

संख्या. पी-63013/237/01/2026/मोड-1/सी0सु0बल/ 2058-62

भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
(Email-comdtord@bsf.nic.in)

ब्लाक संख्या . 10,
सीजीओ काम्पलैक्स,
लोधी रोड, नई दिल्ली-03
दिनांक 16 सितम्बर 2026

वरिष्ठ तकनीकी निदेशक

The Senior Technical Director
राष्ट्रीय सूचना-विज्ञान केन्द्र, नोर्थ ब्लॉक,
गृह मंत्रालय, नई दिल्ली
NIC, North Block, MHA
New Delhi
(द्वारा ई-मेल)

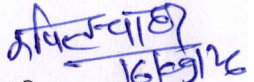
(ई-मेल पता : mpsugandhi@nic.in)

Sub: **Request for comments of stakeholders/OEM on draft QRs & TDs**

कृपया गृह मंत्रालय के पत्र संख्या IV-24011/12/2011-Prov-I(part)(CFN 3300890)-1710 दिनांक 31st Aug 2015 के सन्दर्भ में।

2. उपरोक्त विषयान्तर्गत सूचित किया जाता है कि तकनीकी विशेषज्ञों के उप समूह द्वारा “**12 Ton Interceptor Boat**” के गुणात्मक आवश्यकता/परीक्षण निर्देशों के मसौदों का प्रारूप दिनांक 18 सितम्बर 2026 को आयोजित सभा के दौरान तैयार किया गया, जिसको इस आशय से प्रेषित किया जा रहा है कि उक्त उपकरण के गुणात्मक आवश्यकता/परीक्षण निर्देश को गृह मंत्रालय की वेबसाइट पर 15 दिन के लिए अपलोड करने का श्रम करें।

संलग्न: उपरोक्तनुसार


(कपिल चाहर)

उप कमाण्डेंट (मोड)

प्रतिलिपि :-

1. SO (IT), North Block, MHA
(Through E-mail)
(E-mail address: soit@nic.in)
: उपरोक्त उपकरण के गुणात्मक आवश्यकता /परीक्षण निर्देशों के मसौदा को आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।
2. IT Wing, FHQ BSF
: उपरोक्त उपकरण के गुणात्मक आवश्यकता /परीक्षण निर्देशों के मसौदे को सीमा सुरक्षा बल की वेबसाइट पर 15 दिन के लिए अपलोड करने का श्रम करें। आपसे अनुरोध है कि उक्त मसौदे को गृह मंत्रालय की वेबसाइट पर भी अपलोड करने हेतु निम्नलिखित पतों पर ई-मेल करने का श्रम करें:-
(a) Technical Director, NIC, North Block, MHA
(E-mail : mpsugandhi@nic.in)
(b) SO (IT), North Block, MHA
(E-mail : soit@nic.in)
3. Prov Dte (WW), BSF
: For information w.r.t your UO No. 1793-98 dated 31st July 2026.
4. File.

भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
ब्लाक संख्या . 10, सीजीओ काम्पलैक्स, लोधी रोड, नई दिल्ली-03
(Email-comdtord@bsf.nic.in)

संख्या. पी-63013/237/01/2026/मोड-1/सी0सु0बल/

दिनांक ____ सितम्बर 2026

विषय : “12 Ton Interceptor Boat” के गुणात्मक आवश्यकता/परीक्षण निर्देशों पर हितधारकों/निर्माताओं/विक्रेताओं की टिप्पणी के लिए अनुरोध।

“12 Ton Interceptor Boat” के गुणात्मक आवश्यकता और परीक्षण निर्देशों को परिशिष्ट 'ए' के रूप में संलग्न किया गया है। हितधारकों/निर्माताओं/विक्रेताओं से अनुरोध किया जाता है कि वे उस उत्पाद की विस्तृत एवं स्टीक जानकारी दें। साथ ही प्रत्येक पैरामीटर के अनुरूप अपने उत्पाद के सही विवरणों को प्रस्तुत करें। सिर्फ 'अनुपालना' या 'अनुपालना नहीं' वाली टिप्पणी स्वीकार नहीं की जाएगी।

- क्या आप मूल उपकरण निर्माता/विक्रेता हैं?
- यदि विक्रेता मूल उपकरण निर्माता का विवरण देता है।
- मूल उपकरण निर्माता से प्राधिकरण प्रमाण पत्र।
- उत्पाद की मूल सूची।
- उत्पाद ब्रोशर एवं साहित्य रचना का ब्यौरा

