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INDIGENISATION OF ARMAMENT STORES FOR INDIAN NAVY

DIRECTORATE OF ARMAMENT PRODUCTION AND INDIGENISATION

About The Organisation

Directorate of Armament Production and Indigenisation under DGNNAI at IHQ-MoD(N) is the Authority Holding Sealed Particulars (AHSP) for all Naval Armament (NA) Stores of the Indian Navy. Further, Indigenisation of NA Stores for the Indian Navy, is one of the primary charters of the Directorate.

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INDIGENISATION OF NAVAL ARMAMENTS

Organisation

1. The indigenisation of Naval Armament stores is being undertaken by Director General of Naval Armament Inspection (DGNAI) since late 1980's. In view of increased indigenisation activities and enhanced role of Naval Armament Inspectorate (NAI) organisation, re-organisation of DGNAI was undertaken by forming of two Directorates viz. Directorate of Armament Production and Indigenisation (DAPI) and Directorate of Naval Armament Inspection (DNAI).

2. DAPI was established in Apr 2017. The role and responsibility of indigenisation of NA stores has been entrusted to DAPI since its inception. Subsequently, following Indigenisation Cells (ICs) were created at:-

- (a) Contollerate of Naval Armament Inspection(West), Mumbai
- (b) Contollerate of Naval Armament Inspection(East), Vishakhapatnam
- (c) Contollerate of Naval Armament Inspection(South), Alwaye
- (d) Contollerate of Naval Armament (Ordnance Factory), Pune
- (e) Contollerate of Naval Armament (Defence Production), Hyderabad

3. In addition, following NAI cells at DRDO labs have been mandated to associate during the R&D activities being undertaken for NA stores:-

- (a) NAI Cell at HEMRL, Pune
- (b) NAI Cell at ARDE, Pune
- (c) NAI Cell at NSTL, Vishakhapatnam

4. DAPI along with Indigenisation Cells at Controllerates and NAI Cells at DRDO Labs is responsible for indigenisation of Naval Armament stores. The role and responsibilities includes:-

- (a) Provide input towards formulation of QRs wrt indigenisation of Naval Armament stores.
- (b) Indigenisation of fast moving components/ spares/ consumables and explosives for all NA stores, their fitment and functioning trials and acceptance into service.
- (c) Undertake in-house indigenisation of NA stores, sub systems/ spares and prepare their drawings, specifications, inspection/ proof schedules, inspection criteria, in association with DRDO/ DPSUs/ Trade.
- (d) Render technical advice on indigenous NA stores, their design, stability, safety and reliability including design modification.

(e) Maintain close liaison with DGQA, DGAQA, DPSUs, DRDO and private firms on indigenisation/ production QA related issues of NA stores.

(f) Associate in R&D projects during technical/ user/ environmental trials, transfer of technology and evaluation of NA stores.

(g) Coordination with various authorities on design, development, manufacture, proof, testing and standardisation of NA stores.

5. Organisation Chart for indigenisation of NA stores is as shown at Figure 1 below and the communication details of various indigenisation cells are placed at Table 1 below.

