

संख्या. पी-63013/219/01/2025/मोड-1/सीसुबल 1603-06

भारत सरकार, गृह मंत्रालय  
महानिदेशालय सीमा सुरक्षा बल  
(रसद निदेशालय: आधुनिकीकरण सैल)  
(Email-comdtord@bsf.nic.in)  
(Fax: 011-24367683)

ब्लाक संख्या . 10,  
सीजीओ काम्पलैक्स,  
लोधी रोड, नई दिल्ली-03  
दिनांक 26 मई 2025

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)

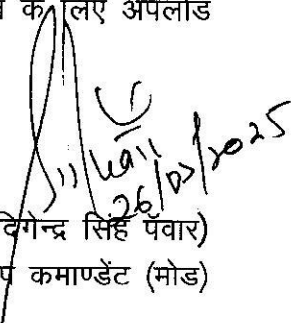
(ई-मेल पता : [mpsugandhi@nic.in](mailto:mpsugandhi@nic.in))

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 31 अगस्त 2015 के सन्दर्भ में।

2. उपरोक्त विषयान्तर्गत यह सूचित किया जाता है कि तकनीकी विशेषज्ञों के उप समूह द्वारा **"High Performance Fast Patrol Craft"** गुणात्मक आवश्यकता/परीक्षण निर्देशों का प्रारूप दिनांक 21 मई 2025 को आयोजित सभा के दौरान तैयार किया गया था जिसको इस आशय से प्रेषित किया जा रहा है कि उक्त गुणात्मक आवश्यकता/परीक्षण निर्देश को गृह मंत्रालय की वेबसाइट पर 15 दिन के लिए अपलोड करने का श्रम करें।

संलग्न : उपरोक्तनुसार

  
(दिगेन्द्र सिंह पवार)  
उप कमाण्डेंट (मोड)

प्रतिलिपि :-

1. SO (IT), North Block, MHA  
(Through E-mail)  
(E-mail address: [soit@nic.in](mailto:soit@nic.in)) : उपरोक्त समस्त गुणात्मक आवश्यकता का मसौदा आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु।
2. IT Wing, FHQ BSF : उपरोक्त उक्त गुणात्मक आवश्यकता का 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](mailto:mpsugandhi@nic.in))  
(b) SO (IT), North Block, MHA  
(E-mail : [soit@nic.in](mailto:soit@nic.in))
3. Prov Dte (Water Wing), BSF  
2<sup>nd</sup> Floor, "F" Wing, Nirman  
Bhawan, New Delhi. : For info w.r.t their letter No.499-500 dated 13 May 2025.


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)  
(Fax: 011-24367683)

संख्या. पी-63013/219/01/2025/मोड-1/सीसुबल/

दिनांक 26 मई 2025

**विषय : “High Performance Fast Patrol Craft” के सूत्रीकरण गुणात्मक आवश्यकता/परीक्षण निर्देशों पर हितधारकों/निर्माताओं/विक्रेताओं की टिप्पणी के लिए अनुरोध।**

1. **“High Performance Fast Patrol Craft” के सूत्रीकरण 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
2. आवश्यक जानकारी/विवरण निम्नलिखित पते पर दिनांक 09 जून 2025 तक भेजने का श्रम करें।  
रसद निदेशालय, सीमा सुरक्षा बल  
लेवल-8, ब्लाक-10,  
केन्द्रीय कार्यालय परिसर, लोधी रोड,  
नई दिल्ली-110003  
ईमेल:- comdtord@bsf.nic.in
3. शीघ्र प्रतिक्रिया का अनुरोध किया जाता है।

  
(दिगेन्द्र सिंह पेंवार)  
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  
(Fax: 011-24367683, Email-comdtord@bsf.nic.in)

No. P-63013/219/01/2025/Mod-I/BSF/

Dated, the 26 May 2025

**Subject : Request for comments of stakeholders/ OEM/ Firms on QRs (Qualitative Requirements) & TDs (Trial Directives) of "High Performance Fast Patrol Craft"**

1. The QRs & TDs of **"High Performance Fast Patrol Craft"** 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.

- 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 09.06.2025:-

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

3. An early response is requested.

  
( Digendra Singh Panwar )  
Dy. Commandant (Mod)