1. आवश्यक जानकारी/विवरण 30 सितम्बर 2026 तक निम्नलिखित पते पर भेजे जा सकते हैं।

रसद निदेशालय, सीमा सुरक्षा बल
लेवल-8, ब्लाक-10,
केन्द्रीय कार्यालय परिसर, लोधी रोड,
नई दिल्ली-110003
ईमेल:- comdtord@bsf.nic.in

2. शीघ्र प्रतिक्रिया का अनुरोध किया जाता है।

कपिल चाहर
16/9/26
(कपिल चाहर)

उप कमाण्डेंट (आधुनिकीकरण)

Government of India
Ministry of Home Affairs
Directorate General Border Security Force
(Prov Dte: Mod Cell)
Block No.10, CGO Complex, Lodhi Road, New Delhi-03
(Email-comdtord@bsf.nic.in)

No. P-63013/237/01/2026/Mod-I/BSF/

Dated, the __Sept 2026

Subject : Request for comments of stakeholders/OEM/Firms on QRs (Qualitative Requirements) & TDs (Trial Directives) of "12 Ton Interceptor Boat"

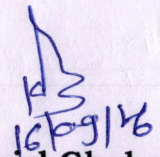
The draft QRs/TDs "**12 Ton Interceptor Boat**" is attached as **Appendix- 'A'**. The OEMs/Vendors are requested to forward information of the product, which they can offer and also forward correct specifications of their system against each parameter. Only complied or not complied remarks will not be accepted. The firms are also requested to furnish the following details:-

- Whether you are OEM/Vendor?
- If vendor details of OEM.
- Authorization certificate from OEM.
- Original catalogue of the product
- Brochure/Literature of the product

2. The required information/details may please be forwarded at the following addresses by 30.09.2026.

Directorate General BSF,
Level-8, Block No. 10,
CGO Complex, Lodhi Road,
New Delhi-110003
Email: comdtord@bsf.nic.in

3. An early response is requested.


(**Kapil Chahar**)
Dy. Commandant (Mod)

Appendix – “A”**DRAFT QUALITATIVE REQUIREMENTS (QRS) FOR 12 TON INTERCEPTOR BOAT**

S. No	Items	QRs / Technical Specification	Trial directives/ procedure suggested for BOOs
01.	Role & Function	The interceptor boat shall be utilized as a dedicated platform for providing practical, hands-on training to all India police personnel in the safe operation, handling, navigation, maintenance, and tactical, deployment of watercraft under various sea and coastal conditions. It shall support the enhancement of operational proficiency and overall capability. The vessel shall be designed and constructed for use in saline & tidal shallow water of Gujarat. • Carry out sea frontier patrolling in territorial waters of India. • Carry out interception of high speed craft. • Carry out anti-terrorist & anti-smuggling operation. • Capable for carry out search and rescue operation. • Seating capacity of at least 16 personnel including crew with personal belongings, weapon and other operational equipment. • Capable for boarding and seizure operations • The craft shall be provided with Bow ramp facility for quick embarking and disembarking of troops for any operations.	To be physically checked
02.	Endurance	8 Hrs with full load at cruising speed.	Trial to be carried out for 2 hrs @ 35 knots with full load (man & materials with eqpts) during sea trial (in favour & against the current) Distance travelled & fuel consumed to be recorded. Check & calculate fuel tank capacity meets endurance requirements