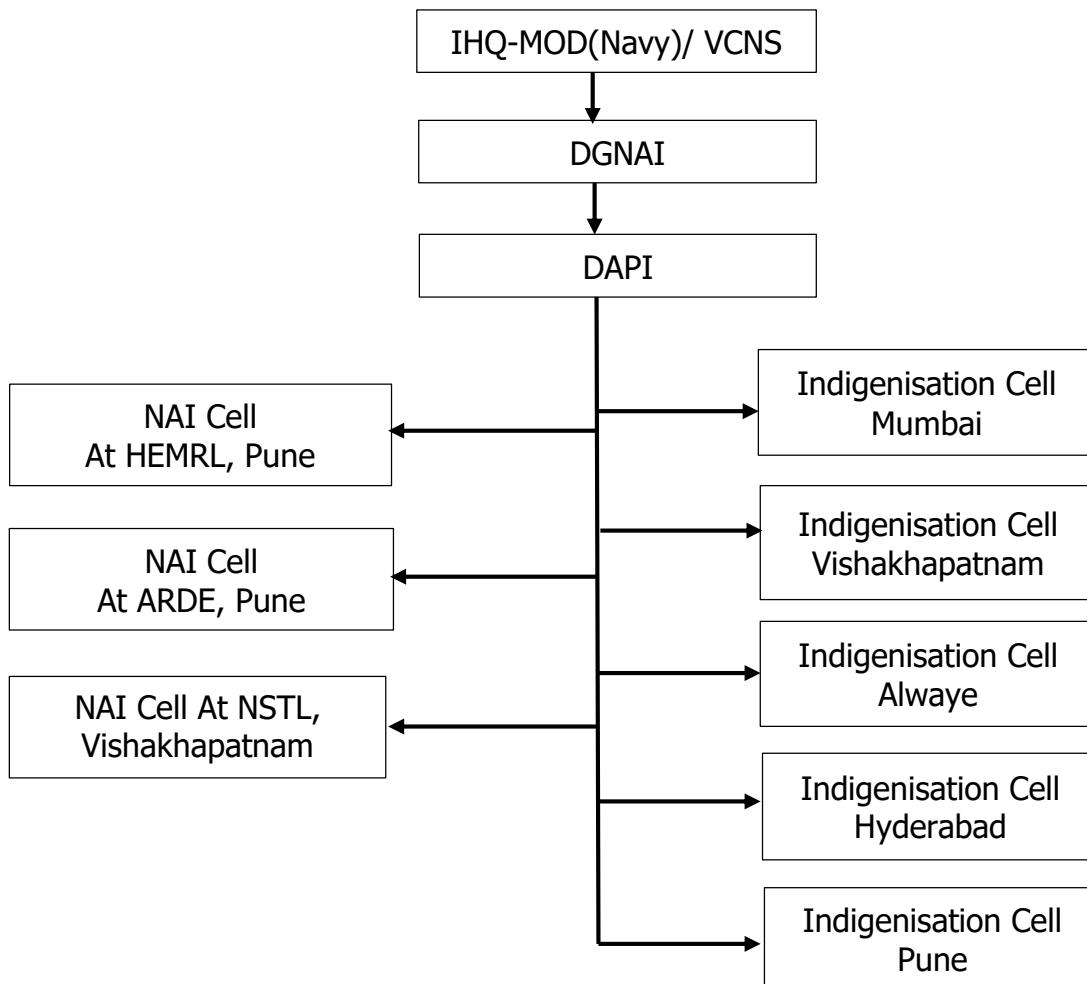


Figure 1: Organisation Chart for Indigenisation of NA stores

Table 1: Communication Details of Indigenisation Cells

<u>Ser.</u>	<u>Indigenisation Cell</u>	<u>Communication Address</u>	<u>Contact Details</u>
(a)	Indigenisation Cell Mumbai CNAI(W)	The Controller of Naval Armament Inspection Controllerate of Naval Armament Inspection(West) Naval Dockyard, Gun Gate Mumbai 400023	Tel: 022-22666091/ 22660990 Fax: 022-22660990 Email: wnccnaimb@navy.gov.in

Ser.	Indigenisation Cell	Communication Address	Contact Details
(b)	Indigenisation Cell Vishakhapatnam CNAI(E)	The Controller of Naval Armament Inspection Controllerate of Naval Armament Inspection(East) PO : Naval Armament Depot Vishakhapatnam 530009	Tel: 0891-2571143 Fax: 0891-2576416/ 2515468 Email: enccnaiv@navy.gov.in
(c)	Indigenisation Cell Alwaye CNAI(S)	The Controller of Naval Armament Inspection Controllerate of Naval Inspection(South) NAD PO, Alwaye 683563	Tel: 0484-2838384 Fax: 0484-2839751 Email: sncnaia@navy.gov.in
(d)	Indigenisation Cell Hyderabad CNA(DP)	The Controller of Naval Armament Controllerate of Naval Armament (Defence Production) Naval Armament Inspectorate PO – Kanchanbagh, Hyderabad – 500 059	Tel: 040-24340589 Fax: 040-24340599 Email: naihyderabad@navy.gov.in
(e)	Indigenisation Cell Pune CNA(OF)	The Controller of Naval Armament Controllerate of Naval Armament (Ordnance Factories) Naval Armament Inspectorate At Ammunition Factory Khadki, Pune - 411003	Tel: 020-25810852 Fax: 020-25811248 Email: naijablpur@navy.gov.in

Indigenisation Routes

6. Indigenisation projects for NA stores are progressed under following routes:-

(a) **Revenue Scheme**. This route is exercised through funds allotted to IHQ-MoD(N)/DAPI. Appropriate funds are sub-allocated to respective Indigenisation Cells through Admin Authorities.

(b) **Make II/ III Schemes**. "Make II/ III - Industry Funded" scheme has been described in Chapter III of Defence Acquisition Procedures (DAP) 2020. It primarily focuses on import substitution through development/ upgradation of systems. In this sub-category, no government funding is envisaged for prototype development, but has assurance of orders on successful development and trials of prototype.

(c) **Technology Development Fund (TDF) Scheme**. The Technology Development Fund (TDF) operated by DRDO was setup in union budget 2014-15. This scheme aims at funding the development of Defence & Dual use technologies. The funding is done to public/ private industry especially MSMEs and only Indian vendor including Association of Person are eligible for this scheme. Each project is capped at 10 Crore with a development period of two years.

(d) **DRDO Projects**. The indigenisation of NA stores is also progressed through DRDO. DGNAI is the Co-Chairman for the IN-DRDO Synergy - Armament Combat & Engineering (ACE) Cluster.