**DRAFT QRs & TDs OF HIGH PERFORMANCE FAST PATROL CRAFT**

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
01.	Role & Function	<p>The vessel shall be designed and constructed as High Performance Fast Patrol Craft for use in saline &amp; tidal shallow water of creek area of Gujarat, Sundarban area of West Bengal and also in Indian Territorial waters.</p> <ul style="list-style-type: none"> <li>• Carryout interception of high speed craft</li> <li>• Capable for on board search and seizure operations</li> <li>• The craft shall be provided with Bow ramp facility for quick disembarking of troops for any operations.</li> </ul>	To be physically checked	
02.	Speed	<p>i) Maximum <b>45 knots</b> with full load displacement at 95% MCR  ii) Cruising speed: Not less than 30 Knots.</p>	To be checked during speed trial	
03.	Sea worthiness & Maneuverability	<p>i. Excellent performance upto Sea State- 04, Sustainability upto Sea state- 05.  ii. The bottom structure of the water craft shall be designed in such a way to withstand slamming effect when the watercraft is operating at high speed in significant wave height of 1.5 meters and above. The vessel shall have good maneuverability for the following operational requirements: -</p> <p>a) Going alongside and leaving a vessel while under way for boarding purpose.  b) Maneuvering safely under all conditions of loading and speeds in adverse weather and sea condition.  c) Crash stop from full speed ahead in minimum 1.5 times of boat length or as per class requirement.  d) Capable of maneuvering from one engine in case of failure of the other.</p>	To be checked during sea trial.	
04.	Endurance	200NM at 30 Knots of cruising speed with full load	Trial to be carried out for 2 hrs @ 30 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	



S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
			fuel tank capacity meets endurance requirements	
05.	Dimension	i) Length minimum 17 Mtr (ii) Beam – according to ship stability criterion and design (iii) Draught – less than 0.9 meter with full load. (iv) Displacement: according to design criteria. (v) Depth: sufficient depth for comfortable sea operation.	To be physically checked	
	General Features	a) Should be monohull construction (Single mould) b) Having arrangement to prevent towing rope from getting entangled in propulsion system of vessel. c) All major machineries of propulsion i.e. main engine, gear box, shafting and propulsion system should have the reference of installation in defense / para military water vessels application d) Have an expected service life of about 15 years for the machinery, equipment and hull. e) Suitable rated diesel engines with Water Jet propulsion system meeting the speed requirement. f) Fresh / portable Water Capacity – Approx 250 Ltr g) Fuel Capacity – Sufficient to meet the range/ endurance criteria of 200 NM plus 10% reserve h) The craft shall be capable to operate in shallow water during day / night operation for patrolling, surveillance and chasing / intercepting suspected water crafts. i) The water craft must have carrying capacity of 14-16 pers including crew j) Latest design concept for the craft with respect to automation, sanctioned aspects and crew comfort are to be included. k) Sufficient hatches with pad locks and door to be provided to meet the comfortness and operational requirement as per class/user requirement. l) Watertight transverse bulkheads to be built in accordance with plan of watertight sections m) All penetrations to be made watertight. n) Watertight bulkheads are to be extended up to main deck. o) Multiple chamber hull with minimum 4 to 5 airtight chamber	Check the criteria with classification society representative and check physically the other items as per class requirement.	

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
		<p>bulkhead shall be considered during design</p> <p>p) Noise and vibrations in various sections of the vessel are to be limited as per class rules.</p> <p>q) Main Engine &amp; its accessories and its electronic devices like control panel, control unit parameter display unit &amp; wheel house operating console units and monitoring system related to engines should be the scope of main engine manufacturers (OEM) compatible with gear box and Water Jet propulsion units.</p> <p>r) Power generation (DG set) and its all auxiliary systems like control and monitoring systems should be the scope of DG set engine manufacturers.</p> <p>s) 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, OBS (list as guided at Annexure. - A) etc along with technical bid. Offering of multiple engine will not be accepted.</p> <p>t) All fittings like railings, nut, bolt, screw, washer, Light fixtures etc and any such materials/fixtures should be of SS 316 marine grade steel.</p>		
07	Environmental conditions	<p>The design &amp; building of High Performance Fast Patrol Craft with the equipment and machinery fitted on board should be marinized and capable of satisfactory operation, under the following environmental conditions:-</p> <p>a) Wind speed up to 30 knots</p> <p>b) Ambient air temperature from zero to +55 °C.</p> <p>c) Water temperature from 01 C to 40 °C.</p> <p>d) Max relative humidity of 90% at 32 °C.</p> <p>e) Salinity of water up to 50000 PPM.</p> <p>f) Tidal Water current -5-6 Knots</p> <p>g) Wave height -2-9 Feet (Approx)</p> <p>h) Water density from 1010 to 1025 Kg/m3</p> <p>i) Creek water which have incidence of water hyacinth, contaminants like</p>	General	