03. Dimension	i) Length over all (LOA) Minimum 13 to 15 Mtr (ii) Extreme Beam – Minimum 04 Mtr $\pm 10\%$ (iii) Draught –less than 0.8 meter with full load. (iv) Full load static displacement: Not more than 12 T. (v) Depth of Hull : sufficient depth for comfortable sea operation.	To be physically checked
04. Speed	i) Not less than 40 Knots with full load displacement at 95% MCR ii) Cruising/economical speed for fuel efficiency : 35 Knots.	To be checked during speed trial
05. General Features	a) Should be monohull (Single mound) and sandwich construction b) Method of manufacturing Vacuum infusion process c) Having arrangement to prevent towing rope from getting entangled in propulsion system of vessel. d) All major machineries of propulsion i.e. main engine, gear box, shafting and propulsion system should have Type approved by IRS or any other IACS members. e) Have an expected service life of about 15 years for the machinery, equipment and hull. f) Suitable rated diesel engines with Water Jet propulsion system meeting the speed requirement. Twin Marine diesel engines coupled with water jet propulsion system(WJPS) g) Latest design concept for the craft with respect to automation, sanctioned aspects and crew comfort are to be included. h) Sufficient hatches with pad locks and door to be provided to meet the comfortness and operational requirement as per class/user requirement. i) Watertight transverse bulkheads to be built in accordance with plan of watertight sections and class requirements. j) All penetrations in the deck and bulkhead to be made watertight. k) Watertight bulkheads are to be extended up to main deck. l) Multiple chamber hull with minimum 4 to 5 airtight chamber bulkhead shall be considered during design or as per class rules. m) Noise and vibrations in various sections of the vessel are to be limited as per class rules. n) Main Engine, its accessories and electronic devices like control panel, control unit parameter display unit, wheel house operating console units monitoring system related to engines should be the scope of main engine manufacturers (OEM) compatible with gear box and Water Jet propulsion units.	Check the criteria with classification society representative and check physically the other items as per class requirement.

		o) Power generation (DG set) and its all auxiliary systems like control and monitoring systems should be the scope of DG set engine manufacturers. p) Firm should finalize and project only one/two each make of engine, Gear box and Water Jet propulsion unit (selection of engine should confirm the compatibility of selection of Gear box make and propulsion unit make) which brand having indigenous product support facilities. The firm should submit complete literatures, manuals, specifications, part catalogue, list of OBS, list of Tools etc along with technical bid. Offering of multiple engine will not be accepted. q) All fittings like sea water heavy duty pipe lines of cooling system, heavy duty fuel line, railings, nut, bolt, screw, washer, light fixtures or any metal parts etc. and any such materials/fixtures should be of SS 316 marine grade stainless steel or brass alloy only. r) Ballast and sullage system should be as per class and MARPOL compliant. s) 200 liters in a potable water camper suitably fixed/clamped. t) A minimum 200 Ltrs fresh water tank shall be provided exclusively for toilet flushing for crew hygiene purpose. u) Vessels should be built in light weight , high strength and low maintenance requirement in service.	
06	Environmental conditions	The design & building of High Performance Fast Patrol Craft/Boat with the equipment and machinery fitted on board should be marinized and capable of satisfactory operation/service, under the following environmental conditions: - a) Wind speed is 17-21kts b) Ambient air temperature from zero to +55 °C. c) Water temperature from 01 C to 40 °C. d) Max relative humidity of 90% at 32 °C. e) Salinity of water up to 36000 PPM-450000 ppm f) Tidal Water current -5-6 Knots g) Wave height -2-9 Feet (sea state 4) h) Water density from 1010 to 1025 Kg/m³ i) Creek water which have incidence of water hyacinth, contaminants like polythene bags of varying size and mud sediments etc.	General

07	<u>Annual exploitation</u>	Annual exploitation of 2000 hours per year <table><tr><td>S. No</td><td>Speed</td><td>Operating Time</td></tr><tr><td>(i)</td><td>From 35 knot to 40 knots</td><td>10% annual exploitation</td></tr><tr><td>(ii)</td><td>From 25 knot to 35 knots</td><td>80% annual exploitation</td></tr><tr><td>(iii)</td><td>From 05 knot to 25 Knot</td><td>10% annual exploitation</td></tr></table>	S. No	Speed	Operating Time	(i)	From 35 knot to 40 knots	10% annual exploitation	(ii)	From 25 knot to 35 knots	80% annual exploitation	(iii)	From 05 knot to 25 Knot	10% annual exploitation	General
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08.	Class, Design and construction	• The boat shall be built as per proven hull design and in accordance with Classification Society rules and norms. In case the offered design is a new one (not build and supplied in the past for the same function), on placement of order, the builder is to carry out detailed design calculations and Model testing (IIT /NSTL) / CFD Analysis (Approved by IACS member Class) of the hull form offered in accordance with Class Rules. The model testing/ CFD Analysis should cover resistance, propulsion, powering and seakeeping parameters of the boat. The design calculations and the model test/CFD reports are to be vetted by the Classification Society in accordance with Class rules and submitted to BSF for records. Model testing may be witnessed by IRS and Owner rep. • The craft shall be designed and constructed in accordance with the highest rules under relevant Classification Societies applicable for govt services i.e. ABS/BV/DNV-GL/IRS/RINA etc. with class notation SWASTIKA SUL, HSLC, RS 2, Patrol, Special govt. Service Swastika IY or equivalent notation of respective other classification societies. The hull shall be constructed using the FRP Vacuum infusion process, which ensures removal of excess resin that adds weight without contributing to structural strength, thereby producing a stronger and lighter hull capable of meeting the speed requirements • To further optimize strength-to-weight performance and durability, low-weight, high-strength advanced carbon composite fiber materials shall be employed. The lamination process shall incorporate carbon fibers in combination with vinyl ester resin or epoxy resin, along with other glass fibers, strictly in compliance with applicable class rules.	To be checked physically as per approved drawing plan and criteria with classification society representative												