(e) **iDEX.** The iDEX (Innovations for Defence Excellence) initiative was launched by the Hon'ble PM in Apr 18 with the aim to achieve self-reliance and foster innovation and technology development in Defence and Aerospace by engaging industries including MSMEs, Start-ups, individual innovators, R&D institutes and academia. Defence India Start-up Challenge (DISC) is being launched since then with Problem Statements (PS) from Armed Forces and DPSUs. iDEX has provision of providing funding to shortlisted vendors upto 10 Cr under various schemes.

Indigenisation Methodology at ICs

7. Following methodology would be followed for indigenisation of stores:-
 - (a) **Development Procedures.** The procedure followed for indigenisation of stores are as per Chapter 15 of DPM-2009 (through Indian industries) or Chapter IV of DAP-20.
 - (b) **No Cost-No Commitment (NCNC) Basis.** The Production Agencies (PAs) are at times engaged for development of stores on NCNC basis. In such cases, the Indigenisation Cells will generate Paper Particulars (PPs) in association with the Production Agencies (PAs). The store will be declared developed and bulk production may be initiated based on satisfactory trials and approval of IHQ-MoD(N)/DAPI.
 - (c) **Indigenisation through DRDO/ Academia.** Stores shall be taken up for indigenisation through DRDO/ Academia wherever feasible, post discussion with respective development agencies in DcPP mode.
 - (d) **Sample Based Indigenisation.** In view of large number of stores required to be indigenised and constraints on resources for generation of drawings/ paper particulars, samples will be issued to development agencies (DAs) for indigenisation. The DAs shall be responsible for generation of drawings and identification of material, etc. based on the sample provided under the supervision of concerned Indigenisation Cell. The RFP may be formulated accordingly.

Indigenisation List

8. A list of more than 400 types of stores integral to missiles, torpedoes and other underwater stores, guns, gun ammunition, etc. is attached at '**Appendix A**'.

Details for Correspondence

9. In this list, stores have been assigned to various Indigenisation Cells as brought out above. Industries possessing the required infrastructure, capability, expertise and desirous of taking up indigenisation/ manufacturing of the listed components may get in touch with respective Indigenisation Cells (for contact details refer Table 1 above).

Appendix A
(Refer Para 8 above)

LIST OF NAVAL ARMAMENT STORES FOR INDIGENISATION

SNo	Item Description	End Use	MOQ (05 yrs)
STORES ASSIGNED TO IHQ-MOD(Navy)/ DAPI			
	<u>Make-III Projects</u>		
1.	Development of 76/62 SRGM ammunition (HE and HEPFF variants)	76/62 Super Rapid Gun Mount (SRGM)	23,376 (for 10 yrs)
<u>DRDO Projects</u>			
2.	IR Decoy	Kavach LRCR, MRCR & SRCR (Chaff Rockets)	--
<u>Indigenisation Projects with Pvt Industry</u>			
3.	Kavach Chaff Rockets	Kavach LRCR, MRCR & SRCR	--
4.	Electromechanical Fuze	Mini Depth Charge(MDC)	--
5.	Primer for SRGM ammunition	Super Rapid Gun Mount (SRGM)	--
6.	Electric Detonator DM-12	SUT (Torpedo)	--
7.	Contact Exploder N-239	CET 65E, TEST 71ME Torpedo	--
8.	SRGM Ordnance <ul style="list-style-type: none"> (a) Muzzle Brake (b) Liner (c) Ring Coupling (d) Tube Barrel (e) Bore evacuator (f) Water Jacket (g) Crank Inner Left (h) Crank Inner Right (j) Lever Left (k) Shaft Splined (l) Lever Cocking Inner (m) Lever Cocking Outer (n) Housing Breech Ring (p) Crank Outer Right (q) Shaft Splined (r) Lever Left (s) Lever Left (t) Breech Block (u) Firing Pin Assy / Striker 	Super Rapid Gun Mount (SRGM)	4 3 18 4 5 5 12 5 5 5 5 5 30 30 3 5 5 4 4 13 31

