

REQUEST FOR INFORMATION (RFI)
FOR CONSTRUCTION OF TWO 500 TON SELF PROPELLED WATER BARGE

1. The Ministry of Defence, Government of India, intends to procure **Two 500 Ton Self Propelled Water Barge** for the Indian Navy (*IN*) from Indian Shipyards. **Submission of incomplete format will render the Shipyard liable for rejection.**
2. This Request for Information (RFI) consists of two parts as indicated below: -
 - (a) **Part I.** The first part of the RFI incorporates operational characteristics and features that should be met by the Barge. Few important technical parameters of the proposed barge are also mentioned.
 - (b) **Part II.** The second part of the RFI states the methodology of seeking responses of Shipyards.

PART-I

3. **The Intended Use of Barge (Operational Requirements).** These are specified in brief placed at **Appendix A** of this document.
4. **Important Parameters.**
 - (a) Details of the Barge are specified in brief at **Appendix A** of this document. Further detailed specification will be given in the Request for Proposal (RFP) which will be issued to Shipyards who have responded to the Request for Information (RFI) and this formulation, after verifying their credentials and capabilities to construct the Barge. Feasibility to build the Barge with specifications indicated at **Appendix A** is to be submitted by the Shipyard.
 - (b) Budgetary quote of the Barge with detailed break up of cost is to be submitted. This should include material cost, labour cost, training cost and product support cost (if applicable). All entities factored in the costing are to be indicated in the break up. **Shipyard to indicate the costing of all Equipment and Machinery envisaged onboard the Barge.** Custom Duty/ Taxes to be included separately and indicated in the Budgetary quote.
 - (c) Information on whether the offered Barge/ design is in use by any other Navy and experience in building similar Barge along with client details to be indicated.
 - (d) The Barge will be operated by Crew as indicated in **Appendix A**. The maintenance of Barge post guarantee period will be carried out by Naval Dockyards/ Naval Repair Yards. Training to *IN* personnel on operation and maintenance is to be imparted by the Shipyard/ Original Equipment Manufacturer (OEM) of equipment at Shipyards/ OEM premises and (or) *IN* premises. Shipyard to indicate acceptance for the same. **Shipyard to provide details wrt manpower/ crew required to operate and maintain the Barge as per the below mentioned format: -**

<u>Ser</u>	<u>Designation</u>	<u>No of Personnel</u>	<u>Remarks</u>
(i)	Master		
(ii)	Engineer		
(iii)	Crew		

(e) Whether the shipyard would be able to comply with all provisions of DPP-16 or not. If not, which Para/ Clause of DPP would not be agreed to, with reasons.

(f) Shipyard may consider RFI as advance information to obtain requisite Government clearances.

(g) Shipyard has to confirm its acceptability with the terms of payment as per DPP 16 and amendment thereof.

(h) MoU, if any, with respect to design aspects to be indicated.

(j) Willingness for Option Clause including the duration for which the Option Clause would be valid is to be indicated.

(k) The tentative delivery schedule/ build period for supply of the 500 Ton Self Propelled Water Barges after conclusion of contract including the build strategy.

(l) Willingness to participate in the bid for procurement of 500 Ton Self Propelled Water Barges.

(m) The shipyard to submit copy of Government license relevant for ship construction / building activity.

(n) Shipyard can communicate with Directorate of Ship Production, IHQ MoD(N) to seek clarifications, if any, on the technical aspects of the 500 Ton Self Propelled Water Barges while responding to RFI.

5. The Shipyard should conform that following conditions are acceptable: -

(a) The solicitation of offers will be as per 'Single Stage-Two Bid System'. It would imply that a 'Request for Proposal' would be issued soliciting the technical and commercial offers together, but in two separate sealed envelopes. The validity of commercial offers would be at least 18 months from the date of submitting of offers.

(b) The technical offers would be evaluated by a Technical Evaluation Committee (TEC) to check its compliance with (Request for Proposal) RFP.

(c) Amongst the Shipyards cleared by TEC, a Contract Negotiations Committee (CNC) would decide the lowest cost bidder (L1) and conclude the appropriate Contract.

(d) The Shipyard would be bound to provide product support for time period specified in the RFP, which includes spares and maintenance tools / jigs / fixtures for field and component level repairs. Documentation for training / maintenance / repairs are also to be provided.

(e) The Shipyard would be required to accept the general conditions of Contract given in the Standard Contract Document at Chapter VI of DPP 2016.

(f) **Integrity Pact.** An integrity pact along with appropriate Integrity Pact Bank Guarantee (IPBG) is a mandatory requirement in the instant case (Refer Annexure I to Appendix H of schedule I of Chapter IV of DPP 16).

(g) **Performance-cum-Warranty Bond.** Performance-cum-Warranty Bond both equal to 10% of value of the contract is required to be submitted after signing of Contract.

(h) **Indigenous Content (IC).** The procurement of the Barge will be as per DPP 16 and accordingly shipyards have to submit the details regarding Indigenous Content (IC) and the likely percentage of IC considered for the Barge. The categorization for the procurement will be under Buy {Indian - IDDM (Indigenously Designed and Developed Manufactured)}, Buy (Indian). The 500 Ton Self Propelled Water Barge must meet the minimum IC parameters i.a.w Para 13 of Chapter 1 of DPP 16.