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks																				
		polythene bags of varying size and mud sediments.																						
08	Annual exploitation	<div>Annual exploitation of 2000 hours per year</div> <table><tr><th>S. No</th><th>Speed</th><th>Nos of Hrs</th><th>Operating Time</th></tr><tr><td>(i)</td><td>From 45 knot to 50 knots</td><td>100 Hrs</td><td>05% annual exploitation</td></tr><tr><td>(ii)</td><td>From 40 knot to 45 knots</td><td>200 Hrs</td><td>10% annual exploitation</td></tr><tr><td>(iii)</td><td>From 30 knot to 40 Knot</td><td>300 Hrs</td><td>15% annual exploitation</td></tr><tr><td>(iv)</td><td>From 5 knot to 30 knots</td><td>1400 Hrs</td><td>70% annual exploitation</td></tr></table>	S. No	Speed	Nos of Hrs	Operating Time	(i)	From 45 knot to 50 knots	100 Hrs	05% annual exploitation	(ii)	From 40 knot to 45 knots	200 Hrs	10% annual exploitation	(iii)	From 30 knot to 40 Knot	300 Hrs	15% annual exploitation	(iv)	From 5 knot to 30 knots	1400 Hrs	70% annual exploitation	General	
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(iv)	From 5 knot to 30 knots	1400 Hrs	70% annual exploitation																					
09.	Class. Design and construction	<p>The craft shall be designed and constructed as per High Speed Craft HSC/HSLC rules for government service of Classification Societies i.e. ABS/BV/DNV-GL/IRS/RINA etc. Main propulsion machinery is to be as per Classification society standards. The craft should be of FRP (Vacuum infusion process for Hull construction) for construction of stronger &amp; lighter hull to meet above design criteria. All the fittings should be corrosion protective material SS marine grade 316. Wheel house, cabin all around should be bullet proof NIJ Type III of lightweight materials like fiber including all glass and window etc Vinyl ester resin low weight high strength advanced composite/fiber glass may be used complying class rules for construction to provide light weight and low maintenance requirement in service. Automatic drainage system provision should be provided in all open decks for draining water shipped on deck during operations/sailing.</p> <p>The <u>work approved certificate from any class</u> regarding firm yard is having capability of Vacuum infusion process for Hull construction should be enclosed with the technical bid.</p> <p>It shall be of sufficient strength to withstand the/slamming effect of rolling pitching of waves and emergency beaching which will be encountered in the adverse service conditions</p> <p>All safety feature, operational feature should meet with owner and class</p>	To be checked physically as per approved drawing plan and criteria with classification society representative																					

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
		requirement.		
10	3D Design	Complete design scheme, drawing and 3D design animation (If any suitable software) to be provided by the builder to finalize the comfortness and operational requirement of purchaser and for discussion between purchaser, class society builder before finalization/approval of drawing. Amendment in the 2D and 3D drawing animation may be incorporated in the GA drawing as per the user requirement before approving of GA drawing by class.	To be checked on computer	
11	Main Engines	<p>a) 2x In-board diesel engine turbo-charged and after cooled inboard marine diesel engines developing enough power to meet speed criteria mentioned in clause(2) of this Q.R. Diesel Engines are to be matched at 95% MCR for the full speed requirement.</p> <p>b) The engine (s) should be able to carry out sustained operations for about 8-10 hrs per day, with an annual exploitation of about 2000 hrs. (Medium/heavy duty engines of RPM range 2100 to 2300)</p> <p>c) Main Engines, Gearbox and Propulsions shall be compliant to IACS class rules. The diesel engine should meet the latest international norms on exhaust emission and personnel safety (IMO/MARPOL regulations on exhaust emissions, SOLAS regulation on personnel safety).</p> <p>d) The propulsion package should cater for shallow water operations.</p> <p>e) Ballast and Sullage system should be as per Class and MARPOL compliant.</p> <p>f) Level indicators for all tanks be provisioned with digital display and physical visual indicator adjacent to the tanks. Tanks should be connected to both engines.</p> <p>g) Engine should be type approved by class for Medium/heavy duty operations.</p> <p>h) Selection of gear ratio suitable to obtain the desirable speed as mentioned SI No. 2 of the QR.</p>	To be checked physically all operation and respective documents wherever applicable	
12	Power generation:-(DG Set)	01 No of Marine DG of sufficient capacity of any reputed brand having indigenous product support facilities duly type approved by class or any member of IACS shall be provided, that shall meet the total power requirement including lighting and air conditioning with at least 20% reserve capacity. Type, quantity & capacity of generator shall meet class	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	