SNo	Item Description	End Use	MOQ (05 yrs)
	(v) Stop Block Right (w) Stop Block Left		38 38
9.	PP3CP	Fire extinguisher on board INS Vikramaditya	--
10.	Contact explosive device	TE2-02 article (Torpedo)	--
STORES ASSIGNED TO CNAI(E) : 2022-23			
11.	Floater Cover 243.03.0502KEM	53-65KE torpedo preparation Items	20
12.	Floater Safety Valve 243.03.049ME		10
13.	Tension ring soluble 243.18.132		20
14.	Striker Pin (Bypass Mechanism) 243.18.131		20
15.	Pulse Headlight 2.424.005		10
16.	55 Types spares	53-65KE torpedo MR Items	25/ 50/ 80/ 150/ 200/ 600
17.	Adhesive 785UC	Adhesive for rubber components	50 Litre
18.	UID 825.52.000 T	53-65KE Torpedo	60
19.	Uran TLC junction Box `O'-Ring	Junction Box of TLC (Uran Missile)	
20.	Uran TLC door `O'-rings	TLC door (Uran Missile)	
21.	Door Plug `O' rings	TLC Door (Uran Missile)	
22.	Molykote HP-870 grease	Barak Missile	
23.	Molykote medium 33 Silicon Low Temp Grease	`O'-Ring of Barak Missile	
24.	Molykote 55 Silicon Grease (-65°C to +175°C)	Warhead Power supply unit replacement of Barak	
25.	Anti-Seizure Paste (OKS-250)	Barak Missile Canister repair	
26.	Loctite 222, 495, 241, 242, 648 Adhesive	Barak Missile Canister	
27.	Spring Helical 127602180	SRGM	
28.	Lever, W/bushing Subassy – 157606037		
29.	Seal, O ring 230079120		
30.	Seal Packing 157606729		
31.	Screw 212104661		
32.	Screw 212104657		
33.	Screw 137601184		
34.	Ground Strap 137601161	AK 176 (Gun)	
35.	Vertical Lock Spring 14-135		
36.	Horizontal lock spring 14-132A		
37.	Cocking lever 14-127A		
38.	Extractor Springs 14-107		
39.	Spring DV 389	40/60 Gun	
40.	Missile Head 3M-14 E.9210.0	Club Missile	20
41.	Radar Homing Head Y554-5		15
42.	On Board Computer Complex (OBCC) БЦВМЗАРЯ-43		15
43.	'O' Rings (12 types)		50

SNo	Item Description	End Use	MOQ (05 yrs)
44.	Inert Warhead for Club 3M-54E	3M54E Missile P-Series Missile	--
45.	Auto Pilot Control Unit ДВ2.564.012		15
46.	Altitude Prediction Gyro ДВ2.562.096		15
47.	Rate Gyro		10
48.	Radio altimeter ГY1.000.040.-05		15
49.	Angular Coordinate Control Unit бIK2.035.321-1СП		15
50.	Self-Contained Noise Maker Battery		06
51.	Overflow valve		15
52.	One Shot Battery Compartment with squib and accessories		10
53.	Long Storage Battery		20
54.	Float along with accessories (Article 2600/ MG 74)		25
55.	Warhead		--
56.	Contact Fuze		--
57.	Ejection Charge		--
58.	Squibs		--
59.	Start Battery		--
60.	EFSB		--
61.	Long Storage Bottle		--
62.	Rubber Components		--
63.	Towed Reel		--
64.	Torpedo Reel		--

STORES ASSIGNED TO CNAI (E) 2023-24

65.	Vertrel XF	53-65KE Torpedo	600 ltr/year
66.	Oil 4LF		100Ltr/year
67.	AKOP-1		100Ltr/year
68.	Missile Head 3M-54 E.9240.0	Club Missile	10
69.	Monoblock 3M-14 E.9230.0		10
70.	Control Unit (CU) БУ-40		10
71.	Radio Altimeter РВэ-12 ГУ2.000.106-07		10
72.	Gyro Inertial Unit ГИБ-123-1		10
73.	Plasticiser Sealant ПАСТА ТФ-1		5 Kg

SNo	Item Description	End Use	MOQ (05 yrs)
74.	Sealant ПАСТА N-1		5 Kg
75.	Sealant ДФГ		5 Kg
76.	Timer Missile бIK2.320.083		10
77.	Timer Radar бIK2.320.094		10
78.	Integrating Mechanism ДБ4.004.001		10
79.	Amplifier лИ2.032.265		10
80.	Selection Unit лИ2.214.000		10
81.	Pre-Amplifier лИ2.328.010		10
82.	Power Amplifier лИ2.039.107		10
83.	Power Supply Unit лИ2.087.747		10
84.	Communication Unit лИ3.622.557		10
85.	RF portion of Receiver бIK2.026.010-1СП		10
86.	Receiver бIK2.026.009-1СП		10
87.	Current Control Unit (бIK)2.032.188		10
88.	Synchroniser unit бIK2.075.035-1СП		10
89.	Auto Tracking Unit бIK2.076.272-1СП		10
90.	Rectifier Unit		10
91.	Distributor unit (BIK)3.680.051		10

STORES ASSIGNED TO CNAI(E) 2024-25

92.	Steering Engine КЯ2-503-026		10
93.	Striker 243.18.131		100
94.	Cable No. 5 243.51.025МЭ		20
95.	Accumulator Battery 743.19.007-1		50
96.	Steering Engine 243.08.000-01Э		20
97.	Converter 253.58.000-I МЭ		10
98.	Linear Acceleration Pickup 243.64.000. МЭ		10
99.	Command Distribution Unit 243.51.010-1МЭ		10
100.	Retarder 243.13.000		30
101.	Tube Safety Device 243.17.000		30
102.	Water Discharge Governor 243.06.027		20
103.	Nozzle Box 243.40.000 МЭ		20
104.	Valve 243.06.031		20
105.	Valve 243.06.032		20
106.	Reducing Valve 812.13.ж		20
107.	Steering Engine 810.10.11-01		28
108.	Stem 243.10.103-I		100
109.	Light 243.03.0415МЭ		10
110.	Switch 643.53.006		10
111.	Bundle No. 2 243.53.011-01КЭМ		10

