PROCUREMENT OF 31 X NWJFACs

1. Acceptance of Necessity (AoN) has been accorded by MoD for 31 x NWJFACs on 03 Dec 24. The approved acquisition scheme is related to construction of 31 x NWJFACs for which RFP would be issued shortly under Buy (Indian-IDDM) Category with minimum IC 70 % iaw Section 'B' Chapter XII of DAP -2020.

2. The NWJFACs are planned for induction in ***IN*** for effective Coastal Defence and Security. FACs will be utilized for Local Naval Defence (LND) operations and are designed to perform the task of seaward Defence of the coast, Low Intensity Maritime Operations, Surveillance, Patrol, and Search and Rescue (SAR) Operations close to coast.

3. Detailed technical specification are mentioned in '**Appendix A**'.

Appendix A

OPERATIONAL/ TECHNICAL SPECIFICATIONS FOR 31 X NWJFACs

Sl. No	Purpose	Description
1.	**Aim of Note**	To indicate the specifications of 31 x NWJFACs, to meet the Indian Navy's requirements.
2.	**Function of NWJFACs**	(a) **Primary Roles**. Local Naval Defence. (Seaward defence of defended Ports, Offshore Installations, Vital Areas and Vital Points). (i) Interception and Attack. (ii) Low Intensity Maritime Operations (LIMO). (b) **Secondary Roles.** (i) Special Operations. (ii) Anti-Piracy Operations. (c) **Constabulary Role**. In the constabulary role, these ships would be deployed for the following: - (i) MIO and VBSS Ops. (ii) Presence cum Surveillance Mission (PSM).
3.	**Essential Features**	The NWJFACs should be designed for operations in shallow water in coastal areas and built as per IHQ MoD (N) approved classification Society Standards (ABS/ IRL/ LRS/ BV/ DNV-GL/RINA).
4.	**Dimensions**	(a) Displacement - 320 ± 10 % tons (b) Draught - Not exceeding 2.1 m. (c) Length - 50 ± 5% m
5.	**Speed**	(a) Max Speed at deep displacement - More than 35 Knots at 85% MCR (b) Maximum sustainable speed – More than 25 Knots at maximum tonnage at deep displacement (c) Economical Speed – More than 12 Knots
6.	**Endurance**	2000 nm or more at Economical speed (≥ 12 Kn) with 25% reserve fuel capacity
7.	**Sea Worthiness**	(a) Capable of operating in sea state up to 4. (b) Seaworthy up to sea state 6.
8.	**Gun Armament**	(a) 30 mm NSG with EOFCS. (b) 02 SRCGs. (c) Should be able to operate Loitering Munitions.
9.	**IBS**	As per NSQRs (with Navigational Radars). **MFCs** Bridge – 03 **MFDs** Bridge Top – 01 (Portable), Bridge Wing – 02 CO Cabin -01

		ICC Bridge – 01
10	**AIS**	01 x AIS is to be provided and fitted in bridge as per QRs.
11	**Night Vision Devices**	04 x Night Vision Binoculars (IHQ MoD (N) /DSR policy WP/ 0651 / NVD dated 31 Aug 15)
12	**Binoculars**	Five (05) optical binoculars to be provided.
13	**CMS**	One MFC and VRD in bridge
14	**AC & Ventilation**	(a) Integral A/C for extreme tropical conditions in all living and working spaces. (b) Ventilation and forced draught arrangements in other spaces. (c) AC and Ventilation system to be iaw NES 102.
15	**Stowage Arrangements**	(a) Stowage space for 30 days dry ration (0.8 ton) with fixed rodent repellant system and 07 days fresh provisions storage for 0.7 Ton (cool room) be provided adjacent to Ships Galley. (b) Sufficient stowage space to be provide in compartments. (c) Rope and Canvas store to be provided with forced ventilation.
16	**Water Tank**	10 Tons capacity fresh water tank.
17	**Construction**	(a) The vessel will be built as per the IN approved classification societies i.e. ABS/ IRS/ LRS / BV/ DNV-GL/ RINA standards. (b) Steel for hull construction should be DMR249A steel as specified in IHQ/ DNA NCD 0249,Part 1, 2 and 3. (c) Aluminum, DMR 0291A iaw NCD 0291 be used for superstructure. (d) Deck covering of dry & wet spaces is to be heavy duty epoxy based underlay and topcoat iaw NCD 3717, Issue 4, Rev 1 and Policy letter NC/Policy/H-144/Material (e) Sewage Treatment Plant & Vacuum toilet system and fixed H2S gas detection and alarm system is to be provisioned in accordance with NCD 3930, Issue 3, 2016. Sewage and Grey water drainage system shall be designed i.a.w Def Stan 02-718. (f) The hull plating (shell and deck plating) while meeting Classification Society strength requirements, shall not be less than 5 mm thick. (g) Corrosion allowance to be specified by the Classification Society. (h) Insulation material is to be based on NCD 1430 and NCD 1433.