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
		requirements. The power generated by DG shall be adequate for all auxiliary systems, heating, ventilation, air-conditioning lighting and Galley loads.	specified by the DG Set manufacturers.	
13	Fuel Tanks and Fuel System	Fuel tanks and fuel system is to cater for the following:- a) Separate fuel tanks for each main engine are to be provided with arrangement to run both engine from each tank. The tanks are to be located at appropriate place as per design and are to be interconnected. b) The fuel tanks should be of marine grade SS 316 with EPI Coat with baffles to reduce sloshing .The tanks are 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 tanks to be constructed with internal and external water tight welding at all joints. c) Fuel capacity to be designed in consonance with the type of engines and as per endurance criteria with 10% reserve. 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 in each tank. e) The vent pipes shall terminate in atmosphere and be positioned with a NRV to avoid ingress of rain water or spray. f) Separate class approved certificate be obtained for each fuel tank separately and produced during prototype inspection. g) Calibration chart plate be installed in every tank	Check fuel capacity. Tank capacity to meet endurance requirement	
14.	Steering system:-	The steering system shall be single station power assisted hydraulic system integrated with Water Jet propulsion system.	To be checked physically	
15.	Equipment's Navigation and Communication Navigation and Radio Equipment	<b><u>NAVIGATIONAL EQUIPMENT'S</u></b> <b><u>RADAR- 01</u></b> (High resolution) High resolution 12 NM RADAR able to track 10 targets simultaneously of reputed make consisting of color 7" RADAR monitor located in the wheel house and an enclosed scanner mounted on the mast. <b><u>GPS/Echo</u></b> <b><u>Sounder / Chart plotter</u></b> One composite GPS/Echo sounder (Dual frequency capable of measuring up to 1000 Mtr depth)/chart plotter of any reputed make with chart Cardin wheelhouse shall be provided to suit speed requirement and shall be	To be checked physically (all items/Eqpts)  Check class approved certificates/ OEM literature wherever applicable	

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
		<p>integrated with the RADAR and shall have multifunctional display with map.</p> <p><b><u>Magnetic Compass -01</u></b>  Reputed make magnetic compass capable of being operational at high speeds.  The compass shall be of 100mm diameter fitted in the wheel house at suitable location to facilitate navigation. The magnetic compass should meet class requirement.</p> <p><b><u>Search Light:-</u></b>  02 nos Search light for 360° coverage with remote operation from wheel house of minimum 200 Watt Xenon lamp (minimum 200 Mtr range) to be positioned on wheel house roof with operating system from inside the wheel house.</p> <p><b><u>Loud Hailer:-</u></b> 01 Nos  With speaker forward and aft.</p> <p><b><u>Electric Horn/ Whistle:-</u></b> 01 Nos  One electric whistle / horn shall be fitted for navigation.</p> <p><b><u>Police Siren:-</u></b> 02 and police light – 01 set</p> <p><b><u>AIS Type A</u></b> -01(Having option for reception and transmission Mode)</p> <p><b><u>NAVTEX:-</u></b> For weather and navigational warning shall be provided.</p> <p><b><u>Binoculars:-</u></b>  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 &amp; dry bulb thermometer in the wheel house shall be supplied&amp; fitted</p> <p><b><u>Navigational lights:-</u></b>  Navigational lights as per COLREG 1972 as amended rules as applicable shall be provided.</p> <p><b><u>Additional Items</u></b>  Following additional items shall be provided:-</p> <ol style="list-style-type: none"> <li>1. Ship's clock- 01</li> <li>2. First Aid Box</li> <li>3. Additional android map navigation with google map screen (offline &amp; online) having access facility with wired/wireless</li> </ol>		