PART- II

6. **Procedure for Response**

(a) Shipyard must fill the form of response as given in **Appendix B to Chapter II of DPP 16**, sample format at **Appendix B** and **Appendix C** of this document. Apart from filling details about Shipyard, details about the exact vessel / craft meeting our generic technical specifications should also be carefully filled. Additional literature on the vessel / craft can also be attached with the form.

(b) Compliance Matrix with respect to Operational/ Technical Specifications indicated at Appendix A is to be submitted in the format specified below in hard and soft (both in editable and write protected form) copies. Compliance to all the serials of Appendix A is to be indicated. Additional literature/ information / documentary evidence as relevant be attached with due reference in the remarks column.

<u>Section / Ser</u>	<u>Compliance (Yes / No)</u>	<u>Remarks</u>

(c) Compliance / acceptance to parameters mentioned at Para 4 and 5 above are to be clearly indicated and certified in the RFI response.

(d) The filled form should be dispatched at under mentioned address: -

The Commodore (SP)
Directorate of Ship Production
8th Floor, Chanakya Bhawan,
Chanakyapuri, New Delhi - 110021
Tele: 011-26886433
Fax: 011-26886426
E-mail: dsp@navy.gov.in

(e) Last date of acceptance of filled form is 28 Mar 19. The Shipyards short listed for issue of RFP would be intimated.

7. The Government of India invites responses to this request only from Indian Shipyards. The end user of the 500 Ton Self Propelled Water Barge is the Indian Navy.

8. This information is being issued with no financial commitment and the Ministry of Defence reserves the right to change or vary any part thereof at any stage. The Government of India also reserves the right to withdraw it, should it be so necessary at any stage. The acquisition process would be carried out under the provisions of DPP 16.

OPERATIONAL / TECHNICAL SPECIFICATIONS
FOR 500 TON SELF PROPELLED WATER BARGE

<u>SECTION – ‘A’ GENERAL</u>	
1.	<p><u>Aim.</u></p> <p>To lay down the staff requirements for 500 Ton Self Propelled Water Barge capable of providing water to ships and submarines in harbour and at anchorage.</p>
2.	<p><u>Functions.</u></p> <p>Provide feed and fresh water to ships and submarines in harbour and at anchorage.</p>
3.	<p><u>General Remarks</u></p> <p>(a) The barge is to be built as per IHQ MoD(N) approved Classification Society Standards (ABS/BV/DNV.GL/IRS/LR/RINA). The notation for the barge and QAP for shipbuilding, including trials, should be finalised in consultation with IHQ MoD(N). Classification Society is to certify that the Class notation proposed by the yard covers all the requirements of build specs / guideline specifications.</p> <p>(b) A certificate is to be provided by the Classification Society confirming that ‘Class Notations have been provided for all functional requirements indicated in RFP’.</p> <p>(c) SS 316 grade Stainless Steel (SS) is to be used for all hull fittings on the weather deck.</p> <p>(d) Separate Feed Water and Fresh Water pumps are to be provided for embarkation/ disembarkation with 100% redundancy to make the barge self sufficient.</p> <p>(e) The barge should have a configuration of 10 tanks with a capacity of 50 Ton each or variable capacity as per the design/ hull form.</p> <p>(f) The barge should have flexibility to utilise tanks in various configuration to accommodate fresh and feed water as per requirement.</p> <p>(g) The main and auxiliary machinery of the barge should permit a continuous operation of 48 hrs.</p> <p>(h) The barge should be capable of supplying light stores ie, fresh and/or dry provision to ships upto 250 kg (capable of being lifted manually), when required.</p> <p>(j) The barge should have an expected life of 20 years.</p> <p>(k) The barge should comply with all the latest requirements of Marine Pollution (MARPOL)/ Marine Environment Protection Committee (MEPC) and Safety of Life at Sea (SOLAS) regulations.</p>