		- Automatic drainage system provision should be provided with non-return valve in all open decks including Fwd/Aft deck for draining water shipped on deck during rain, operations/sailing. - Enclose the class-approved Works Approval Certificate verifying the yard's vacuum infusion capability for hull construction with the technical bid. It shall be of sufficient strength to withstand the slamming effect of rolling pitching of waves of 1.5 Mtr to 2.5 Mtr and emergency beaching which will be encountered in the adverse service conditions. <u>All safety feature, operational feature should meet with owner and class requirement.</u>	
09	3D Design	The builder shall provide complete 2D drawings and 3D design animations for review of comfort and operational requirements by the purchaser, class society, and builder at the design stage. The builder should submit 2D & 3D design animation within 30 days of issue of supply order / AT. Amendments, if any, shall be incorporated into the GA drawing prior to final class approval before starting the production of prototype boat.	To be checked on computer
10	Main Engines	a) 2x In-board diesel engine turbo-charged and after cooled or advanced inboard marine diesel engines developing enough power to meet speed criteria of this Q.R. Diesel Engines are to be matched at 95% MCR for the full speed requirement. b) The engines should be able to carry out sustained operations for about 6-8 hrs per day, with an annual exploitation of about 2000 hrs. (Medium/heavy duty engines of RPM range 2100 to 2300) c) The propulsion engines shall have at least 20% reserve power over the required operational power to ensure sustained performance under adverse environmental conditions. d) 02 Nos. gearbox compatible with engine and Jet propulsion system Selection of gear ratio suitable to obtain the desirable speed. e) 02 Numbers Water Jet propulsion package should cater for shallow water operations. f) Main Engines, Gearbox and Propulsions shall be Type approved by IRS or any other IACS members and also unit certification by respective classification society The diesel engine should meet the latest international norms on exhaust emission and personnel safety (IMO/MARPOL regulations on exhaust emissions, SOLAS	To be checked physically all operation and respective documents wherever applicable.

		regulation on personnel safety). g) Machinery should be type approved by class where ever applicable for Medium/heavy duty operations. h) 02 Nos Hatch cover of appropriate size to be provided to lift up and remove the engines for Repair & Maintenance.	
11	<u>Power Generation: - (D G Set)</u>	DG Set: - 01 No Marine DG of sufficient capacity of any reputed brand having indigenous product support facilities shall be provided. Type & capacity of generator shall meet class requirements. The power generated by DG shall be adequate for all auxiliary systems, heating, ventilation, air-conditioning lighting and Galley loads with 20% reserve power. IP65 Enclosure	DG Set performance trial to be conducted by running for one hour continuously on full load. All parameters & load of DG Set must be in normal limits specified by the DG Set manufacturers.
12	Fuel Tanks and Fuel System	Fuel tanks and fuel system is to cater for the following: - a) Fuel capacity calculation to be submitted as per endurance of the boat during submission of bid. sufficient capacity fuel tank for main engine to be provided with arrangement to run both engines and generator. The tanks are to be located at appropriate place as per design. b) The fuel tank should be of marine grade to reduce sloshing. The tank is to have suitable inspection manhole, filling point on deck, drainage valve and suction lines with valves for each engine with water separator and filters. The tank to be constructed with internal and external water tight joints. c) Fuel tank capacity to be designed to meet the endurance criteria d) "Digital tank level indicators" are to be provided for the fuel tanks. The fuel state indication is to be provided on the bridge/wheel house control panel also visual fuel level indicator provided adjacent to each tank. e) The vent pipes shall terminate in atmosphere and be positioned with a NRV and other arrangements to avoid ingress of rain water or spray f) Class approval certificate be obtained for fuel tank and produced during prototype inspection. g) Calibration chart plate be installed at fuel tank to calculate the quantity of fuel.	Check fuel capacity. Tank capacity to meet endurance requirement