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
		<p>connectivity with mobile phone etc.</p> <p><b>COMMUNICATION EQUIPMENT</b></p> <p><u>VHF Radio (Marine) with DSC capabilities:-</u> 01 25W VHF TX/ RX multi-channel marine radio telephone shall be provided positioned in the wheelhouse.</p> <p><u>Police Radio:-</u> To be provided by BSF</p> <p><u>Camera provisions:-</u> i) 360 degree (PTZ) camera- 01 No ii) Bullet camera 02 Nos (At Fwd deck and Rear deck) iii) One TV screen along with Accessories. iv) Sufficient storage provision for above items.</p>		
16.	Associated safety equipment's	<p>Lifesaving appliances as per the statutory requirements for the craft shall be provided. Stowage space shall be provided for life jacket and mounting brackets for life buoys. Lifesaving equipment's shall be <u>type approved by any class of society.</u></p> <p>a) Life raft – 02 (10 men capacity fitted one on each side with HRU. b) Life jackets – 24 (Adult JacketType) 20 normal and 04 hazardous duty life jackets. c) Lifebuoy- 06 (30" diameter, Two with life line and two with light and smoke signal) d) Flares pack- 01 - Comprising 6 red rocket parachute flares, 12 red hand flares and 2 orange buoyant smoke signals / markers) e) Signaling Mirror- 01 (Daylight signaling) f) Torch- 01 (Water proof 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 x 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) Hull lifting points along with lifting arrangements and slings x 4 nos with spreader bar to suit to the length &amp; breadth of vessel. l) Firefighting system and damage control system as per class requirements.</p>	<p>To be checked physically for all items</p> <p>Check class approved certificates/OEM literature wherever applicable</p>	



S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
		<p>m) Water jet Propulsion unit with Inspection hatches, fully complaint engine room with forced air ventilation system and full compliant ships wiring and fuse system.</p> <p>n) Adequate deck rails and hand holds to the deck areas of the craft and suitable foldable mast to host navigational and communication equipment.</p> <p>o) One blue flashy police light on wheel house roof, one police siren on wheel house roof.</p> <p>p) Boat poles /hook x 2 floating type &amp; mooring line x 4</p> <p>q) Towing line with stern mounted towing posts and towing line storage locker. Towing post should be strengthened with additional stiffeners.</p> <p>r) Mooring bollards, cleats and fairleads of SS 316 to be provided and strengthened by providing additional stiffeners linked with bulkheads to withstand the watercraft load in the tidal current / bad weather to ensure proper mooring of watercraft.</p> <p>s) The Machinery space shall be fitted with fixed firefighting system and fire-alarm &amp; smoke detection system meeting class requirements.</p> <p>t) A fire alarm system operated by smoke detectors shall be provided for engine room generator room (Detectors installed above the engines), accommodation cabin and wheelhouse. An audible alarm shall be fitted at the helm console.</p>		
17.	Weapon mounting & Armoured protection	<p>a) The High Performance Fast Patrol Craft is to be fitted with all around Armour protection of NIJ level -III of lightweight materials like fiber withof suitable material of International standards to wheelhouse and Cabin. Armour protection NIJ level-III of lightweight materials like fiber should be fixed inbuilt and not removable.</p> <p>b) Stabilized Remote Control Gun (SRCG) of 12.7 mm HMG at bridge top with 320<sup>0</sup> forward arc of fire with remote operating facility from captain cabin and with provision to operate manually also to have installation facility for 7.62 mm MMG. Installation need confirmation from the classification society considering the safety and stability of these class/type of vessels during operation.</p> <p>c) Bullet proof jacket NIJ type-III ( 4 nos)</p>	Weapon mounting points, posts and locker spaces to be checked physically	



S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
		d) <b>Bullet proof helmet type –III A (4 nos)</b> e) Sufficient armament locker to be provided. f) Two SS LMG post one each at Fwd and Aft deck for mounting LMG having 270° arc of fire.		
18	Cabin	Spacious enough to accommodate seating arrangements of 12 pers. It should be air conditioned & should have suitable seats for 12 pers. Cabin should have 2 open able windows each for Port and Stbd side without compromising the armored protection. a) 2 Nos small port hole each Port & Stbd of cabin for fire the weapon from inside One toilet with reserve tank with flushing / pumping arrangement shall be provided it should have following fittings:- (i) Water closet – 01 No. (ii) SS 316 wash basin with fittings – 01 No.	To be checked physically as per approved drawing plan	
19.	Wheel house /	It should be air conditioned & shall have 4 numbers of suitable seat with fixed arm rest & lap belt for operating crew in the wheel house. The wheel house must be provided the following equipment's facilities:- <ul style="list-style-type: none"> <li>• Almost 360 degree vision</li> <li>• Overhead vision ( Hatch)</li> <li>• Steering system</li> <li>• Engine/ propulsion controls and instrumentation</li> <li>• Ventilation and air conditioning including open able side windows 1 No each of Port &amp; Stbd and roof hatches</li> <li>• Adequate stowage areas for all navigation equipment like RADAR DGPS / Magnetic compass / ROW system to operate weapons on the top remotely etc.</li> <li>• Master control panel for system</li> <li>• Wall mounted fan for cabin.</li> <li>• Wind screen wiper (heavy duty)</li> </ul>	To be checked physically as per approved drawing plan	
20.	Air condition plant	➤ The craft shall be provided with marine reputed make air conditioning system (or Split AC System). The system shall be compact environment friendly and have low-power consumption. 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	To be physically checked and all ACs to be run during full load trial	

