

संख्या. पी-63013/239/01/2026/मोड-1/सीओसुबल/ 2063-67

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 “Landing Craft Utility” के गुणात्मक आवश्यकता/परीक्षण निर्देशों के मसौदे का प्रारूप दिनांक 18 अगस्त 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
6/9/26
(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 मसौदे 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 पता 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-63013/239/01/2026/मोड-1/सी0सु0बल/

दिनांक ___ सितम्बर 2026

विषय : “Landing Craft Utility” के गुणात्मक आवश्यकता/परीक्षण निर्देशों पर हितधारकों/निर्माताओं/विक्रेताओं की टिप्पणी के लिए अनुरोध।

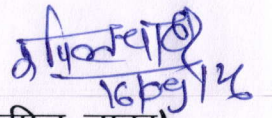
“Landing Craft Utility” के गुणात्मक आवश्यकता और परीक्षण निर्देशों को परिशिष्ट 'ए' के रूप में संलग्न किया गया है। हितधारकों/निर्माताओं/विक्रेताओं से अनुरोध किया जाता है कि वे उस उत्पाद की विस्तृत एवं स्टीक जानकारी दें। साथ ही प्रत्येक पैरामीटर के अनुरूप अपने उत्पाद के सही विवरणों को प्रस्तुत करें। सिर्फ '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)

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-63013/239/01/2026/Mod-I/BSF/

Dated, the __Sept 2026

Subject : Request for comments of stakeholders/OEM/Firms on QRs (Qualitative Requirements) & TDs (Trial Directives) of "Landing Craft Utility"

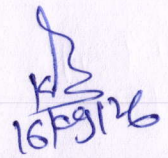
The draft QRs/TDs "**Landing Craft Utility**" is attached as **Appendix-'A'**. The OEMs/Vendors are requested to forward information of the product, which they can offer and also forward correct specifications of their system against each parameter. Only complied or not complied remarks will not be accepted. 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 & TRIAL DIRECTIVE OF LANDING CRAFT UTILITY

S.No	Items	Proposed QRs / Technical Directives	Trial Directive/ Procedure suggested for trial for Board of Officers
01	Role & Functions	The LCU shall be designed to be operational and maneuvered safely and effectively at specified speed with full complement in specified Creeks of Gujarat. The LCUs shall be highly seaworthy and very stable & resistant to capsize. The LCU shall offer good maneuverability and throttle response throughout its speed range and particularly when coming alongside or breaking away an underway vessel at its full load and complement. The LCU shall have propulsion, power generation, lifesaving protection and other engineering and electrical systems to carry out safe and reliable operation to perform the following functions. (a) Carrying Fresh water (b) Transportation of vehicles. (c) Transportation of troops and materials (d) LCU patrol during day and night in shallow coastal waters. (e) Transport boarding and landing party to shore for foot patrolling. (f) Limited search & Rescue.	To be checked physically
02	Environmental conditions	The design & building of LCU with the equipment and machinery fitted on board should be marinized and capable of satisfactory operation, under the following environmental conditions: - a) Wind speed is 17-21kts. b) Ambient air temperature from zero to +50 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- 45000PPM f) Tidal current -5-6 Knots g) Wave height -2-9 Feet (Approx). (sea state 4)	