13.	<u>Steering system:-</u>	The steering system shall be single station power assisted hydraulic system or advanced and integrated with Water Jet propulsion system.	To be checked physically
14.	<u>EQUIPMENT'</u> <u>NAVIGATION AND</u> <u>COMMUNICATION</u> <u>Navigation and</u> <u>Radio Equipment</u>	NAVIGATIONAL EQUIPMENT'S RADAR- 01 (High resolution) High resolution 12 NM RADAR able to track 10 targets simultaneously of reputed make consisting of color 10" / 12" RADAR monitor located in the wheel house and an enclosed scanner mounted on the mast. AIS Type A -01 (Having option for reception and transmission Mode) GPS/Echo Sounder /ECDIS/ Chart plotter with updated electronic chart One composite GPS/Echo sounder (Dual frequency capable of measuring up to 100 Mtr depth)/chart plotter of any reputed make with chart Cardin wheelhouse shall be provided to suit speed requirement and shall be integrated with the RADAR and multifunctional display with map Magnetic Compass -01 Reputed make and to meet class requirement a magnetic compass capable of being operational at high speeds. Search Light: - 01 Nos Search light for 360° coverage with remote operation from wheel house of minimum 500 Watt Xenon lamp (minimum 200 Mtr range) to be positioned on wheel house roof with operating system from inside the wheel house Loud Hailer: - 01 Nos with speaker at forward and aft Electric Horn/ Whistle: - 01 Nos One electric whistle / horn shall be fitted for navigation. Police Siren: - 02 and police light - 01 set NAVTEX: - For weather and navigational warning shall be provided. Binoculars: - One Marine binocular of Magnification 7 x 50, with protection case of reputed make. One night vision binocular of 7 x magnification be provided. One Barometer, Anemometer, Inclinator and wet & dry bulb thermometer in the wheel house shall be supplied& fitted Navigational lights: - Navigational lights as per COLREG 1972 as amended rules as applicable shall be provided. Additional Items Following additional items shall be provided: - 1. Ship's clock- 01	To be checked physically (all items/Eqpts) Check class approved certificates/OEM literature wherever applicable

		2. First Aid Box as per requirement of vessel. 3. Additional android map navigation with google map screen (offline & online) having access facility with wired/wireless connectivity with mobile phone etc. 4.SART and EPIRB 5. A high quality PTZ camera with night navigation facilities fixed at suitable height for 360-degree coverage with recording storage of at least one month and min 18-inch screen fixed at suitable place in cabin COMMUNICATION EQUIPMENT VHF Radio (Marine) with DSC capabilities: - 01 25W VHF TX/ RX multi-channel marine radio telephone shall be provided positioned in the wheelhouse. Police Radio:- To be provided by BSF	
15.	Associated safety equipment	Lifesaving appliances as per the statutory requirements for the craft shall be provided. Stowage space shall be provided for life jackets and mounting brackets for life buoys. Lifesaving equipment shall be class approved type as per Class requirement. a) Life raft – 02 Nos (10 men capacity of rectangular shape yacht model) to be fitted on the top deck with HRU. b) Life jackets – 24 Nos (20 Nos Normal Adult Jacket Type with zip and 03 strips, and 04 Nos hazardous duty life jackets). c) Lifebuoy – 06 Nos (Minimum 30" diameter; 04 with life line and 02 with light and smoke signal). d) Flares pack – 01 No comprising: • 03 Red Rocket Parachute Flares • 06 Red Hand Flares • 02 Orange Buoyant Smoke Signals/Markers e) Signaling Mirror – 01 (Daylight signaling). f) Torch – 01 (Waterproof electric torch suitable for Morse signaling). g) Whistle – 01 (Whistle or equal sound signal). h) One buoyant safety knife shall be provided. One bucket shall be provided. i) Hand-held spotlight with wander leads × 2, low-level deck lighting as per design. j) Shore power connection facilities (230 Volt, Single Phase) with 100 mtrs cable of required capacity. k) Firefighting system and damage control system as per class requirements.	To be checked physically for all items Check class approved certificates/OEM literature wherever applicable