4.	<u>Speed.</u>	(a) Maximum speed of 12 Kn upto 85% MCR. (b) Sustained : 10 kn.
5.	<u>Dimensions.</u>	The principle dimensions of the water barge should be as follows : - (a) Length - Not less than 45 m. (b) Beam (extreme) - Not less than 8 m. (c) Draught - Not more than 4 m.
6.	<u>Endurance.</u>	NLT 150 nm.
7.	<u>Sea State</u>	Should be able to sea faring upto Sea State 3 and sea keeping upto Sea State 5.
8.	<u>Crew.</u>	11 + 5
9.	<u>Operating/ Environmental Conditions</u>	All equipment should be marinised and capable of performing under the following conditions: - (a) Air Temperature - upto 45 °C (b) Average Machinery Space Temperature - upto 55 °C. (c) Sea Water Temperature - upto 40 °C (as per NES 02-102) (d) Relative Humidity - 95 % condensation at temp of 35 °C.
<u>SECTION B – NAVIGATION</u>		
10.	<u>Bridge.</u>	Bridge should have large inclining windows for all around visibility to assist manoeuvring alongside. All front windows should have Clear View Screen mechanism and other windows should have either Clear View Screen mechanism or marinised Window Wipers.
11.	<u>Mast.</u>	Foldable mast is to be provided to restrict the height of the barge from water level. This Mast should be capable of carrying navigational lights, antenna and flags.
12.	<u>Radar.</u>	One 'I' band COTS Navigation radar with Multi Functional Control (MFC) and Electronic Chart Display and Information System (ECDIS) is to be provided. The radar should be integrated with GPS and Automatic Identification System (AIS) Transreceiver.
13.	<u>Echo Sounder.</u>	One COTS Echo Sounder is to be provided.
14.	<u>Gyro</u>	One Gyro is to be provided with repeaters in Bridge, Bridge Wings and steering positions.
15.	<u>Magnetic Compass.</u>	One transmitting Magnetic Compass is to be provided on the bridge with repeaters on Bridge Wings.
16.	<u>GPS.</u>	One GPS.
17.	<u>AIS</u>	One AIS.
18.	<u>Anemometer.</u>	One fixed anemometer.
19.	<u>Fog Horn.</u>	Two electric fog horns are to be provided as per Classification Society requirement on top of the wheel house with local operating controls and provision for remote operations from the bridge.

20.	<u>NAV Lights.</u>	(a) As per International Regulation for Prevention of Collision at Sea (IRPCS) – 1972. Battery and backup supply is to be provided for the navigation lights.
21	<u>Misc.</u>	Log' and 'Roll and Pitch Indicator.
<u>SECTION C – COMMUNICATION</u>		
22	<u>Communication.</u>	Following communication facilities are to be provided: - (a) Latest VHF MMB Tx/Rx complying with International Maritime Organization (IMO) Regs for Global Maritime Distress and Safety System (GMDSS) - One (b) VHF hand held Radio sets (Motorola GP 338) with one each battery charger, spare battery and water proof pouch - Four (c) Megaphone (Fixed on Bridge Top) - Two (d) 5” Hand signalling Lantern with stowage box - One (e) Portable loud hailer - Two (f) Call up bells - As required. (g) Sound Power Telephone - As required. (h) Blue Ensign Flags - Four (j) Basic Communication Flags and Shape - One set.
23.	<u>Internal Communication</u>	The following internal communication systems are to be provided:- (a) Main Broadcast System, which should be audible on upper deck and in all compartments (for general and emergency announcements). (b) Intercom between:- (i) Bridge, Pumping Point, Forecastle and Quarterdeck. (ii) Bridge, Engine Room, Aft Steering Post (ASP) and Crew Mess. (c) Voice Pipe should be provided in Engine Room, Bridge and Bridge Top for emergency communication.
<u>SECTION D – HULL, MACHINERY FIRE FIGHTING AND DAMAGE CONTROL</u>		
24.	<u>Hull.</u>	(a) <u>Hull Form.</u> The barge is to be of single hull construction of a proven design either existing in service or supported by relevant calculations in case of a new design, meeting all the requirements specified in the Request for Proposal (RFP). The hull design would be scrutinized by IHQ MoD(N) during TEC. (b) <u>Construction Material.</u> The main Hull and superstructure should be of all welded steel of IS 2062 specification of 2011 (Grade E250/ Quality BR with impact test required/ killed).

		<p>(c) <u>Plate Thicknesses & Scantlings.</u> Corrosion allowances specified in Classification Society rules are to be provided. Plate thickness of less than 5 mm is not to be used for hull.</p> <p>(d) <u>Hull Strength.</u> The design of hull and hull members should be undertaken as per Class rules applicable for the role of the vessel. Structural analysis including Direct Strength Analysis (DSA) and Residual Strength Analysis (RSA) would be carried out to ensure that hull is designed for the area of operation for intact condition. The necessary structural analysis/ calculation would be vetted by Classification Society. All Structural Bulkheads, Decks, Super Structure, Structural Closures, Mast, Foundation etc, should be as per Class requirements.</p>
25.	<u>W/T & GT Integrity</u>	<p>(a) Collision bulkhead is to be provided in accordance with class rules and should extend to the uppermost continuous deck.</p> <p>(b) No passageways through watertight bulkheads are to be provided below main passage deck/ damage control deck.</p> <p>(c) All openings and piercings below the damage control deck in main bulkheads are to be fitted with a permanent means of watertight closure.</p> <p>(d) All W/T doors and hatches are to conform to IHQ/ MoD(N) specifications, NCD 1447 and 1448 respectively.</p> <p>(e) All APT clusters and boundaries are to be tested iaw Class rules.</p>
26.	<u>Fire Resistant Material</u>	Structural fire protection and fire zone boundaries are to be provided as per Safety of Life at Sea (SOLAS)/ Classification society rules.
27.	<u>Underwater (U/W) Hull Protection.</u>	IHQ MoD(N) approved Sacrificial Anodes as per NCD 3906, Issue 2 are to be fitted. Anodes are to be fitted in bilges, Sea chest and other areas where sea water tends to accumulate. In addition zinc rings are to be fitted at the neck of the sea tubes near the flange and also in the overboard discharges.
28.	<u>Paint Scheme and Deck Covering.</u>	<p>(a) Long life paint scheme in accordance with the latest issue of IHQ/ MoD(N) specifications (NCD 1481) is to be applied under paint manufacturer's supervision.</p> <p>(b) Coatings for Protection of Internal Spaces (Machinery bilges and voids) and tanks are to be undertaken as per NCD 1491 specifications.</p> <p>(c) Intumescent fire retardant paints iaw IHQ/ MoD(N) specifications (ie, NCD 1478) are to be applied in all internal offices and accommodation spaces.</p> <p>(d) Deck covering scheme in accordance with the latest issue of NCD 3717 is to be provided for internal compartments and alleyways in both dry & wet areas.</p>

