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Inspection Report

Description of the Item		CHAMBER AFT MOTOR MOD 1						
Drawing No.		NASK 1134/1/5(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	External thread	150 x 12 TPI ButressThread close class	Screw ring 'Go' & 'No Go' gauge		Major			
2	Internal thread	140 x 12 TPI ButressThread close class	Screw plug 'Go' & 'No Go' gauge		Major			
3	Length of external thread	32						
4	Length without external thread	3		±0.3	Major			
5	Length of internal thread	24.5		-0.1	Major			
6	Length	36		±0.2	Major			
7	Length	70		±0.3	Major			
8	Outer dia.	143.5		±0.3	Minor			
9	Inner dia.	137.5		+0.3	Major			
10	Outer dia.	148.8	Plug 'Go' & 'No Go' gauge	+0.1	Major			
11	Outer dia.	154	Snap 'Go' & 'No Go' gauge	-0.1	Major			
12	Outer dia. step Taper angle	70°						
13	Outer dia.	143.5			Major			
14	Length	140		+0.3	Major			
15	Length	112		±0.5	Minor			
16	Length	102		±0.3	Major			
17	Length	86		±0.3	Major			
18	Length	7.5		±0.3	Major			
19	Length	7.5		±0.2	Major			
20	Outer dia.	148		±0.2	Major			
21	Length of outer dia 148	34	Snap 'Go' & 'No Go' gauge	±0.3	Major			
22	Internal thread	140 x 12 TPI ButressThread close class	Snap 'Go' & 'No Go' gauge		Major			
23	Length of above internal thread M 140 x 12 TPI	28		±0.5	Major			
24	Tapped hole on outer dia.	M 6 x 1	Screw plug 'Go' & 'No Go' gauge		Major			
25	Centre distance of above tapped hole from end	9		±0.2	Major			
26	Total Length	685		±0.2	Major			

Special Notes -

Ser	Note	Observations
1	Material:- Steel to Spec BS: 970 (Pt.3)-91 Gde 817 M 40 (EN 24)	
2	Hardened & Tempered in 'X' condition	
3	General tolerance specification IS 2102 (Medium class) except for dimensions affecting total length.	
4	(a) Hydraulic pressure testing of 330 kgf/cm ² are carried out as acceptance test for duration of 1 minute for 100% stores. (b) Post hydraulic pressure test at maximum expected operating pressure (MEOP 330Kgf/cm ²) DP Test to be undertaken.	
5	(a) Proof pressure test of 420±5 Kgf/cm ² for duration 10 sec, be carried out as qualification test on '01 motor for lot size quantity ≤100 Nos. (b) Burst pressure test to be continued after satisfactory proof pressure test and value be recorded. Test may be discontinued after achieving 520± 1 Kgf/cm ² . In case of safety/system limitations with concurrence of inspecting authority.	
6	Surface to be phosphated to IS 3618 class B.	
7	Internal surfaces to be coated uniformly with zirconium silicate to Appendix C of ARDE/SPECN/334/1985 or APC 216 to Spec JSS:8010-51:09 except threads. Dimension 137 +0.1 mm to be maintained after coating.	
8	External Surfaces marked xxx in the drawing 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.	
9	Metric thread to conform to Spec IS:4218	
10	Butress Thread to conform To Spec BS:1657	
11	100% Ultrasonic test as per IS:8791/98 class 'A' for ferritic steel forging or ASTM E213 for seamless tube cold finished condition & Annealed condition	
12	Manufacturer's logo and Serial No. to be stencilled with black colour paint to Spec IS 138 in 10mm letter size at 45mm space from commencement of 150 x 2.0 BS Butress Thread 12 TPI close class from adapter side.	
13	100% thread gauging to be undertaken to check major dia 150 x 2.0 BS Butress Thread 12 TPI close class & 140 x 2.0 BS Butress Thread 12 TPI close class.	
14	Thread profile is to be checked on 10% of the lot size.	

By: *ASD/R1, Jany*

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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: 2300162

MACHINING OF RGB60 CHAMBER AFT MOTOR FROM STEEL TUBE (OD 159MM ID 132.8MM AND LENGTH 700MM) AS PER DRG No: NASK 1134/1/5 (P) AND QUALITY ASSURANCE PROCEDURE (QAP)

1. Raw material, steel tube (OD 159mm ID 132.8mm and length 700mm) BS 970(Pt3)-91Gde 817 M40 (EN24), Hardened and Tempered to X condition and weight 33 KGs approximately will be supplied by HEPF .
2. The firm has to carry out only machining work of Chamber AFT 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 24 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 minimum 50 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:

12. 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