03	MAIN PARTICULARS/ GENERAL DESCRIPTION	(a) Length molded – 20 Mtrs $\pm 10\%$ Tolerance (b) Beam - according to the ship stability criteria and design. Not less than 4 Mtr (c) Draught (Max) – not more than 0.8 mtr. (d) Speed Full Load – 20 Knots at 85% MCR at Sea state – 3 (e) Cruising speed – 15 Knot (f) Depth : Suitable depth for sea Operation. (Minimum 60-70 personnel in addition to Tractor/JCB/dead weight up to 10 Tons)	Check with measuring tape in clam water and tally with approved drawing. Check lines plan and general arrangement drawings.
04	CLASS/DESIGN	(a) The LCU (Landing Craft Utility). shall be constructed with steel in accordance with Class notation SWASTIKA SU, HSLC, RS2, LANDING CRAFT, SPECIAL GOVERNMENT SERVICE, SWASTIKA IY as per Classification Society (IRS or any Member of IACS) rules and norms to operate in the inland shore/creek/river/lake. (b) The builder is to keep in mind continuously the fact that, economy of weight and space is of utmost importance. Accordingly, equipments and fittings of minimum dimensions and weight, subject to given or approved dimensions commensurate with satisfying operation shall be supplied. An actual and accurate weight record of hull structure, fittings, equipments accessories etc shall be forwarded to BSF 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. (c) The design of the LCU should be approved by the Classification Society and 3D Design drawing to be submitted for approval of BSF. 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. (d) HSC Code/SOLAS/LLC/FTP Code/AFS convention as applicable. (e) Structural strength as per Class rules to meet the functional requirement. (f) Stability and subdivision as per IMO regulation. (g) Firefighting as per Class requirement.	Check the criteria with classification society representative. Examine the class certificate issued by classification society with the specified class notation for compliance.

		(h) Anchoring, Mooring, Towing, and lifting arrangements as per Class rules. (i) Engineering machinery, propulsion, shafting and piping systems as per Class.	
05	General Features	(a) The LCU (Landing Craft Utility) should have a service life of 15 years for machinery equipment and hull of the LCU. (b) The LCU shall be capable to have sustained operation of 8 hrs per day with annual exploitation not less than 2000 hrs. (c) Excellent directional stability and good sea keeping hull characteristics. (d) The Vessel 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 vessel. 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. (e) Regime of Operation:- Machinery installation should be such that undesirable vibrations, noise etc are minimized and measured parameters during trial shall conform to class Rules. (f) 02 Nos each 9 cm size Port hole (it should be covered with round disk of bullet resistant material) on Port & STBD at suitable place be provided to fire the weapon from inside the cabin. (g) Engine room must have sufficient place to carry out repair and maintenance. (h) Main engine, steering system, propulsion system, power generation (D G Set), navigation accessories & etc and its electronic devices like control panel, control unit parameter	Check the criteria with classification society representative and check physically the fender and other items as per class requirement.

		display unit wheel house operating console, potential meter, joystick all accessories from engine room to wheel house should preferable be the product of same firm / company for proper synchronization and single point maintenance support. Firm should finalize / project only one make of engine with complete literatures / manuals / specifications part catalog etc along with technical bid. Offers comprising multiple engine makes shall not be accepted. (i) Fendering:-The LCU shall be fitted with fixed Heavy duty D-type reinforced molded rubber along the LCU sides and the stern. Sufficient number portable pneumatic fenders shall be provided with suitable lowering/hoisting arrangement. Suitable gunwale piece shall be provided to prevent rubbing by rope. (j) Fresh Water Capacity:-15000 ltrs Capacity inside the hull moulding considering emergency requirement at any outpost if there is no weights loaded for transportation (i.e LCU should able to transport either 15 K ltrs water without any extra floor weights or 15 tons weights including 60-70 troops if no water is filled) with a 100 mts pipe connection and pump facility considering delivery of water. (k) portable water-1000 lts storage facility at suitable place considering conveyance of 60-70 troops (l) All SS Material used in the Deck or any other of marine Grade of SS 316. All the materials, workmanship and finish shall be of the highest standard/quality and as per class requirement. (m) Bilge Pumps:- 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. (n) Hand bilge pump- as per class requirements. (o) 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) Shore Supply Arrangement:- A waterproof shore supply connection box 230 V, 1 phase, 50 Hz alongwith 100 Mtr shore cable shall be	
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		fitted on weather deck at an appropriate position conforming to Classification rules, to meet the requirements of the harbour loads. (q) A reel for stowing the flexible cable will be provided and suitably located on the winch deck. (r) Search Light:- Two high definition, high beam, marinized Search lights for 360 degree rotation having detection range 500 meter, identification range 400 meter and recognition 300 meter having capacity 1000KW with remote system from cabin for Operations. (s) Noise. Every practical effort is to be made to minimize the equipment noise by use of vibration mounts below all machinery. (t) Suitable towing arrangement, to tow a disabled LCU of equal size to be provided as per classification society approval and tow LCA in case of emergency. (u) One set PVC coated nylon fabric awning with removable provision shall be provided for complete deck to cover troops/ load space (v) First aid box to be installed with medicine. (w) The list of OBS /BDS will be given during issue of AT (x) Suitable anodes to be fitted on the hull sea chest & other appropriate places for 18 months of continuous service. (y) All penetrations to be made watertight.														
06	Operating Profile of 2000 hours per year	<table><tr><th>S/No</th><th>Speed of LCU (Landing Craft Utility). in knots</th><th>Operating Time</th></tr><tr><td>A</td><td>From 15 knots upto 20 knots</td><td>10% of annual exploitation</td></tr><tr><td>B</td><td>From 10 knots upto 15 knots</td><td>60% of annual exploitation</td></tr><tr><td>C</td><td>Upto 10 Knots.</td><td>30% of annual exploitation</td></tr></table>	S/No	Speed of LCU (Landing Craft Utility). in knots	Operating Time	A	From 15 knots upto 20 knots	10% of annual exploitation	B	From 10 knots upto 15 knots	60% of annual exploitation	C	Upto 10 Knots.	30% of annual exploitation	Check as per requirement.	
S/No	Speed of LCU (Landing Craft Utility). in knots	Operating Time														
A	From 15 knots upto 20 knots	10% of annual exploitation														
B	From 10 knots upto 15 knots	60% of annual exploitation														
C	Upto 10 Knots.	30% of annual exploitation														
07	Maximum speed (Full load) & Cruising Speed	20 knots at full load correspondence to 85% MCR of the engine at sea state -3 15 Knots at full load		To be physically checked in sea state-3 with GPS during sea trials with and against tide/current & by calculating the distance travelled & time taken.												