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
		<p>of 45° with humidity above 80 present.</p> <p>➤ The air conditioning system chosen shall provide adequate cooling capacity in wheel house and crew accommodation separately to maintain cool condition even at high temperature.</p> <p>Air conditioning system suitable for operating in 220V electrical system of the boat shall be provided. AC system should have the service facility in India.</p>		
21.	Fenders	Rubber fender provided all around (except aft transom). 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.	Check fender and class approvals certificate for materials	
22.	Anchor, windlass, pockets, Hose pipe	As per the class requirement shall be provided. The complete system shall have galvanic protection inside cable locker.	To be physically checked	
23.	Railing	Stainless steel 316 hand / grab rails shall be fitted throughout accommodation and service area for safety of personnel on board. Stainless steel 316 guard rails all-round the main deck for safety of crew and personnel shall be provided.	To be physically checked	
24.	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	
25.	Bow Thrusters	Bow thrusters system be provided and adequate powerful separate battery be provided to operate bow thrusters system or coupled with any engine by operating system from wheel house	To be physically checked	
26.	Inverter / UPS	Hybrid Inverter & Litium Iron battery capacity of 2 KW maximum power point tracking (MPPT) with independent charging facility by 1 KW flexible bipole solar panel and remaining through DG / Shore connection shall be provided for communications and emergency lighting / Fan etc for all cabins etc. backup upto 8 hours.	To be physically checked and run fan & light etc connected to inverter for 1 hour	
27.	Bilge pump	<p>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.</p> <p>Hand bilge pump- as per class requirements.</p> <p>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.</p>	Check functioning of bilge pump and alarm system.	

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks						
		Bilge pump- as per class requirement. Electric drive type pump with a 24 V DC.								
28.	Galley	One small galley space in the cabin including induction stove to make tea and hot water along with one sink shall be provided. <ul style="list-style-type: none"><li>• 01 No tea kettle</li><li>• 02 Nos 01 Ltr thermos</li><li>• 02 ltr/03 ltr/05 ltr casserole 01Nos each</li><li>• Tray, glass, tea set</li></ul>	To be physically checked							
29	Aft Deck	All surfaces shall be of minimum maintenance and easy to clean. The areas shall have adequate handholds	To be physically checked							
30.	Paint	<div>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&amp; cream / smoke gray color. Inside of hull paint color should be pale cream.</div> <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 &amp; primer to jet units</td></tr><tr><td>(ii)</td><td>Jet system/bucket &amp; bucket system &amp; propulsion nozzle &amp; bucket s 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 s 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	
(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 s be spray painted									
(iii)	AFT deck and all rounds walk way anti-skid painting.									
31	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. BSFemblem to be affixed on transom. Size and location will be decided at the time of building of vessel.	To be physically checked							

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
32.	Supervision	<p>As the vessels are being built to class, these would be inspected by the classification society as per class requirement. However the owner shall undertake stage wise additional inspections during Hull, Engine installation, Accommodation etc. Shipyard would be required to provide all inspection facilities at OEM premises/builders yard to the inspection team. Periodic reviews by the owner would be conducted for ascertaining work progress by a team including technical officer and member from user end for the complete project.</p> <p>One Officer alongwith team of 3 members (including 01 SO each from WKSP, Master &amp; Engine Driver) be detailed to supervise the construction of the boat in stage wise. They will visit the building yard and all machineries and equipment manufacturing yard / company in a regular interval to confirm the quality and ensure the boat shall be built as per requirement specification.</p>	Periodic check	
33	Certificates	<p>Following documents to be provided by builder with each vessel on delivery- three sets in hard copy &amp; one set in soft copy:-</p> <ol style="list-style-type: none"> <li>All class society approved drawings, booklets, manuals &amp; trial data</li> <li>Built and as fitted drawings and consolidated schedule of piping, painting, insulation, and paneling's etc.</li> <li>Manual with regards to installation, operation and maintenance of various equipment / fittings, systems.</li> <li>Service manual, part catalogue/ identification list of major machinery such as main engine, gear box, generators, pumps &amp; other accessories.</li> <li>Docking plan, LSA plan, firefighting plan alongwith instruction of operating safety equipment.</li> <li>Certificate of any member of IACS class</li> <li>Builder's certificate</li> <li>FO tank calibration chart.</li> <li>Anchor &amp; chain cable mooring ropes certificate. Major machinery (Main Engine, Gear box, water jets &amp; generators etc) type approval certificate.</li> <li>Stability booklet.</li> </ol>	Check all documents physically	
34.	Associated	i) Basic maintenance kit related to repair.	To be physically checked	