		(e) For external above water areas, paints iaw latest revision of NCD 1493 are to be applied.
		(f) For weather decks, paints iaw latest revision of NCD 1437 are to be applied.
		(g) Paint scheme for other miscellaneous areas is to be iaw <i>IN</i> specifications.
		(h) Shipyard is to prepare a project wise paint document iaw above documents and forward the same to IHQ MoD(N) for approval. The same should include paints scheme of all areas onboard the ship.
29.	<u>Ventilation and Air Conditioning.</u>	Ventilation and Air Conditioning is to be provided, as follows: -
		(a) Marinised Air Conditioning units should be provided for all living spaces including bridge.
		(b) Adequate forced ventilation should be provided in the wash places and shower/ WCs.
		(c) Galley ventilation should be iaw DefStan 02-102.
		(d) All storerooms are to be provided with supply and exhaust based on the content of the storerooms.
		(e) Adequate forced ventilation should be provided in cargo areas, machinery spaces, battery charging space considering requirement of all the fitted equipment.
		(f) The following should be iaw DefStan 02-102:-
		(i) Number of air changes per hour.
		(ii) Capacity of air supply and exhaust system.
		(iii) The internal temperatures of air conditioned spaces.
		(g) Ventilation in spaces other than the ones mentioned above should be provided as per Classification Society rules.
30.	<u>Stability.</u>	The barge should satisfy stability requirements for both intact and damage stability condition as per International Maritime Organization (IMO)/ Safety of Life at Sea (SOLAS) requirements.
31.	<u>Inclining Experiment</u>	Inclining Experiment should be undertaken as per NCD 0104. Inclining Experiment and stability calculation post Inclining Experiment needs to be submitted to IHQ MoD(N) for approval.
32.	<u>Ship's Husbandry Tools.</u>	Ship's Husbandry Tools are to be provided iaw IHQ MoD(N) promulgated list.
33.	<u>Capacity.</u>	(a) Water (cargo) - 500 Ton (including fresh & feed water)
		(b) Fuel Oil (propulsion) - As per endurance + 25% reserve
		(c) Domestic Fresh Water - 4.5 to 5.5 Ton
		(d) Lub Oil - As per endurance + 25% reserve
34.	<u>Main and Auxiliary Machinery.</u>	Main propulsion and auxiliary machinery is to be as per Classification Society rules. Engine controls, using modern, indigenous, Commercial Off the Shelf (COTS) component, are to be provided in the Bridge and Engine Room. The

	engines should comply with International Maritime Organization (IMO)/ Marine Pollution (MARPOL) requirements. Salient aspects of Main and Auxiliary machinery should be:-
	(a) Propulsion package and auxiliary machinery having indigenous product support are to be provided.
	(b) Twin shaft propulsion system with one diesel engine driving each shaft, reverse reduction gear box and fixed pitch propeller per shaft, with shaft locking arrangement is to be provided.
	(c) Auxiliary machinery is to be provided as required, to meet Class requirements.
	(d) Bridge and Engine Room should have Engine controls as per Class requirements.
	(e) Main and auxiliary machinery are to be mounted on anti vibration mounts.
	(f) Separate feed water and fresh water pumps are to be provided with 100% redundancy. Pumping rates should be as follows: -
	(i) Feed Water - 40 to 60 TPH.
	(ii) Fresh Water - 80 to 100 TPH.
	(g) Gear Box. Reverse reduction gear box of suitable reduction ratio are to be provided.
	(h) Steering Gear. Steering gear should be Electro Hydraulic as per Classification Society norms.
	(j) Oil Water Separator. One Oil water separator of suitable capacity complying with Marine Pollution (MARPOL) requirements is to be provided.
	(k) Marinised Package AC Plant. Marinised package AC plants as per Class requirements are to be provided for all living spaces including bridge.
	(l) Additionally, following auxiliary machinery/ equipment of adequate capacity are to be provided: -
	(i) Lub Oil Centrifuge.
	(ii) Fire Pumps.
	(iii) Battery Charger (for ME and DA).
	(iv) Diesel Alternators.
	(v) Emergency Genset.
	(vi) Air Compressor (DD and MD)
	(vii) Bilge Pump.
	(viii) Dirty Oil Pump.
	(ix) Fresh Water Pumps.
	(x) Fuel Oil Pumps.
	(xi) Fuel Oil Centrifuge.
	(xii) Oily Bilge Separator.
	(xiii) Semi Rotary Hand Pump.
	(xiv) Lub Oil Pump.
	(xv) Stripping Pump.
	(xvi) Tank Content Gauges/Level indicators.
	(xvii) Workshop Equipment as per IHQ MoD(N)/DME