08	Endurance	a) Endurance is 08 hours at full load in cruising speed of 15 knots.	Trial to be carried out for 3 hrs @ 15 knots with full load (man & materials with eqpts) during sea trial (favour & against the current) distance travelled & fuel consumed to be recorded.
09	WHEEL HOUSE/CABIN	(a) Wheel House : A suitable wheel house with glasses having NIJ level III protection to be used as windscreen and side glasses of wheel house with sliding facility (if possible) considering ventilation in low risk areas, accommodating the crew (04 in no.) members with necessary facilities such as foldable seats which can be converted and may be used as sleeping bed in case if needed. The wheel house shall be fitted with steering wheel, instrument panel, main switch panel with table top for chart. The wheel house shall provide un-restricted all round visibility. Helmsman chair shall be provided in front of steering position for the coxswain. (b) 02 Nos wall fan and open able window in port and stbd side for cross ventilation (c) Air Conditioning: Wheel house/Accommodation space with split air conditioned as per National/International Std for marine application. Adequate forced /cross ventilation is to be provided as per National/International Std. (d) Window Wipers :- All front windows be provided heavy duty wipers (Class approved, marine grade) with motor on top.	To be physically checked Ballistic test report to check the quality of glass of LCU.
10.	Navigational Equipment	(a) RADAR- 01 (High resolution) High resolution 12 NM RADAR able to track 10 targets simultaneously of reputed make consisting	To be checked physically as per approved drawing plan.