53-65 KE Torpedo

<u>SNo</u>	<u>Item Description</u>	<u>End Use</u>	<u>MOQ (05 yrs)</u>
112.	Lock 243.03.008 МЭ		40
113.	Rod 243.03.812		40
114.	Stopcock П243.00.010		10
115.	Noise Maker 243.53.090		10
116.	Pipeline 243.03.0208		10
117.	Washer 243.11.117-II		40
118.	Receiving Coil 243.91.002 МЭ and улр гилш 468332.084		10
119.	Depth and Roll Recorder ЕП001-04-020-II		10
120.	Squib Unit		10
121.	AKOP		100 litre
122.	SFE and Barrel 243.59.000		10
123.	Piston Brass and Steel (Bypass Valve)		10
124.	Bollard		10
125.	UID M825.01.000		30
126.	Release Mechanism 243.28.000		5

STORES ASSIGNED TO CNAI(W) 2022-23

127.	26 Types of Cables & Conductors	TEST 71ME Torpedo	20
128.	Electronic Pack 2517.040.0050		50
129.	52 Types of Pipes & Hose Pipes		20
130.	Headlight 2517.034.0000		05
131.	Depth Sensor 1563.039.0500		05
132.	Poppet Valve 002.84.030		10
133.	Bollard 2526.003.009		10
134.	Battery Hose Pipe for TEST 71ME		30
135.	Torpedo Reel End Connector		30
136.	14 types of springs		50
137.	Micro Switch П1М9-2В		30
138.	Orifice 238.11.060		30
139.	10 Types of Valves		50
140.	02 Types of Piston		50
141.	07 Types of Bearings		50
142.	N239 contact exploder		200
143.	Electronic Pack 2517-040-0300	CET-65E Torpedo	10
144.	Air Flask / Long Life Balloon (LLB) 260.030.122		10
145.	Bulk Head Terminals		10
146.	10 types of Bus Bar		10
147.	06 Types of Cables (Loose)		10
148.	14 Types of Cable		10

SNo	Item Description	End Use	MOQ (05 yrs)
149.	06 Types of Cable(inbuilt)		10
150.	Squib-CEC Union (260.030.129)		10
151.	CEC Union-A/B inbuilt (260.030.131)		10
152.	Inlet Union-4w &Ret. Union (260.030.132)		10
153.	Retarder-COD (260.030.008)		10
154.	Retarder-NRV (260.030.105)		10
155.	4w-NRV, Retarder, COD, Pneumatic Switch (260.030.106)		10
156.	COD – Battery Diaphragm 260.030.047		10
157.	Stern Bush 260.019.0102		10
158.	Battery Hose Pipe for CET 65E		10
159.	21 Types of Pipes		10
160.	ENSD		10
161.	Timer		10
162.	Blinker Unit 2039.04.020-II		10
163.	Bollard- 02 Nos.		10
164.	Transducer cable Assembly of Digital AIE		10
165.	Relay Unit -1 (Pb-1)		10
166.	Radio Marker (TPO-72)		10
167.	Filter 2526.043.000		10
168.	Junction Box -19 (JB-19)		10
169.	Bypass Valve (PPV) 241.503.040		10
170.	Depth Sensor		10
171.	Pressure pick-up (PP) 260.007.002-1		10
172.	18 Types of Rubber embedded valves and collars		50
173.	03 Types of Connector		25
174.	02 Types of Hose		25
175.	RETENTION BELT(PNEUMATIC)		80
176.	RESTRAINT BANDS		80
177.	BREAKING DISC		80
178.	COVERS ORANGE		80
179.	EMERGENCY BATTERY		80
180.	MK-1 MOD 3 SQUIB		160
181.	EED SQUIB		80
182.	SEA TRAIL KIT		20
183.	EX HEAD PCB'S (CR CARDS)		10 sets
184.	RING STOP		05 sets
185.	FEEDING TUBE ASSY		05
186.	FEED ASSY E.H A244S SRP		05
187.	DIODE & PILES BOX		05