		guideline promulgated vide DME Specification 459.
35.	<u>Controls.</u>	COTS components in basic machinery control in the bridge are to be provided.
36.	<u>ELSA/ BASCCA(EE).</u>	Emergency Life Support Apparatus (ELSA)/ Breathing Apparatus Self Contained Compressed Air (BASCCA) (EE) should be as per specification prescribed by <i>IN</i> for 150% crew strength.
37.	<u>Dewatering Arrangement</u>	Portable pumps are to be provided, as follows: - (a) 01 x 37 TPH DD Emergency Fire Pump. (b) 02 x 20 TPH MD Submersible Pumps. (c) 01 x 40 TPH MD Submersible Pump.
38.	<u>Fire Fighting and : Damage Control.</u>	The Damage Control and Fire-Fighting arrangements are to be provided as per Safety of Life at Sea (SOLAS), Classification Society rules and compatible with naval supply equipment for the ease of replacement. In addition, following are required:- (a) Fixed CO ₂ system for fire protection in main and auxiliary machinery spaces. The CO ₂ system bottles should be outside the compartment being served. The system is to cater for two shot operation and is to have both Remote and Manual modes. (b) Firemain rings with adequate numbers of fire hydrant with isolating valves (to retain serviceability in the event of damage to some part of ring) to meet the requirements of fire-fighting. The system should have minimum pressure of 6 bars. (c) Fire-fighting and damage control equipment as per Classification Society norms. List of items to be supplied would be indicated in the GLS. Specification of portable fire fighting and damage control equipment is to be as per Comprehensive NBCD Allowance List (CNAL). (d) Lockers and stowage arrangements (spread across the barge) for stowage of Firefighting (FF) & Damage Control (DC) gear. (e) Automatic Fire Detection and Alarm System in all compartments as per Classification Society norms along with a centralised monitoring panel in the bridge. (f) The machinery compartments and fuel tank areas should be provided with the following: - (i) Suitable fire fighting arrangement for machinery fire. (ii) Foam Inlet Tubes for fighting Bilge Fire. (iii) Ladder sprinkling and cooling system. (g) Flood warning system in all compartments located below waterline other than tanks, along with a centralised monitoring panel in the bridge. (h) Minimum of four BASCCA sets. (j) Escape hatches in machinery compartments and mess decks with escape route marking. (k) Four pairs of Bristol Fire Fighting suits with all

		accessories.
		(l) Separate Fire Fighting System for galley meeting Classification Society requirement should be provided. Additionally, Portable K/ F - Class Galley Fire extinguishers should be provided.
		(m) A charging panel from the ship's HP air system capable of charging two BASCCA sets simultaneously upto 300 bar.
		(n) One portable Diesel driven compressor suitable for charging of Breathing Apparatus (BA) sets. Specification for the portable compressor should be as per (Statement of Technical Requirements) SOTRs promulgated by IHQ MoD(N).
		(p) Fixed dewatering arrangement as per Classification Society Rules.
		(q) Fixed bilge eductors in all underwater compartments.
		(r) Fixed shoring arrangement for hatches of all underwater compartments that do not have direct access to weather deck.
		(s) Surveillance and monitoring system, such as CCTV to monitor all unmanned compartments and hazardous areas.
		<u>SECTION E – ELECTRICAL</u>
39.	<u>Power Generation and Distribution.</u>	The entire electrical system, machinery and associated system should conform to IHQ MoD(N)/DEE promulgated standards (uploaded at Directorate of Standards website) over and above Classification Society Rules. The following electric equipment and fitting are to be provided: -
		(a) <u>Alternators.</u> Two DAs of equal capacity with each DA capable of meeting maximum electrical load satisfactorily under various operating conditions of the barge and with one DA remaining as standby and also a provision for running both Diesel Alternators (DAs) in parallel/ load sharing. Further, a growth margin is to be catered for the Alternators, subject to a minimum of 10% of the estimated value.
		(b) <u>Power Supply.</u> Following power supplies are to be provided :-
		(i) 415V AC, 3Phase, 50 Hz, 3 wire.
		(ii) 230V AC, Single Phase, 50 Hz, 4 wire for domestic and portable equipment.
		(iii) 230V AC, Single Phase, 50 Hz, 2 wire for lighting, communication and navigation system.
		(iv) 24V DC.
		(c) <u>Lighting.</u> Following lighting conforming to Classification Society norms/ specification are to be provided :-
		(i) LED based Lighting for general illumination.
		(ii) Navigational lighting conforming to IRPCS- 72 Regulations.

