm² in case of safety/system limitations with concurrence of inspecting authority.	
4	Gen Tolerence IS 2102 except specified.	
5	Surfaces to be phosphated to IS 3618 class B.	
6	Internal surface to be coated uniformly with Zirconium Silicate to Appendix C of ARDE/SPECN/334/1985 or APC 216 to Spec JSS 8010-51:09	
7	External surfaces marked xxx to be painted with PU paint colour dove grey (three coats i.e. CHEMZINC 1000 as first coat, CHEMPRIME 3001 as second coat & CHEMTHANE 3300 as third coat) (ISC No. 694 to IS-5) except threaded surfaces.	
8	100% Ultrasonic test As per IS 8791/98 class 'A' for ferritic steel forging or ASTM E213 for seamless tube cold finished condition & Annealed condiiton to be carried out.	
9	Metric thread to conform to spec IS 4218	
10	Buttress thread to conform to spec BS 1657	
11	Post hydralic pressure test at maximum expected operating pressure (MEOP ,i.e 330 kgf/cm²) DP test to be under taken	
12	100% thread gauging to be undertaken to check major dia 165 x 12 TPI Butress Thread close class	
13	Thread profile is to be checked on 10% of the lot size.	
14	Manufacturer's logo and Serial No. to be engraved in white stage and stencilled with black colour post painting to Spec IS 138 in 10mm letter size leaving 20mm space from body base side on outer surface having Ø173.0 -0.1 a . Tapped hole area to be avoided during stenciling.	

K. KASTURI, Jwn)

(A Ramesh)

HEPF, TRICHY

The HIGH ENERGY PROJECTILE FACTORY (HEPF) is an Indian Defence establishment under Munitions India Limited, A Government of India Enterprise, Ministry of Defence, for production of anti tank kinetic energy projectiles of various calibers and the factory is located about 25 kilometres from the main city of Tiruchirappalli.

SCOPE OF WORK

PR No: 2300160

MACHINING OF RGB60 CHAMBER FORE MOTOR FROM STEEL TUBE (OD 180MM ID 155 MM AND LENGTH 400MM) AS PER DRG No: NASK 1134/1/2 (P) AND QUALITY ASSURANCE PROCEDURE (QAP)

1. Raw material, steel tube (OD 180mm ID 155 mm and length 400mm) BS 970(Pt3)-91Gde 817 M40 (EN24), Hardened and Tempered to X condition and weight 21.5 KGs approximately will be supplied by HEPF .
2. The firm has to carry out only machining work of Chamber Fore Motor including pressure test & burst test.
3. The firm need not return the scrap generated during machining, however, the firm should submit their offer lowest by taking the cost of steel scrap of 15 kgs (approx) generated in machining into account.
4. The firm shall do all the test (pressure test for every component & burst test for one No out of 100 nos) and maintain the operation sequence as per drawing and QAP. The test to be carried out as per QAP in presence of inspection authorities.
5. The firm has to take utmost care to avoid material rejection due to dimensional/ process deviation during machining.
6. In case of rejection exceeds 2%, the existing cost of raw material will be recovered from the firm. The firm shall also return the rejected components to HEPF.
7. The firm should submit Bank guarantee for the cost of raw material for minimum50 Nos, and collect the material from HEPF store within 10 days of placement of supply order.
8. Firm should make their own arrangement (including loading/ unloading) for collection of raw material from HEPF stores and deliver the finished / accepted components to HEPF stores.
9. Firm should submit pilot sample along with dimension report within 15 days of receipt of raw material for prior approval.
10. The pilot sample submitted by the firm shall be inspected by HEPF Quality Control Section / inspection authority before bulk production.
11. After obtaining approval of pilot sample, the firm should maintain the delivery schedule of minimum 50 Nos for every week from the date of receipt of the raw material.

QUALITY ACCEPTANCE CRITERIA:

1. The components shall be inspected by Quality Control Section /HEPF or Navel Armament of Inspectorate (NAI) as per drawing and Quality Assurance Procedure (Inspection Report). If it is confirming to both drawing and Quality Assurance Procedure (Inspection Report) the same will be accepted.

Note: 1. Prospective bidders are free to visit HEPF before bidding, for understanding the operation.

2. In case of technical clarification the bidders may contact : 0431-2584-645 & 662, 0431-2584600 Extn:271.

GO/MS **DO/MS** **OIC/MS**