		l) Water jet propulsion unit with inspection hatches, fully compliant engine room with forced air ventilation system, and full compliant ship's wiring and fuse system. m) Adequate deck rails and hand holds to the deck areas of the craft and suitable foldable mast to host navigational and communication equipment. n) One blue flashy police light on wheel house roof and one police siren on wheel house roof. o) Boat poles/hooks × 2 (floating type) & mooring line × 4. p) Towing line with stern-mounted towing posts and towing line storage locker. Towing posts shall be strengthened with additional stiffeners. q) Mooring bollards, cleats and fairleads of SS 316 to be provided and strengthened by additional stiffeners linked with bulkheads to withstand watercraft loads in tidal currents/bad weather, ensuring proper mooring of the watercraft. r) The Machinery space shall be fitted with fixed firefighting system and fire-alarm & smoke detection system meeting class requirements. s) A fire alarm system operated by smoke detectors shall be provided for engine / generator room (Detectors installed above the engines), accommodation cabin and wheelhouse. An audible alarm shall be fitted at the helm console.	
16.	<u>Weapon mounting & Armored protection</u>	a) The High Performance Fast Patrol Craft is to be fitted with Armour protection of NIJ level -III of lightweight materials like fiber with suitable material of International standards all around to wheelhouse and Cabin including bullet proof glass. Armour protection NIJ level-III of lightweight materials like fiber should be fixed inbuilt and not removable. b) 01 Number Remote operated weapon mounting system of MMG on the top of cabin. Also manual operation facility in case ROW system is nonfunctional c) Sufficient armament locker to be provided. d) 02 SS LMG post one each at Fwd and Aft deck for mounting LMG having 270° arc of fire. e) Light weight preferably Fiber made 04 Nos Bulletproof Helmet and 04 Nos bullet proof jackets to be provided for firers.	Weapon mounting points, posts and locker spaces to be checked physically
17	<u>Aft Cabin</u>	Aft cabin should be separated from the wheel house with a sliding door. Seating arrangements of 12 pers in 03 rows at Aft cabin. Seat with arm rest & lap belt for troops. First 02 rows both side seat shall be folded type to convert like	To be checked physically as per approved drawing plan

		foldable bed for crew comfortness /rest. Cabin should be air conditioned and with 06 suitable wall mounted fan. 01 toilet having reserve tank with electric flushing and manual flushing arrangement of sewage shall be provided. 01 wash basin, mirror, place for keeping soap and hand wash, towel holder with fittings etc to be provided. 01 exhaust fan.	
18.	<u>Wheel house /</u>	It should be air conditioned & shall have 4 numbers (2 seats on each PORT and STBD side) of suitable shock mitigating seat with arm rest & lap belt for operating crew in the wheel house. The wheel house must be provided the following equipment's facilities: - • Almost 360-degree vision • Front wind screen should be placed vertical and bottom inclined towards wheel house room to protect the wheel house equipment from direct sun rays and clear vision of crews while sailing during rain and foggy weather. • Overhead vision (Hatch) • Steering system • Engine/ propulsion controls and instrumentation • Ventilation and air conditioning including roof hatches. • Adequate stowage areas for all navigation equipment like RADAR/DGPS / Magnetic compass / weapon control system to operate weapons by remotely etc. • Master control panel for system. • 02 Nos Wall mounted fan for cabin. • Wind screen wiper (heavy duty)	To be checked physically as per approved drawing plan
19.	<u>Air condition plant</u>	The craft shall be provided with marine reputed make air conditioning system / 5 Star rating Split AC System (non-invertor) with hydrophilic coating at fins. The capacity of the AC shall be as per requirement. The AC shall be capable of maintaining 24° C room temperature in an ambient temp of 45° with humidity above 80%. • Separate air conditioning system should be provided with adequate cooling capacity in wheel house and crew accommodation independently to maintain cool condition even at high temperature.	To be physically checked and all ACs to be run during full load trial