		(iii) Flood Lights.
		(iv) Emergency lights.
		(v) Search & Signalling lights.
		(vi) Six hand lamps.
		(vii) Flame Proof light fitting in Battery Charging Rooms.
		(d) <u>Main Switch Board</u> . Suitably rated Switch Board should be provided in accordance with Classification Society specifications.
		(e) <u>Shore Supply Arrangements</u> . Water tight (IP 57) shore supply connection boxes of 415 V, 3 phase, 50 Hz should be fitted on weather deck at an appropriate position on both Port and Stbd sides. The shore supply box should be connected by permanent cables to the switch-board and should have suitable terminals for connecting flexible cables upto 100 meters length. Shore supply Cable is to be provided with securing drum/ reel. A phase sequence indicator should also be provided.
		(f) <u>Batteries with Charging Arrangement</u> . Maintenance free batteries of adequate capacities and Battery Bay with requisite battery charging arrangement as per Classification Society regulations are to be provided. Switch-board should have internal rectifier mechanism so that batteries of engines and diesel alternators are automatically charged with shore supply.
		(g) <u>Motors, Starters and Control Panels</u> . Direct on line motor starters should be provided for all services below 5 HP. Star Delta starters are to be provided for motors of 5 HP rating and above incorporating under voltage, over current, short circuit, single phase protection and connection for thermister provided in all the motors. All motors should be conforming to IHQ MoD(N) promulgated standards and procured from IHQ MoD(N) approved suppliers (IHQ MoD(N)/ DEE standards and list of approved suppliers are available on Directorate of Standardisation website).
		(h) <u>Cables</u> . Low fire hazard cables (EBXL cables) as per Classification Society Requirements should be used.
		(j) <u>Transformers and Rectifiers</u> . Transformers and rectifiers are to be provided as per the Classification Society Requirement.
		(k) Electrical machinery/ equipment/ fittings should conform to Classification Society standards/ specifications.
	<u>SECTION F – ACCOMMODATION AND HABITABILITY</u>	
40.	<u>Accommodation</u>	(a) Fully air conditioned accommodation with suitable marinised ACs, confirming to Class are to be provided as follows: -
		(i) Two cabins with attached WC and bath (with geyser) for the master and the engineer.
		(ii) One six bunk cabin for engine room crew.

		(iii) One four bunk mess for deck crew.
		(iv) One four bunk mess for service crew.
		(b) Associated facilities are to be provided as follows:-
		(i) Two sets of Separate WCs.
		(ii) Urinals co-located outside the WC.
		(iii) Showers (with geyser) for the crew and service crew.
		(iv) All bathroom fittings are to be of SS 316 grade Stainless Steel.
41.	<u>Galley.</u>	(a) A common galley is to be provided for Master, Engineer and crew catering for 20 personnel. The galley is to be equipped with the following:-
		(i) Smoke/ Fire sensors.
		(ii) The hot plate On/ Off indication lamps panel fitted in the galley with indicator outside the galley as well as on the Bridge.
		(b) All galley fittings are to be of SS 316 grade Stainless Steel.
		(c) One pantry with serving bay is to be provided. A dining hall with seating capacity for 11 personnel is to be provided with separate enclosures for Master and Engineer.
		(d) The galley should have the following facilities:-
		(i) Electric cooking Range with Two Hot Plates (5Kw) - One
		(ii) Microwave Oven (3 Kw) - One
		(iii) Refrigerator 230 lts capacity - One
		(iv) Electric Kettle - One
		(v) Hot Case - One
		(vi) Hot water geyser/ boiler - One
		(vii) Water Cooler of suitable capacity with RO based water purifier - One
		(viii) Deep Freezer - One
		(ix) Stainless Steel sink with a fresh water nickel silver tap with splash back and drain board.
		(x) Stainless Steel racks in serving bay.
		(xi) One each salt water and fresh water tap is to be provided 500 mm above the deck with a sill around to restrict splash.
		(xii) Galley utensils and accessories required for functioning of galley for 15 personnel.
		(e) One wire mesh locker for storage of potato and onions on upper deck.
		(f) One provision store room and a stainless steel top table with a large provision cupboard and metal drawers.
		(g) Adequate crockery and cutlery for 20 personnel.
42.	<u>Recreational and Office Facilities.</u>	(a) Three LED colour TVs of 42 inch or more, one each for Master's and Engineer's cabin and one in the dining hall are to be provided. SRE is to be provided in living spaces, dining hall and bridge.
		(b) Two each carom and chess board are also to be provided.