	of color 10" / 12" RADAR monitor located in the wheel house and an enclosed scanner mounted on the mast. (b) AIS Type A (Having option for reception and transmission Mode) (c) EPIRB & SART at suitable place (d) A multifunctional display with GPS , Chart plotter and Echo sounder of any reputed make having android mobile connection facility with license validity mini upto 3 yrs for updated version of digital map (e) Magnetic Compass -01 (f) Loud Hailer:- 01 Nos With speaker at forward and aft (g) Electric Horn/ Whistle:- 01 Nos (h) Police Siren:- 02 and police light - 01 set (i) NAVTEX:- For weather and navigational warning shall be provided. (j) Binoculars:- One Marine binocular of Magnification 7 x 50, with protection case of reputed make. (k) One night vision binocular of 7 x magnification be provided. (l) One Barometer, Anemometer, Inclinator and wet & dry bulb thermometer in the wheel house shall be supplied& fitted Navigational lights:- (m) suitable foldable mast to host navigational and communication equipment. (m) 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.	Functional test of all equipment to be carried out & recorded. All related commissioning report.
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		(g) Navigation Light : Navigational lights are to be provided as per IRPCS 1972 as applicable	
11.	Deck Materials and Deck Fittings	(a) Deck Material: All deck fittings shall be stainless steel grade AISI-316 until unless specified separately. All forged fittings shall conform to B-970 and the castings shall conform to BS-3100. The finish of all these should be of excellent quality. (b) Deck fittings:- - sufficient panama fairleads of sufficient of SS 316 unless specified otherwise shall be fitted. - One towing hook for aft towing shall be provided on deck at stern. - Brow should be provided on both sides of the LCU for unidirectional movement of person on board with provision of aluminum alloy light weight ladder. - Electrical operated suitable class approved anchors windlass to be provided. - Embarkation ladder. (c) Davit Motor:01 Nos Davit with maximum capacity to sustain load of 03 Ton at suitable place for lifting/Loading/Unloading of dead weight etc	To be physically checked. Materials test certificate to be provided by builder.
12	Complement	a) LCU (Landing Craft Utility) shall have a capacity of 60 to 70 troops. b) Additionally one Tata Storm/Bolero/Mahindra Pride/Tata Zenon /Tractor/ dead weight upto 10 Tons.	Seating capacity & load carrying capacity to be physically checked.
13	Troops seating arrangement	Troops seating of 60-70 person shall be provided. Side seats shall be hinged type and slidable to accommodate vehicle	To be physically checked
14	LMG Mounting	Pedestals (Material SS) for two in number LMGs mounting shall be provided at suitable positions preferably one at top of cabin to gain height advantage ,second at front or other suitable place considering adequate movement	To be physically checked
15	Machinery Specification	All machinery, equipments and fittings in the LCU shall be compact and of light weight construction. (a) ENGINE ROOM with gear box and propulsion system :-	Class Type approved Main engines, gear box and Propulsion system to be used on board

		The LCU (Landing Craft Utility) Should be fitted with suitable Twin engine propulsion system either Jet system or Propeller System based on design convenience (Type tested, class approved engines confirming to the latest MARPOL/IMP norms) shall be of Diesel engine with having product support in India. A contemporary model may be selected so as to meet the specified speed at 85% MCR of engine rating and endurance requirement of the LCU. The propulsion package should cater for shallow water operations. The propulsion system should be designed to achieve desired performance throughout the life of the LCU(15 years).The propulsion engines shall have at least 20% reserve power over the required operational power to ensure sustained performance under adverse environmental conditions. (b). Engine Starting :- Remote starting/stopping of main engine from wheel house and locally from engine, electrical and mechanical starting system in main engine. (c) The engine shall be started by a three- position (off/power/ignition) key switch and a start push-button. The starter motor used for starting shall be IP 65 or higher rating. (d) Diesel Generator:- The LCU shall be fitted with one suitable make diesel generator of suitable capacity adequate for operating all the electrical equipment on board with 20% additional capacity, Air condition & Davit System. The installation of generator is to be undertaken on anti-vibration mounts. The generator is to have its own fuel line, exhaust system and cooling system line in such a way that it can be operated independently. (e). STEERING GEAR JOYSTICK / REMOTE:- The steering shall be from the helmsman position actuated by rim type wheel mounted at 45° to the vertical, the steering command shall be transmitted by a power steering system. Steering system should be operable even when only one engine is in use. (f) Manual steering need to install for emergency situation	along with unit certification. 2) Prepare main engine for operation. 3) Engine performance trial to be conducted by running on various RPMs continuously. All parameters of engine must be in normal limits specified by the engine manufacturers. This trial will be done twice after interval of half hour. a)Full power trials of LCU to be conducted with recording of all system parameters. (b) Class type approved certificate to be provided by the LCU builder. (c) DG Set performance trial to be conducted by running for two hours continuously on full load. All parameters of DG Set must be in normal limits specified by the DG Set
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		(g). Engine Room Ventilation:- Sufficient ventilation blowers at engine Aft and Front (One intake / One exhaust) shall be provided according to the main engine intake and out exhaust system in order to ensure the followings :- (h) Heat Sensor and Fume Detections:- The Engine room should be properly ventilated and provision for extraction of hot air from the engine shall be ensured. Heat sensor and fume detection system shall also be provided in engine room with alarm at wheel house control console. i) Fuel System/ Fuel Tank:- One SS fuel tank capacity to meet the endurance with 10% reserve. Fuel level indicator cover plate for inspection and cleaning along with digital fuel gauge at cabin. j) Sufficient power DD fire pump with pipe- 1 nos.	manufacturers. This trial will be done twice after interval of half hour.
16	ELECTRICAL SYSTEM	I. Electrical Installation a) All the electrical equipment, machinery length and associated systems shall conform to Classification Society rules and should have IP 65 rating or above. EPXL cables conforming Classification Society specification shall be used. Electrical fittings/cables provided for engines will be installed at the bottom near the bilges to maintain better electrical hygiene. b) Anodized aluminum tally plates shall be fitted on items electrical fittings and equipments as applicable. II. KVA INVERTOR UPS BATTERY:- Backup system to cater for uninterrupted power supply, for a minimum duration of 6hrs to essential equipment, communication, lighting, fan, mobile charging point etc is to be provided. III. LIGHTING AND MISCELLANEOUS : a) Sufficient numbers of LED based light fitting to be provided in engine room, wheel house. b) Two Portable hand lamp of reputed make shall be provided.	Functioning of all electrical fitments to be checked during functional trials