A244S Torpedo

SNo	Item Description	End Use	MOQ (05 yrs)
188.	BODY, PERCUSSION		10
189.	PRESSURE SWITCHES (N 212000100, N 212000101)		10
190.	VALVE ASSEMBLY		05
191.	SECURITY VALVE		10
192.	EH CABLE		10
193.	CHECK PLUG P 202		05
194.	SCOOP ARMING WIRE#		50
195.	COUPLING RING FOR A244S MOD 3		100
196.	VARNISH FOR SBH VEPOLUX-038(COMPONENT A & B)		10L
197.	(A) PAINT 1N630000001		10L
198.	(B)CATALYST ACT 65		10L
199.	(C)DILUENTS SN530002DILUE		10L
200.	(D)ADDITIVE 1N601000018		10L
201.	INVERTER OF MOD 3		20
202.	SBH OF MOD 3		100
203.	FIAM MOD 0 (SET) with accessories		50
204.	BATTERY SECTION OF MOD 3		50
205.	ELECTRONIC RACK OF MOD 0 TORPEDO (07 PCBs)		20 sets
206.	Acoustic Head MOD 0		20 sets
207.	ELECTRONIC RACK MOD 0 (WITH 27 PCBs)		20 sets
208.	RPM Sensor		20 sets
209.	LOCKING RING II COMPLETE 279.840 322		50
210.	LOCKING RING III COMPLETE 279.840 314		63
211.	EXCESS PRESSURE VALVE279.345 249		60
212.	GUIDE TUBE 279.599 571		60
213.	A- SPOOL KW 20 279.648 683		60
214.	BUSHING 279.410 795		100
215.	RUDDER SHAFT BEARING 279.710 632		100
216.	TOOTHED SEGMENT 279.586 057		100
217.	COUPLING PIECE 279.410 951		100
218.	COUPLING LINK COMPLETE 279.446 658		60
219.	UPPER FIN 279.562 678		60
220.	UPPER GUIDE PIECE WITH PIN 279.579 300		20
221.	LOWER FIN WITH THREAD INSERT 279.562 645		20
222.	LOWER GUIDE PIECE COMPLETE 279.578 351		20
223.	KNURLED NUT 279.578 393		20
224.	COMPRESSION SPRING 279.491 886		50
225.	SPRING PIN 279.578 385		50
226.	PUSH-OUT LEVER 279.578 377		20

SUT Torpedo

SNo	Item Description	End Use	MOQ (05 yrs)
227.	LOCKING RAIL 279.578 336		20
228.	WATER VELOCITY SWITCH EF6037G651		20
229.	XMTR COIL COMPLETE 279.836 122		60
230.	XMTR COIL COMPLETE 279.836 130		60
231.	LATERAL FIN WITH BUSHING 279.841 254		60
232.	CABLE TRUNK II 279.835 850		60
233.	CABLE TRUNK III EF6037G549		60
234.	FORWARD PROPELLER 279.840 280		20
235.	REAR PROPELLER 279.840 272		20
236.	FORWARD SHAFT SEALING 279.840 306		60
237.	SCREWING RING 279.340 000		100
238.	MATCHING RING 1082180803008		50
239.	SLOTTED ROUND NUT 279.340 018		50
240.	INTERMEDIATE SHAFT SEALING 279.840 298		60
241.	SCREWING RING 279.340 034		100
242.	SLOTTED ROUND NUT 279.340 023		50
243.	REAR SHAFT SEALING 279.551 275		60
244.	SCREWING RING 279.569 475		100
245.	PROPELLER SHAFT BEARING COMPLETE 279.432 427		20
246.	SNAP RING SW60 272.300 945		50
247.	BEARING FLANGE 279.400 143		40
248.	EXTERNAL SHAFT 279.409 284		10
249.	INNER SHAFT 279.409 292		10
250.	A-CABLE GUARD 279.604 967		100
251.	LOCKING DEVICE 279.829 549		20
252.	B-SPOOL KW8 279.779 405		60
253.	RED LEVER MECHANISM		100
254.	A-B CONNECTOR		100
255.	Gas generator		80
256.	Section No.4 9M3813.0401.000-01	Kashmir Missile	30
257.	Radar Homing Head (RHH) 935013	Kashmir Missile	50
258.	Radio Fuse 93241M13	Kashmir Missile	50
259.	Auto-pilot БУ-10	Kashmir Missile	50
260.	Turbo Generator Power Supply unit 9Б256	Kashmir Missile	80
261.	Section 1 Assembly 9M317.0100.000-05	SHTIL Missile	-
262.	Section 4 Assembly 9M317.0400.000-02	SHTIL Missile	-
263.	Plug Fitting (End Ring) 9M38.0000.002	SHTIL Missile	-
264.	Uran SDD	Uran Missile	-

SNo	Item Description	End Use	MOQ (05 yrs)
265.	KH-35 Explosive Bolts	KH-35 Missile	-
266.	Flare Launcher Basket for Signal Flares (Kalvari class boats)	Flare launching system (Kalveri class)	50/year
267.	Accumulator Diaphragm for Uran	Uran Missile	10 Nos
268.	Scoop Bulk Head (Mod 3)	A244S torpedo	02 Nos
269.	Missile Balwanka 3M14eBW	Series Inspection of EKM submarines	02 Nos
270.	Missile Mockup 3M14ETBM and 3M54ETBM		02 Nos
271.	Imitator-R	EKM Submarine	02
272.	TOSIM	Kalveri Submarine	02
273.	Cross Gauge for EKM submarine	EKM submarine	01
274.	Cross gauge for Kalveri class submarines	Kalveri class submarine	02
275.	TONA	SSK Submarines	01
276.	Caliber Jig	Shishumar Class	01