		(c) Two computers with computer tables, operator's chairs, laser jet printers and UPS are to be provided for rendering returns, processing job cards and other official jobs.
	<u>SECTION G – SEAMANSHIP, LIFE SAVING AND SAFETY EQUIPMENT</u>	
43.	<u>Seamanship Fittings.</u>	(a) <u>Anchor and Chain Cable & Fittings.</u> Anchor and anchoring arrangement are to be as per Classification Society Rules. Anchor chain cables and accessories should be in accordance with NCD 3909.
		(b) <u>Anchor Windlass & Fittings.</u> As per Classification Society Requirements.
		(c) <u>Towing and Berthing Gears & Fittings.</u> Towing and berthing arrangements are to be provided as per the Classification Society Requirements. In addition, following are to be provided:-
		(i) At least four each bollards on port and starboard side.
		(ii) Fairleads on either side of bollards.
		(iii) Cleats and stag horns for rigging fenders during movement.
		(iv) Bow fairlead or Stem bullring.
		(v) Following suitable for tonnage of the vessel:-
		(aa) Two sets of six Berthing hawsers.
		(ab) One multiplated Polypropylene towing hawser.
		(vi) Towing pendant of Steel Wire Rope should be provided.
		(d) <u>Covers.</u>
		(i) PVC coated nylon fabric retractable shade should be provided for gangway area.
		(ii) Two sets of light weight canvas canopy as per modern merchant marine standards for weather deck spaces should be provided.
		(iii) Two sets of light weight metallic/ canvas covers should be provided for all weather deck fittings and machinery openings.
		(e) <u>Fendering.</u> Fendering arrangement should be provided to avoid metal to metal contact of the hull whilst alongside ships/ submarines as follows:-
		(i) Heavy duty non inflatable type fixed fenders made of special rubber conforming to Class Specifications should be provided as follows:-
		(aa) Along the hull above waterline.
		(ab) Underwater hull (Underwater Fendering to cater for berthing alongside Submarines).
		(ac) Suitable clamp arrangement is to be provided for fixing of these fenders to hull.
(ii) Round Tyre type fenders with fixed clamp arrangement.		
(iii) Four each light weight and heavy duty portable pneumatic fenders.		

		(iv) Rubber quality of all inflatable fenders supplied and non-inflatable fenders fitted should be such that fenders, during use would not leave marks and discolour the ships side of vessels.
		(f) Two brows of suitable dimension and strength with stowage arrangement are to be provided.
		(g) Four lockers (with Marinised Stainless Steel hinges of grade SS 316) are to be provided at suitable location on weather deck.
		(h) Scuppers are to be provided at suitable location for draining out of rain water from decks.
44.	<u>Life Saving Equipment</u>	(a) Life Saving equipments are to be provided as per Safety of Life at Sea (SOLAS).
		(b) <u>Life Rafts.</u> 2 x 20 men life rafts, one each on port and stbd side, are to be provided.
		(c) <u>General Service Life Jackets (GSLJs).</u> 25 General Service Life jackets are to be provided; specification of GSLJ is to be iaw NCD 3925.
		(d) <u>Hazardous Duty Life Jackets (HDLJs).</u> Six Hazardous Duty Life jackets are to be provided; specification of HDLJ is to be iaw NCD 3926.
		(e) <u>Life Buoy and MOB Markers.</u> Life buoys and MOB markers are to be provided on upper deck as follows:-
		(i) One Lifebuoy on Foxle.
		(ii) One Lifebuoy each on either side at midship.
		(iii) One each Lifebuoy with Man Overboard Light and Smoke Markers on both Bridge Wings and on Quarterdeck (QD).
		(f) Specification of Man Overboard Light and Smoke Markers should be iaw Article 06033 of BR 67/2009 (Admiralty Manual of Seamanship).
45.	<u>Safety Equipment</u>	The following safety equipment are to be provided: -
		(a) Helmets - 11
		(b) Ear Plugs - 11 pairs
		(c) Safety Gloves - 25 pairs
		(d) Anti Splash Goggles - 4
		(e) Dust Protector - 11
		(f) Safety Harness - 4
46.	<u>Medical facilities.</u>	First aid boxes one each in Crew Mess, Bridge, Engine Room and Master's Cabin should be provided. One each Neil Robertson Stretcher and ambulance stretcher should be provided.
	<u>SECTION J – MISCELLANEOUS</u>	
47.	<u>Hoses.</u>	Adequate length of hoses are to be provided for fresh water and feed water separately. Suitable covered stowage/ securing space for the hoses is to be provided on upper deck.

48.	<u>Documentation.</u>	Complete inventory of spares and the relevant documentation of equipment and machinery is to be provided in hard and soft copies in CD. Documents to be supplied as per Class specification. 'Ship fit' and as fitted drawings, maintenance, repairs and refit documents, Catalogue of spares/ D 787 for OBS and B&D inventory, and are to be provided alongwith the barge.
49.	<u>Test Equipment.</u>	Test equipment as per extant <i>IN</i> policy is to be provided as part of First Outfit of Stores.

Appendix B

(Refer to Para 7 and 15(a) & 15(b) of Chapter II of DPP 16 & Part – II, Para 6(a) of RFI)

INFORMATION PROFORMA
(INDIAN VENDORS)

1. **Name, Address and Unique ID (if any) of the Vendor / Company / Firm.**

(Company profile, in brief, to be attached. In the eventuality of the firm emerging as L1, Contract will be concluded in the name and address of the firm, as indicated here). Vendors are to undertake that any subsequent proposal for change in name of firm or address, will be intimated to IHQ MoD(N) at the first available opportunity and supporting documents be furnished accordingly within five working days of their approval by the competent authority.

