MANUFACTURING QUALITY PLAN - ROCKET SHELL - RGB 60

ITEM DESCRIPTION	**DIAPHRAGM (NOZZLE PLATE)**
REF. DOCUMENT	NASK 1071/4 (P)
MATERIAL	Steel casting to spec IS:2856 Gde 2 Normalised condition

Component name/operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI
Diaphragm (Raw material)	General finish, appearance & blow holes	Semi critical	Visual	100%	IS 2856 Gde 2 for material. Blow holes to be inspected as per IS 5530.	IS 2856 Gde 2 for material. Blow holes to be inspected as per IS 5530.	Inspn. Report	Vis. Inspn.
	Chemical properties	Critical	Chemical lab analysis	Three samples per lot or as per the discretion of inspection authority			Test report from NABL Lab	Accept. By NAI
	Mechanical properties	Critical	Mechanical lab analysis	Three samples per lot or as per the discretion of inspection authority			Test report from NABL Lab	Accept. By NAI
In process - Pattern making, casting, normalizing, turning and drilling	Dimensions specified in the inspection report of the component	Critical	Dimensional measurement	100% or as per the discretion of inspection authority	Tolerance as specified in Drg.NASK 1071/4(P)	Tolerance as specified in Drg.NASK 1071/4(P)	NAI Inspection report	Accept. By NAI
Final finish	Radiographic examination	Critical	Visual	100%	As per IS 12938	As per IS 12938	Test report from NABL Lab	Accept. By NAI
	Phosphating	Critical	Visual & Sample	100%	IS 3618 class B	IS 3618 class B	Test report from NABL Lab or NAI inspection report	Accept. By NAI
	Painting (Oilive Green)	Critical	Visual & Sample	100%	ISC 220 to IS 5	ISC 220 to IS 5	Test report from NABL Lab or NAI inspection report	Accept. By NAI

VETTED

Naval Armament Inspectorate
Tiruchirapalli

Inspection Report

Description of the item	**DIAPHRAGM (Nozzle plate)**
Drawing No.	NASK 1071/4 (P)
Date of Inspection	

Sno.	Description of parameter	Nominal dimension as per drawing in mm	Gauge used	Tolerance (As specified in the drg.)	Nature of Parameter	Observed dimension in mm	Deviation in mm	Remarks
1	Outer dia.	136		+0.1 / -0.2	Major			
2	Outer spigot dia.	128		±0.1				
3	Inner dia.	119		±0.1				
4	Inner dia.	111		+0.2 / -0.1				
5	Inner dia.	81		±0.1				
6	Collar outer dia.	74		±0.1				
7	Collar inner dia.	60.8		+0.2				
8	Pin dia.on spigot 128 dia.(2 nos. diametrically opposite)	5.0		-0.1				
9	Centre distance of above holes from face	6.5		+0.1				
10	Inner length	24		±0.1				
11	Inner dia.(Other end)	70						
12	spigot dia (Other end)	81		±0.1				
13	Outer length	30		±0.1				
14	Length	18		±0.1				
15	Spigot 81 dia.deep	4.5		±0.1				
16	Rib thick	7.5		±0.2				
17	Pin dia on PCD 123 (2 nos)	10						
18	PCD of above pins	123						
19	Length	13		±0.1				
20	Outer step dia.	124		+0.5 / -2.0				
21	Collar Width	10		±0.2				
22	Radius	R3						
23	Radius	10		±0.2				
24	Length of Dia 70	12.5		+0.2				
25	Length of Collar	8		±0.2				
26	Inner rib width	10						
27	Radius	R2						
28	Chamfer	1 X 45°						
29	Chamfer (Pin)	1 X 45°						
30	Angle	60°						
31	Radius	R10						

Special Notes:

Sno.	Note	Observations
1	Material: Steel casting to spec IS:2856 Gde 2 Normalised condition	
2	Blow holes to be inspected as per IS 5530 as cast condition but all features at all points must be within the specified tolerance.	
3	Protective Finish: Phosphated to specification IS 3618 class B and then painted with olive green ISC No.220 to specification IS:5.	
4	100% Radiographic Examination to be conducted as per IS 12938	
5	Manufacturer's logo and Serial No. to be engraved in 10 to 15mm letter size on the surface having length 18.0 ± 0.1. Depth of engraving 80 to 120 microns.	

VETTED

Naval Armament Inspectorate
Tiruchirapalli