		(j) Aluminum WT doors to conform to NHQ specification NCD 3526. (k) Air locks for entry to A/C spaces to be provided. (l) Escape ladders are to be of mild steel. (m) WT doors and hatches to conform to NCD 1447 and 1448 respectively. Emergency escape hatches/ scuttles to conform to NCD 1449.
18	**Anchor and Chain Cable.**	Complete anchoring and berthing arrangements as per Classification Society Rules should be provided.
19	**Boat and Boat Davits**	One 4.7 m RIB with motorized lowering, hoisting and slewing davits to be provided. Boat davit to conform to NCD 1500
20	**Towing Arrangements**	Fwd and Aft towing arrangements with emergency disengaging gear aft.
21	**Fenders**	Six portable light weight fenders with stowage arrangement on upper deck should be provided.
22	**Environmental Conditions**	Ambient Air Temperature: 10 ºC to Max 45 ºC Max Relative Humidity: 95% at 35 ºC Max Ambient Sea Water Temperature : Upto 38 ºC
23	**Main Propulsion System**	The propulsion package is to be with three engines with independent RGs and Waterjets. MPP to consist of the following major equipment:- (a) 03 x Main Engine of suitable power rating to meet Max speed at 85% MCR. (b) Gear Boxes (Three) – To meet main engine and speed characteristics. (c) Three Reversible/steerable Waterjets of suitable capacity and design to meet the powering / speed requirements
24	**Reverse Osmosis Plant**	One in number Reverse Osmosis plant with a capacity of four/five tons per day.
25	**AC Plant**	AC Plants of adequate capacity with 100% reserve (with two independent Gas systems). AC Plants shall use R-134A gas and to be selected / designed iaw IHQ MoD(N) letter EG/4001/Aux/02 dated 28 Aug 20 (a) Ambient Temperature. Dry bulb 41 ºC, Wet bulb 30ºC and sea water 38ºC. (b) Internal Effective Temperature. Internal temperatures to be achieved are as indicated:- (i) For all compartments, except galley complex, 23.5ºC Effective (27.0ºC DB/ 19.6ºC WB). (ii) Galley complex, 29ºC Effective (34.5ºC DB/ 26ºC WB)

26	**Air Compressors**	(a) Electric driven air compressors of 200 bar capacity catering for 100% redundancy as per calculated air requirements are to be provided. (b) Air Receivers are to be sited vertically with provision to drain the condensate.
27	**Ventilation and Lighting**	Adequate ventilation and lighting with extra lighting for operational compartments such as Enclosed Bridge to be provided. Police light to be provided in lobbies, Gangways, hatch ways, all sleeping billets, messes and wash placed to be provided.
28	**Battery and Battery charging facility**	Adequate suitable number of Fire retardant Maintenance Free (SMF) batteries are to be provided along with a suitable battery charging facility conforming EED-50-35.
29	**Major NBCD System**	(a) Fire Main System and Fire/Salvage Pumping Arrangement. Details as per INBR 312. (b) Rapid Reaction Sprinkling System (RRSS) type Magazine Fire Fighting system shall be provided in all magazines iaw INBR 1862 Vol-I(INMER), DEFSTAN 00-101 and SOTRs as approved by NHQ/DNBCD. (c) Magazine flooding system as per INMER 1862. (d) Automatic Galley Fire Fighting System is to be provided in the galleys for containing galley fire as per IHQ MoD (N)/DNBCD policies and SOTRs. The galleys must also be provided with fire dampers in all HVAC trunkings. Additionally, indications should be provided in DCHQ, outside respective galleys and IPMS/BDCS during operation. (e) Addressable Fire Detection System (AFDS) is to be provided for all compartments and compartments which are likely to remain locked/ unmanned during non-working hours, to meet all requirements as per DEFSTAN-02-602/02/603 (NES 602/603), INBR 312, IHQ MoD (Navy)/ DEE Policy EE/Policy/L-74/ POWER-21 dated 21 Feb 11 and DNBCD Policy letter NB/0695/AFDS dated 19 Jan 18. The system should be integrated with the BDCS for continuous monitoring and action. (f) Addressable Flood Alarm System (AFAS) to be provided as per IHQ MoD (Navy)/DEE Policy letter EE/Policy/L-84/POWER-27 dated 02 Apr 12 and DNBCD Policy letter NB/0695/AFAS dated 24 Aug 21. (g) Contemporary Fixed Fire Fighting System is to be provided for Paint Store/Bosun Store as per Class Authority and requirements as per NO (Str) 03/19.