		• In case split AC system, the outer unit be installed in the appropriate place to avoid sea water contact, which may damage the system. AC system should have the service facility in India.	
20.	Fenders	Rubber fender provided all around. The material shall be of low weight with high shock absorbing and good buoyancy. 06 Nos pneumatic fender size 2.5 feet x 1 feet to be provided with the boat for additional safety during placing the boat alongside.	Check fender and class approvals certificate for materials
21.	Anchor, windlass, pockets, Hose pipe	The complete system shall have anti rust material inside cable locker. Anchor to have sufficient capacity chain and rope have adequate strength and length to hold the craft in deep water up to 12 Meter. Anchor and windlass system as per the class requirement shall be provided.	To be physically checked
22.	Railing	Stainless steel 316 hand / grab rails shall be fitted where ever required / applicable throughout accommodation and service area for safety of personnel on board.	To be physically checked
23.	Anode protection external	Suitable anodes to be fitted on the hull sea chest & other appropriate places for 18 months of continuous service.	To be physically checked
24.	Bow Ramp	Bow landing ramp to be provided and adequate capacity to lifting and downing arrangement for easy embarkment and de-embarkment of troop for operation. Bow protection plate to be provided.	To be physically checked
25.	Inverter / UPS	Hybrid Inverter & LiFePO4 battery of sufficient capacity with independent charging facility by solar panel (capacity of solar panel can be increased if more spaces is available on top) and also through DG/Shore connection for emergency lights, Fan for all cabins , Mobile charging point etc, backup up to 6 to 8 Hrs	To be physically checked and run fan & light etc connected to inverter for 1 hour
26.	<u>Aft Deck</u>	Should have proper drain system of sea water shipped on Board while sailing. All surfaces shall be of minimum maintenance and easy to clean. The areas shall have adequate handholds protections. Seating arrangement with SS 316 frame bench for 04 person each at STBD & PORT with synthetic material niwar/strips.	To be physically checked
27.	Bilge pump	Electric power operated automatic bilge pump (vertical type) be provided in each bulkhead compartment of the hull. One additional stand by manual/hand operated bilge pump in Engine room to be provided.	Check functioning of bilge pump and alarm system.

		Hand bilge pump- as per class requirements. Bilge alarm system – fitted to all bilge wells to indicate high water level in the bilge. Alarm panel shall be fitted on helm console in the wheelhouse. Bilge pump- as per class requirement. Electric drive type pump with a 24 V DC be fitted.							
28	<u>Paint</u>	Tin free anti fouling paint system as per latest International Maritime Organization (IMO) regulations shall be applied to hull bottom (below water line) The pattern of the paint on the outer body part of the boat will be disruptive with combination of OG& cream / smoke gray color. Inside of hull paint color should be pale cream. Engine room should be painted with fire retardant paint. <table><tr><td>(i)</td><td>Anti-Fouling Paint: - Pen guard HB primer (Epoxy primer) 01 Coat-100 Micron (DFT) Safeguard universal ES grey tie coat 01 Coat-100 Micron (DFT) Sea Quantum pro-u light red- 01 coat-150 micron (DFT) (Silyl Acrylate Anti-fouling self-polishing paint) Sea quantum pro-u-dark red -01 coat-150 micron (DFT) (Silyl acrylate anti-fouling self-polishing paint) Metal oxide paint & primer to jet units</td></tr><tr><td>(ii)</td><td>Jet system/bucket & bucket system & propulsion nozzle & bucket system to be spray painted</td></tr><tr><td>(iii)</td><td>AFT deck and all rounds walk way anti-skid painting.</td></tr></table>	(i)	Anti-Fouling Paint: - Pen guard HB primer (Epoxy primer) 01 Coat-100 Micron (DFT) Safeguard universal ES grey tie coat 01 Coat-100 Micron (DFT) Sea Quantum pro-u light red- 01 coat-150 micron (DFT) (Silyl Acrylate Anti-fouling self-polishing paint) Sea quantum pro-u-dark red -01 coat-150 micron (DFT) (Silyl acrylate anti-fouling self-polishing paint) Metal oxide paint & primer to jet units	(ii)	Jet system/bucket & bucket system & propulsion nozzle & bucket system to be spray painted	(iii)	AFT deck and all rounds walk way anti-skid painting.	To be physically checked and tallied with class certificate/inspection report wherever applicable
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29.	Marks on Hull superstructure etc.	The crafts name, ID No., crafts' emblem & National flag is to be affixed to both sides of the hull at super structure level. The craft's name, ID No. NACP emblem to be affixed on transom. Size and location will be decided at the time of building of vessel. The craft name , NACP emblem will be provided by NACP.	To be physically checked						
30.	Supervision	The vessels shall be inspected by IRS or any other IACS members as per class requirement. In addition, the owner will conduct stage wise supervision of hull construction, machinery installation, and accommodation to ensure operational requirements and troop comfort. The shipyard shall provide full inspection facilities at its yard and OEM premises. A BSF supervisory team comprising one WW Officer and three members (SO from WKSP, Master and Engine Driver), will be detailed by	Periodic check						