2. **Type (Tick the relevant category).**

Original Equipment Manufacturer (OEM) Yes/ No

Authorised Vendor of foreign Firm Yes/ No (attach details, if yes)

Others (give specific details) _____

3. **Contact Details.**

Postal Address: _____

City: _____ State: _____

Pin Code: _____ Tele : _____

Fax: _____ URL/Web Site: _____

Email : _____

4. **Local Branch/ Liaison Office in Delhi (if any).**

Name & Address: _____

Pin code: _____ Tel : _____ Fax: _____ E mail : _____

5. **Financial Details.**

(a) Category of Industry(Large/ medium/ small Scale) : _____

(b) Annual turnover : _____ (in INR)

(c) Number of employees in firm: _____

(d) Details of manufacturing infrastructure: _____

- (e) Earlier contracts with Indian Ministry of Defence / Government agencies: -

Contract Number	Equipment	Quantity	Cost

6. **Certification by Quality Assurance Organisation.**

Name of Agency	Certification	Applicable from (Date &Year)	Valid till (Date &Year)

7. **Details of Registration.**

Agency	Registration No.	Validity(Date)	Equipment
DGS&D			
DGQA/DGAQA/ DGNAI			
OFB			
DRDO			
Any other Government Agency			

8. **Membership of FICCI / ASSOCHAM / CII or other Industrial Associations.**

Name of Organisation : _____

Membership Number : _____

9. **Equipment / Product Profile (to be submitted for each product separately)**

(a) Name of Product : _____

(Should be given category wise for e.g. all products under night vision devices to be mentioned together)

(b) Description (attach technical literature): _____

(c) Whether OEM or Integrator : _____

(d) Name and address of Foreign collaborator (if any): _____

(e) Industrial Licence Number : _____

(f) Indigenous component of the product (in percentage): _____

(g) Status (in service / design & development stage): _____

(h) Production capacity per annum: _____

(j) Countries / agencies where equipment supplied earlier (give details of

quantity supplied) : _____

(k) Estimated price of the equipment _____

10. Alternatives for meeting the objectives of the equipment set forth in the RFI.

11. Any other relevant information: _____.

12. **Declaration**

(a) It is certified that the above information is true and any changes will be intimated within five (05) working days of occurrence.

(b) It is certified that design and development is indigenous and belong to the _____ (Vendor) and / or _____ (its Indian Sub Vendor). The Indigenous Content in the said equipment is _____ % as on date and likely to be raised to _____ % by _____ (date). The certification for the same is enclosed.

(c) It is certified that the complete set of design and production drawing are available and source code for all software applications/ programmes are also available with the _____ (Vendor) and that these would be produced for verification when required.

Note: - Certification for 12(b) and (c) is required only if claiming IDDM category.

(d) It is certified that in the past that _____ (name of firm) has never been banned/ debarred for doing business dealings with MoD/ GoI/ any other Government Organisation and that there is no inquiry going on by CBI/ ED/ any other Government agency against the firm.

Note: - Para 44 and Appendix F of Chapter II of DPP 16 may be referred.

(Authorised Signatory)

ADDITIONAL INFORMATION PROFORMA
FOR SHIPYARD SELECTION / PRE QUALIFICATION
(INDIAN SHIPYARDS)

1.	Year Established							
2.	Type of Organisation size/ Classification of Yard							
3.	Organisation setup and availability of skilled Manpower							
4.	Details of design, planning and production facilities/ infrastructure including slipways/ drydocks and wet basin/ water front (attach brochures etc.)							
5.	Annual build capacity (in tonnage) and capability to increase the production capacity to meet delivery schedule requirements of services							
6.	Details of future expansion and business development planned							
	Number of years of experience in manufacturing of same/ similar barge							
7.	Vessels delivered in last 05 years. (attach previous order copies for yardcraft/ similar vessels only)							
	<u>Yard</u>	<u>Customer</u>	<u>Type of vessel</u>	<u>Dead Weight Tonnage (DWT), Gross Register Tonnage (GRT)</u>	<u>Order date</u>	<u>Start production</u>	<u>Contractual delivery</u>	<u>Actual delivery</u>
8.	Orders in hand (attach order copies for similar barges only)							
	<u>Yard</u>	<u>Customer</u>	<u>Type of vessel</u>	<u>DWT, GRT</u>	<u>Order date</u>	<u>Start production</u>	<u>% completed</u>	<u>Expected delivery</u>
9	Quality Plan maintained by Shipyard							
10	Details of certification by Quality Assurance Agencies							
11	Industrial License details at the time of submission of bid							
12	Financial information (in INR)							

	(a)	Annual turnover in the last three financial years (year wise)	
	(b)	Capital Assets	
	(c)	Profits made	
	(d)	Tax return (copy of Income Tax return filed during last three years)	
	(e)	Net Worth = equity+ reserves	
	(f)	Debt/Equity ratio	
	(g)	Quick Ratio = (current assets long term debts)/current liabilities	
	(h)	Attach copies of certified published annual report showing turnover and financial status in support of above information for last five years	
13		Details of shareholders	
14		Details of Promoters, associated, allied and JV companies,	
15		Details of vigilance action viz ongoing investigation and suspension/debarment /blacklisting actions against the shipyard, if any	
16		Detailed specifications of yardcraft offered to meet the specified requirements and build period from date of order	
17		Detailed specifications of commercially off the shelf (COTs) yardcraft if available for outright purchase, if any	

Undertaking: - It is certified that the above information is true and any changes will be intimated within five (05) working days of occurrence.