STORES ASSIGNED TO CNAI (W) : 2023-24

277.	Diaphragm Valve 238.030.0050	TEST71ME Torpedo	40
278.	Pressure Pick Up 260.07.002-1		10
279.	Torpedo Reel		50
280.	Charging and Stop Valve 2517.046.0000-01		25
281.	Hydraulic Pump with Reduction Unit 2517.011.0000-01		10
282.	Starting Device 2517.038.0000		10
283.	Distance Gear 2526.010.000		10
284.	Air Flask 2517.005.0507		10
285.	Equipment Switch 2517.070.0050		10
286.	Retarder 2526.014.000		10
287.	Cut Off Valve 2526.014.000		10
288.	Safety Valve 1563.04.0140-01		10
289.	Bleeding Unit 2526.028.000		10
290.	Fluid Flask 2526.019.0107		10
291.	Pneumatically Operated Switch 2517.051.0000	CET65E Torpedo	10
292.	Non Return Valve 1563.039.0100-01		10
293.	Filter 2526.043.000		10
294.	Cut Off Device 2526.013.050		10
295.	Noise Maker 094.033.000-I		10
296.	Tube Safety Device / Lever 260.545.092		20
297.	Propeller Lock 2517.545.0026		20
298.	Noise Emitter		05
299.	Pressure Pick up		10
300.	Relay МАГ-11		10
301.	Protection Unit		10
302.	Contactor with Pneumatic Switch		10

SNo	Item Description	End Use	MOQ (05 yrs)
303.	Non Return Valve (Air)		10
304.	Retarder 260.013.000-11		10
305.	FIAM MOD 3 (SET) WITH ACCESSORIES WMP 324400405		100
306.	TRANSDUCER,PRESSURE N211000200, N211000202		10
307.	SRP ELECTRONICS W036718		05
308.	SRP ELECTRONICS CABLE W036539		05
309.	SENSOR BOX W003198		05
310.	PINGER CABLE WCP324400019A		10
311.	PINGER N21000200		05
312.	ARMING DEVICE OF MOD 0 AND MOD 3 W002257		20
313.	ACOUSTIC HEAD FOR MOD 3 TORPEDO WMP324400429		20
314.	AG 2000 RACK WMP324400277		20
315.	SCAN BOARD WM 9940119900		20
316.	I/O BOARD WM 9940120600		20
317.	DSP BOARD WM 9940120700		20
318.	PPC BOARD WM 9940133200		20
319.	DC/DC CONVERTER WTP 324400206		20
320.	YOKES FOR ELEVATOR ASSEMBLY W005716		10
321.	TIE ROD (WMP32440000295) NUT (WMP324400292A) WASHER (WMP324400290)		60
322.	INCLINOMETER N215000200		60
323.	PRESSOMETER SUPPORT WMP324400232		10
324.	STUD WMP324400343		10
325.	SLING W013679		10
326.	SPACER W013681		10
327.	JUMPERED CAP WMP324400025		10
328.	PRESSOMETER ASSEMBLY WITH CABLING WMP324400349		05
329.	INCLINOMETER N215000100		05
330.	DAS RECORDER WMP324400029		05
331.	FITTING SCREW (02 Types)		50
332.	GUIDE STUD FWD PART		20
333.	GUIDE STUD AFT PART		20
334.	GUIDE PIECE		20
335.	CYLINDER WITH PIN		20
336.	BUS BAR CONNECTOR		20
337.	COVER FOR BUS BAR CONNECTOR		20
338.	BUS BAR SUPPORT		20
339.	BALL		100
340.	DISTANCE MEASURING DEVICE		20

SNo	Item Description	End Use	MOQ (05 yrs)
341.	FIN BOLT (05 Types)	Kashmir Missile	50
342.	Blank (End Ring) 9M38.0000.002		100
343.	Sealant T Y 3801051436-88		20 Kg
344.	Plug (TG Stub) ЕИГА.305364.002		100
345.	Muzzle Velocity Discharge Pressure (MVDP) Measuring Equipment	SSK S/M (Harpoon Missile mock up firing)	--

STORES ASSIGNED TO CNAI (W) : 2024-25

346.	Forward Propellers A666.393.030-01	TEST71ME Torpedo	5
347.	Aft Propellers A666.393.031-01		5
348.	Horizontal Rudder 033.046.000-01		20
349.	Vertical Rudder 003.046.000		20
350.	Aileron 260.020.062		20
351.	Towed Reel		50
352.	Tail Unit 2517.020.0000		10
353.	Blade Big (For Propeller Assembly) 007.060.028-01		20
354.	Blade Small (For Propeller Assembly) 007.060.029-01		20
355.	Starting Gear 2517.038.0000-01		60
356.	Ball Bearings b-7000107		100
357.	Converter and Frequency Stabilizer ПТО-1000 & BP42H		40
358.	Forward Propeller 260.021.010		
359.	After Propeller 260.021.011		
360.	Oil Filter 260.043.000	CET65E Torpedo	
361.	Pneumatic Switch (APS) 260.042.006		
362.	Hydraulic Fluid Flask 282.019.030		
363.	Steering Engine (829.25.03)		
364.	Steering Engine (810.11.10)		
365.	Load Unit		
366.	Shut up Valve 260.014.000		
367.	Shut up Device		
368.	Starting Lever		
369.	Non Return Valve (NRV)		
370.	GYROSCOPE W018940	A244S Torpedo	10
371.	ELEVATORS YOKE (HEEL TRIM MOTOR WITH CABLE) W001968		10
372.	LEFT ELEVATOR WITH SHAFT WMP324400433		10
373.	RIGHT ELEVATOR WITH SHAFT WMP324400432		10
374.	VERTICAL LOWER PIN W000187		10
375.	HORIZONTAL PORT FIN WMP324400167		10
376.	SHAFT PROPELLAR ASSEMBLY WMP32440009		10