		FHQ WW to undertake periodic visits in rotation to monitor quality and progress until project completion. They will visit the building yard and all machineries and equipment manufacturing yard /company in a regular interval at least officer and 01 member at a time to confirm the quality and ensure the boat shall be built as per required specification.	
31	<u>Certificates</u>	Following documents to be provided by builders with each vessel on delivery: - three sets in hard copy & one set in soft copy: - a) All class society approved drawings, booklets, manuals & trial data. b) Built and as fitted drawings and consolidated schedule of piping, painting, insulation, and paneling's etc. c) Manual with regards to installation, operation and maintenance of various equipment/fittings, systems. d) Service manual, part catalogue/identification list of major machinery such as main engine, gear box, generators, pumps & other accessories. e) Docking plan, Class reviewed LSA plan, Class reviewed firefighting plan along with instruction of operating safety equipment. f) Class Certificate of any member of IACS class. g) Builder's certificate. h) FO tank class approved certificate and calibration chart. i) Anchor & chain cable mooring ropes certificate. Major machinery (Main Engine, Gear box, water jets & generators etc.) type approval certificate. j) Class approved final Stability booklet. k) Maintenance schedule on utility basis (i.e. Run Hrs) and time basis (i.e. weekly, monthly, yearly etc.) of all equipment's.	Check all documents physically
32	Guarantee Warrantee	/ The firm will have to provide 02 years guarantee/warranty for boat from the date of acceptance of consignee location in satisfactory condition. Guarantee & warranty services on site shall be provided by the OEM/authorized service agencies of respective machineries. The Guarantee / Warranty shall be comprehensive i.e. for all system. The company will provide all the consumable items including oil / lubricant, filters, batteries, spares of all machineries (only Except fuel) for the period of guarantee / warranty on free of cost. All periodical maintenance should be done by the firm for all machineries/equipment. The OEM service provider of the	Physically check the documents

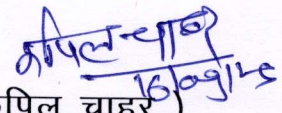
		respective machineries shall provide a certificate that they have the experience of servicing similar type of engines/machineries during last 05 years in India. (OEM shall provide preventive maintenance schedule and support through repair and rate contract (RRC) for major machinery during the operational life of the craft)	
33	OBS/BDS	Will be provided during tender.	To be checked during JRI
34	Inspection, Test & Trials	The test and trials shall be carried out as per the standard procedure of class requirement or as per following details. a) Machinery trial. b) Beaching Trial. c) Mooring trials. d) Speed trials. i. Light load condition ii. Full load condition e) Endurance/Sea trial f) Maneuverability trials and water jet trials as per class requirement. g) Turning circle trials h) Astern trials i) Crash stop j) Electrical equipment's trials k) Anchor trials as per class / QR requirement l) Generator trial m) Navigation equipment's trial. n) Basin trail o) Inclining/ stability test	To be checked during prototype inspection along with class representative. Speed and maneuvering trials need to be conducted again during JRI
35	Associated equipment	a) Basic maintenance kit related to repair. b) Hull lifting points along with lifting arrangements and slings × 4 Nos capacity 100% excess, with spreader bar to suit to the length & breadth of vessel. c) Suitable light weight cradle with wheel facility for safe transportation if by road transfer.	To be physically checked

36	Training	Provision of imparting training to 16 crew / Wksp staff per boat for the period of 02 weeks regarding on board operation & maintenance of main engine by OEM rep, propulsion system by OEM rep, all fitted equipment's, machineries and manning of crafts shall be included in the initial package.	To be conducted at consignee location.
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तकनीकी विशेषज्ञों के उप समूह द्वारा यह निश्चित किया गया है कि उक्त गुणात्मक आवश्यकता को अधिक बेहतर बनाने के लिए गृह मंत्रालय एवं सीमा सुरक्षा बल की वेबसाइट पर विक्रेताओं/फर्मों के सुझाव प्राप्त करने हेतु 15 दिनों के लिए अपलोड किया जाए।

नोट – सभी विक्रेताओं/फर्मों से निवेदन है कि अपने सुझावों के साथ निम्नलिखित कागजात संलग्न कर ई-मेल पता comdtord@bsf.nic.in पर भेजने का श्रम करें:-

1. उत्पाद की वास्तविक विवरण पुस्तिका।
2. उत्पाद की साहित्यिक रचना का ब्यौरा।
3. गुणात्मक आवश्यकताओं के उपर व्यापक टिप्पणीयों।


 (कपिल चाहर)
 उप कमांडेण्ट (आधुनिकीकरण)