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
	equipment	<p>ii) <u>On board spares.</u></p> <p>The craft to be supplied with basic maintenance on board spares of main engine, gear box, propulsion system &amp; DG set for 2000 hrs operation. As per OEM recommendation and requirement of BSF (OBS list should be prepared /finalized and submitted along with technical bid)</p>		
35	Inspection, Test & Trials	<p>The test and trials shall be carried out as per the standard procedure of class requirement or as per following details.</p> <ol style="list-style-type: none"> <li>Deflection test</li> <li>Beaching Trial</li> <li>Mooring trials</li> <li>Speed trials               <ol style="list-style-type: none"> <li>Light load condition</li> <li>Full load condition</li> </ol> </li> <li>Endurance/Sea trial</li> <li>Maneuverability trials</li> <li>Turning circle trials</li> <li>Astern trials</li> <li>Crash stop</li> <li>Electrical equipment's trials</li> <li>Navigation equipment's trial</li> </ol>	<p>To be checked during prototype inspection alongwith class representative. Speed and maneuvering trials need to be conducted again during JRI</p>	
36	Guarantee/ Warrantee	<p>The firm will have to provide 02 years guarantee/warranty for boat from the date of acceptance of consignee location in satisfactory condition. Guarantee &amp; warranty services on site (BSF deployment locations) shall be provided by the OEM/authorized service agencies of respective machineries. The Guaranty / Warrantee shall be comprehensive i.e. for all system. The company will provide the all consumable items including oil / lubricant, filters, batteries, spares of all machineries (Except fuel) for the period of guarantee / warrantee on free of cost. All periodical maintenance should be done by the firm for all machineries/equipments. The OEM service provider of the respective machineries shall provide a certificate that they have the experience of servicing similar type of engines/machineries during last 05 years in India.</p>	Physically check the documents	

S.No	Items	QRs / Technical Specification	Trial Directives for Trial	Remarks
37	OBS/BDS	(i) List of On Board Spares (OBS) enclosed as <b>Annexure-I</b> which are required to be supplied along with each boats (ii) List of Base Deport Spares (BDS) enclosed as <b>Annexure-II</b> which are required to be supplied for each consignee location for store reserve.	-	

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 वेबसाईट पर विक्रेताओं/फर्मों के सुझाव प्राप्त करने हेतु 15 दिन 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](mailto: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।

  
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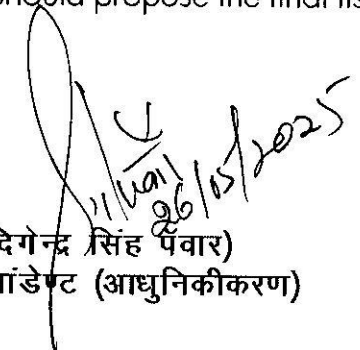
## ON BOARD SPARES (OBS) FOR HIGH PERFORMANCE FAST PATROL CRAFT

S/No.	Particulars	Qty Per Boat	Remarks
<b>Main Engine</b>			
1.	All type Lub Oil filters	04 Set	
2.	All type Diesel filter	04 Set	
3.	All Lub Oil (Qty as per Engines Requirement)	For 02 time replacement	
4.	Water Separator	04 Set	
5.	Tappet Gasket	04 Set	
6.	Coolants (Qty as per Engine Requirement)	For 02 time replacement	
7.	Sea Water pump impeller	02 Set	
8.	Engine Oil drain plug gasket	04 Set	
9.	"V" Belt Alternator	04 Nos	
10.	Relay for starter with Harness	02 Nos	
11.	Main engine all sensors with Harness	01 Set	
<b>Gear Box</b>			
12.	Lub Oil filter	02 Set	
13.	Solenoid switch reverse with Harness	01 No	
14.	Solenoid switch forward with Harness	01 No	
15.	Gear oil (Qty as per engine requirement)	For 02 time replacement	
16.	Main relay forward with Harness	01 Set	
17.	Main relay reverse with Harness	01 Set	
18.	Temperature & pressure Sensor with Harness	02 Set	
<b>Jet Propulsion</b>			
19.	Hydraulic Cylinder Assembly	01 Set	
20.	Hydraulic Filter	04 Set	
21.	Sensors with Harness	01 Set	
22.	Relay with Harness	01 Set	
23.	Hydraulic cylinder oil seal kit	01 Set	