SNo	Item Description	End Use	MOQ (05 yrs)
377.	STEERING CONTROL ASSEMBLY WMP324400392		10
378.	CARD B2 W0 01674		10
379.	INVERTER(EX-HEAD) W036615		10
380.	CARD B1 W001673		10
381.	CARD B2 W001674		10
382.	CONNECTOR N236000200		10
383.	CONNECTOR N232000401		10
384.	CONNECTOR N232000700		10
385.	CONNECTOR N232000201		10
386.	RECORDING RACK ASSEMBLY (WITH CARDS) W036560		10
387.	GUIDE RAIL STB. COMPL		10
388.	GUIDE RAIL PORT. COMPL	SUT Legacy & LTE Torpedo	10
389.	SWITCHING UNIT SD		10
390.	PRESSURE PIECE (02 Types)		20
391.	Sealing Paste Y-303-5	SHTIL Missile	30 kgs
392.	Vulcanising Paste No.9		30 kgs
393.	Product АГМ-9		30 kgs
394.	Nitrocellulose Glue AK-20		30 kgs

STORES ASSIGNED TO CNA(OF) : 2022-23

395.	SBP for 100mm Ammn	100mm Ammn	--
396.	VH2 based cap composition for GUV-7 primer	GUV-7 Primer for 100 mm & 76.2 mm	--
397.	SRGM Primer	76/62 SRGM Gun	--
398.	Refilling and indigenisation of Club 3M 14E TLAM W/H *	Club 3M 14E TLAM	--
399.	Refilling of A244S W/H #	A244S Mod 0 Torpedo	--
400.	Mk 1 Mod 3 Squib (Motor disconnector) for A244S #	A244S Torpedo	--
401.	30 mm Barrel using alternate material	AK-630 gun	--
402.	Propellant for PK-16 Chaff	PK-16 Chaff Rockets	--
403.	Low Smoke EDB Propellant for TIC	Torpedo Impulse Cartridge	--
404.	CE pellet of Contact Exploder И-239	CET-65E Torpedo	--

STORES ASSIGNED TO CNA(OF) : 2023-24

405.	PDM 9030A1 fuze for SRGM	76/62 SRGM Gun	240
406.	Steel CC for SRGM	76/62 SRGM Gun	161
407.	Fuze for 76.2mm ammn	76.2mm ammn	240
408.	3M54E W/H *		18
409.	3M54TE W/H *	CLUB Missile	28

STORES ASSIGNED TO CNA(OF) : 2024-25

410.	SAP rounds	76/62 SRGM ammn	--
411.	AO-18 spares using indigenous material	AO-18 Gun	--

<u>SNo</u>	<u>Item Description</u>	<u>End Use</u>	<u>MOQ (05 yrs)</u>
<u>STORES ASSIGNED TO CNA(DP) : 2022-23</u>			
412.	DM12 Detonator Electric for SUT Torpedo	SUT Torpedo Exploder	For 100 W/Hs
413.	DM16 for SUT Torpedo	SUT Torpedo Exploder	For 100 W/Hs
414.	Transmitting Load	SUT Torpedo Exploder	For 100 W/Hs
415.	Arming Device for A244S Torpedo	A244S Torpedo Exploder	100
416.	Inverter for A244S Torpedo	A244S Torpedo	128
417.	Release Wire for A244S Torpedo	A244S Air Launch Torpedo	50
418.	Scoop Arming Wire for A244S Torpedo	A244S Air Launch torpedo	50
419.	Coupling Ring for A244S Torpedo	A244S Torpedo	50
420.	PCBs of Electronic Rack (XA22, XA23, XA24, XA09) for A244S Torpedo	A244S Mod 0 torpedo	20 each
<u>CONTROLLERATE OF NAVAL ARMAMENT INSPECTION (SOUTH) : 2022-23</u>			
421.	Towed Reels	Test 71ME Torpedo	20
422.	Torpedo Reels		20
423.	Hose with coupling	SUT torpedo	50
424.	A-B Connector		50
425.	Battery Section Shell		20
<u>CONTROLLERATE OF NAVAL ARMAMENT INSPECTION (SOUTH) : 2023-24</u>			
426.	A Spool	SUT Torpedo	20
427.	B Spool		20