		c) Three Nos reputed make socket 12V, 5A, with cover shall be provided in wheel house as Mobile charger points	
17	Associated safety equipments	Lifesaving appliances class approved type as per SOLAS/MMD/Class requirements considering requirements shall be provided. Stowage space shall be provided for life jackets and mounting brackets for life buoys. Lifesaving equipment shall be:- (a) Life raft – 03Nos (20 men capacity of reputed) to be fitted at suitable places (b) Life jackets – 70 Nos (60 Nos Normal Adult Jacket Type with zip and 03 strips, and 10 Nos hazardous duty life jackets). (c) Lifebuoy – 10 Nos (Minimum 30" diameter; 05 with life line and 05 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) The Machinery space shall be fitted with fixed firefighting system and fire-alarm & smoke detection system meeting class requirements. 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.	Arrangement of Life saving Equipments, their operation to be checked physically as per Class approved Certificate. Examine certificate issued by classification society for compliance to SOLAS requirement and safety plan as per class rules

18	Lifting Arrangements	(a) The LCU shall be provided with spreader bar with lifting siling as per the shipbuilding practice. Lifting sling in way of hull structure to be verified as per class requirements. (b) A wheel mounted cradle for undertaking maintenance/stowage during monsoons to be provided. Tools (including special tools) arrangements for hatch (openable/re-mount)for lifting of heavy machinery including engines, gearboxes etc. to be provided for carrying out periodic maintenance routines as specified by the equipment OEMs. (c) A separate wheeled cradle with towing arrangements to carry/load dead weight/boats upto 10 Ton Capacity into LCU so that that this dead wt/load can be placed on this cradle,then cradle can be placed on LCU and transported from one place to other as per OPS/ADM requirements. (this is extra to LCU's own cradle arrangements)	Check lifting points in number & location. Check strengthening record position. Load Test Certificate to be provided by builder.
19	Ropes	Poly propylene (PP) ropes of following length and thickness to be provided for berthing, towing, mooring, and anchoring the LCU. (a) For berthing – 12 mm dia - 100 meters (b) For towing – 18 mm dia - 50 meters. (c) For mooring - 12 mm dia - 100 meters (d) For anchoring - 18 mm dia - 100 meters.	To be physically checked. Breaking strength certificate to be provided by builder.
20	RAMP	The folding ramp of sufficient strength with extension upto 10-12 feet for loading/unloading shall be watertight (when close) of simple construction and be capable of being operated remotely from the wheel house by an electric winch. Additionally, it should be easily operable locally by two hand operated winches. It shall be of appropriate size and have antiskid surface and tracks for safe disembarkation of vehicles and personnel particularly in wet condition. Trials of the opening-closing mechanism will be taken during sea trials. (a) Ramp should be open able upto 100 degrees from the closed position. (b) When opened, it should make suitable angle with base line. (c) Water tight rubber sealing should be provided for arresting the ingress of water.	To be physically checked during sea trial.