		(h) Novec-1230 fire-fighting system in machinery compartments iaw IHQ MoD(N) letter EG/4707/06/NBCD dated 10 Jun 20. (j) Portable NBCD equipment to be provided as per INBR 312/CNAL
30	**NBCD Arrangements**	(a) Two NBCD lockers and stowage arrangements for stowage of DC and FF items. Design of lockers to accommodate part quantity of CNAL items. (b) Fitment of indicator test plugs on all doors and hatches in the Red Risk Zone to fitted as per Para 44 (b) of NO (Str) 03/19, Para 0201 (K) of INBR 312 and IHQ MoD(N)/DNBCD policy Nb/0695/ITP dated 07 Mar 19. (c) Fitment of photo luminescent markings for escape routes and first aid boxes. (d) Provision of emergency escapes routes with suitable hatches and ladders. Escape hatches to be lightweight and easy to operate. (e) Waterline marking and flooded volume markings for all compartments below the main continuous deck. (f) Fitment of First Aid Boxes.
31	**Electrical/ Equipment lighting**	(a) **Generator.** Three DGs with suitable rating to cater for 100% reserve capacity under various load conditions to be provided. DGs given in Navy Order 18-96 and procured from approved vendors identified by DQA (N) in consultation with NHQ/DEE. Generators to conform to EED-Q-242 (R3) specification. At least one DA to be located in separate compartment for redundancy. (b) **Emergency DG.** One Emergency DG of suitable rating for WT and communication equipment to be provided. The power supply of the emergency DA exhaust and supply blowers should be same as the emergency DA supply, ie, 230V single phase. Sufficient numbers of LED based AEL conforming to EED-50-28 (R1) with batteries to be provided for illumination of alleyways, compartments, machinery spaces etc. (c) **Emergency Lighting.** Sufficient numbers of LED based AEL conforming to EED-50-28 (R1) with batteries to be provided for illumination of alleyways, compartments, machinery spaces etc. (d) **Shore Supply.** Ships to be provided with suitable number of watertight shore supply connection boxes with enclosure protection IP 57, one each on either side of the ship on weather deck of adequate capacity to meet the harbour load of the vessel. Shore supply cable

		of 50 m length of suitable rating with stowage arrangement near the shore supply connection box is also to be provided. (e) **Transformer.** Transformers to conform to NES – 535 specifications and approved SOTRs promulgated by NHQ/DEE. Suitable number of transformers shall be provided to cater the machinery and domestic user requirement. At least two lighting transformers to be provided. (f) **Power Supply. Supplies of 415 Volts, 3 phase 50 Hz & 230 Volts single phase 50 Hz AC regulated to ± 0.5 percent and 24 volts DC.** (i) Power supplies required for the operation of NSG-30 with EOFCS. (ii) 230 V AC, 50 Hz, 1 Phase supply derived from 415, 3 Phase, 4 wire system (obtained through secondary star connected transformer) with earthing of neutral to ship's hull along with ELCB & DPDT MCB for domestic and COTS equipment. (g) **Motor, Starter.** Sufficient number of motor driven pumps of adequate capacity, both centrifugal (FW pumps, Salvage pumps, fire pumps, SW pumps etc.) and positive displacement pumps (lub oil pumps, bilge pumps, fuel oil pumps, transfer pumps) are to be provided. (i) All motors and starters conforming to EED-Q-071(R4) to be provided and selected from approved list of vendors of DQA(N) in consultation with NHQ/DEE. (ii) All centrifugal pumps to be compliant to DME-465 (h) **EMI/EMC.** EMI/EMC standardized procedures are to comply with NECP 500 and MIL STD 461 E/F. (j) **Battery and Charging Facility** Adequate suitable number of Fire-retardant Maintenance Free (SMF) batteries are to be provided along with a suitable battery charging facility conforming EED-50-35. (k) **Auto Change Over Switches** All essential services/ equipment to be fed through auto changeover switches. (l) **Magazine Lighting** LED based Flame Proof Light Fittings conforming to EED-50-33(R1) to be used for Primary and Emergency lighting in Magazines. (l) **DAs.** Three DAs of suitable capacity.