24.	Hydraulic pressure gauges	01 Set	
25.	Zinc anode for bucket	01 Set	
<b>DG Set /Electrical</b>			
26.	DG Set oil filter	03 Set	
27.	DG Set Fuel filter	03 Set	
28.	Air Filter	03 Set	
29.	Lub Oil	For 02 time change	
30.	Over Speed Control	01 No	
31.	Thermostat	02 Nos	
32.	Sea Water cooling Pump repair kit	03 Set	
<b>MISC ITEMS</b>			
33.	All Electrical bulbs/ Tube lights / LED lights	25% of installed nos	
34.	Complete vessel fuse set, MCB (Electrical system & all machineries)	01 Set	
<b>AIR CONDITION</b>			
35.	AC Compressor belt	02 Nos	
36.	Sea water cooling pump repair kit	02 Set for each AC System	
37.	AC Compressor connector Relay (IF APPLICABLE)	04 Nos	

**Note :-** Proposed OBS list is not exhaustive may vary as per the engine/system of different make in the vessel. Firm should propose the final list on the basis of above list along with technical bid.

  
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### BASE DEPOT SPARES (BDS) FOR HIGH PERFORMANCE FAST PATROL CRAFT

S/No.	Particulars	Qty Per Boat	Remarks
<b>Main Engine</b>			
1.	All type belts	02 Set	
2.	Air Cleaner filter	04 Set	
3.	Sea Water Cooling Pump	02 Nos	
4.	Sea Water pump repair kit	04 Set	
5.	Heat exchanger pressure cap big & small	04 Set	
6.	Anodes fresh water	04 Set	
7.	Thermostat	02 Nos	
8.	Turbo charger base gasket both side	04 Set	
9.	Injector "O" Ring Set	03 Set	
10.	Engine protective circuit breaker	06 Nos	
11.	Alternator	01 No	
12.	Toxic seal with elastomer lips various size / all type for engine injector pipe	02 Packet	
<b>Gear Box</b>			
13.	Lub Oil filter	02 Set	
14.	Solenoid switch reverse with Harness	02 Nos	
15.	Solenoid switch forward with Harness	02 Nos	
16.	Zinc Anode gear oil cooler	02 Set	
17.	Main relay forward with Harness	02 Set	
18.	Main relay reverse with Harness	02 Set	
19.	Oil Cooler	01 No	
<b>Jet Propulsion</b>			
20.	Coupling Lamina Plate (if fitted)	02 Set	
21.	Hydraulic Cylinder Assembly	02 Set	
22.	Nozzle and bucket bushes & spacer	02 Set	

23.	Main jet shaft seal complete set with bellow	02 Set	
24.	Hydraulic hose all type	01 Set	
25.	Hydraulic cylinder oil seal kit	02 Set	
26.	Zinc anode for bucket	03 Set	
27.	Shaft coupling bolt complete set	02 Set	

### DG Set /Electrical

28.	DG Set per 3 Boats to be provided	01 No DG set per 3 boats, accordingly numbers of DG Set will be proportionate to Qty of Boats.	
29.	Breaker	01 No	
30.	Governor Control	02 Nos	
31.	AVR (Automatic Voltage Regulator)	02 Nos	
32.	Sensor (Water temperature, Oil pressure, Lub oil temperature) with Harness	02 Set	
33.	Sea Water cooling Pump	01 No	
34.	Battery Charger	01 No	

### MISC ITEMS

35.	Pneumatic fender	04 Nos	
36.	Anchor winch contact/ relay up & down	02 Set	
37.	Engine room blower blades	02 Nos	
38.	Bilge pump electric	04 Nos	

### AIR CONDITION

39.	Sea water cooling pump	02 Nos	
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**Note :-** Proposed BDS list is not exhaustive may vary as per the engine/system of different make in the vessel. Firm should propose the final list on the basis of above list along with technical bid.

11/04/25  
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