21	Certificate	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, LSA plan, firefighting plan alongwith instruction of operating safety equipment. (f) Certificate of any member of IACS class. (g) Builder's certificate. (h) Fuel tank class approved certificate and calibration chart. (i) Anchor & chain cable mooring rope's certificate, Major machinery (Main Engine, Gear box, water jets & generators etc.) type approval certificate. (j) Stability booklet. (k) Maintenance schedule on utility basis (i.e. Run Hrs) and time basis (i.e. weekly, monthly, yearly etc.) of all equipments.	Clean approved drawing to be obtained from builder.
22	Fitting & Fixtures	All fitting fixture to be SS-316 grade unless other metal is suitable for a particular operation or superior	Material test certificate to be provided.
23	Painting	(a) Hull area below the waterline shall be painted with a TBT free Anti fouling paint as per the latest IMO regulations. (b) The armament lockers shall be painted with flame retardant painting system. (c) The LCU shall be painted in disruptive pattern colour with markings as per user requirement. (d) The LCU name, ID No., BSF Emblem and National Flag shall be fixed on both sides of the Hull at superstructure at an appropriate place.	To be physically checked and documents regarding paint scheme.

24	Supervision during Construction	a) As the vessels are being built to class, these would be inspected by the Classification Society in presence of user. The Owner reserves the right to undertake additional inspections either directly or by third party. LCU builders would be required to provide all inspection facilities at yard premises to the inspecting team. Periodic reviews by the Owner would be conducted for ascertaining work progress by a team including technical member from user end. b) A technical team consisting of one officer, one Inspr/SI (Wksp), Inspr/SI/HC(Master) will be detailed to monitor the entire building of LCU from the initial stage for confirming design/drawing as per the requirement of area of deployment to suit the Ops/Adm requirement. Team will visit the yard in the regular interval and complete the task in addition to the assigned task at posted place.	Check as per requirement
25	Life Time Support	The Shipyard is to obtain a Contractual commitment from the various equipment suppliers to provide Product Support for a minimum period of 10 years including electronics, after delivery of the last LCU (Landing Craft Utility). In case the equipment is likely to become obsolete, the manufacturer of LCU should be committed to give a clear three year notice to the BSF.	Product support records to be checked.
26	Guarantee/ Warranty	The firm will have to provide 03 years guarantee/warranty for LCU from the date of acceptance of consignee location in satisfactory condition. Guarantee & warranty services on site (BSF deployment location) shall be provided by the OEM/authorized service agencies of respective machineries. The Guaranty / Warrantee of LCU shall be comprehensive i.e. for all system. The company will provide all consumable items (Except fuel) for the period of guarantee / warrantee. The OEM service provider shall provide the past service performance of such engines for 05 years.	To be checked physically.
27	Inspection, Test & Trials	The test and trials shall be carried out as they are described in the following. a) Swamp Test b) Drop Test c) Impact Test d) Deflection test e) Beaching Trial	To be checked physically.

		f) Floatation test g) Lowering/Hoisting Trial h) Mooring trials i) Speed trials at full and no load j) Endurance/Sea trial k) Maneuverability trials l) Turning circle trials m) Astern trials n) Crash stop o) Steering trials p) Electrical trials	
28	Training	Provision of imparting training to 16 crew / Wksp staff per LCU for the period of 02 weeks regarding onboard operation & maintenance of main engine by OEM rep, propulsion system by OEM rep, all fitted equipments, machineries and manning of crafts shall be included in the initial package.	To be conducted at consignee location.

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
16/9/24

(कपिल चाहर)

उप कमांडेंट (आधुनिकीकरण)