

## TENDER SPECIFICATION OF DIVERS LAUNCHING AND RECOVERY SYSTEM

1. **Name of the Equipment.** Divers Launching and Recovery System (LARS).
2. **Purpose.** Each LARS will be used on board a diving boat which are presently under construction in Bangladesh. They should be specifically designed to give a compact operating footprint to minimize the deck space required on board.
3. **Quantity.** 03(Three) complete system for 03 diving boats.
4. **Manufacturer.** Name and full address is to be mentioned.
5. **Year of Manufacture.** 2021 or later. The item should be brand new and original.
6. **Country of Origin.** USA, UK, Canada, Turkey, Germany, France, Netherland, Spain, Italy and Norway.
7. **Country of Manufacturer.** USA, UK, Canada, Turkey, Germany, France, Netherland, Spain, Italy and Norway.
8. **Certificate/Document of Authentication.** The local supplier must provide following certificate(s)/ document(s) with the offer/quotation of items as regard to the genuinity of source and item(s) in order to establish chain of links from the original source to supply items:
  - a. One certificate/ document by the manufacturer in favor of the supplier (in case of manufacturer as direct source).
  - b. Two certificates/ documents, one by the manufacturer to authorized agent and other by the authorized agent to supplier (in case of authorized agent as immediate source).
9. **Standard.** The Divers Launching and Recovery System is to be designed and constructed fulfilling the requirement of International standard. The standard to which the quoted Divers Launching and Recovery System complies which is to be specified.
10. **Ambient Condition.** The Divers Launching and Recovery System will have to operate in a highly corrosive marine environment whose particulars are as follows:

a.	Air temperature	5°C - 45°C.
b.	Sea water temperature	5°C - 32°C
c.	Relative Humidity	Upto 90% (non-condensing)
d.	Water condition	Salty, Muddy and Oily

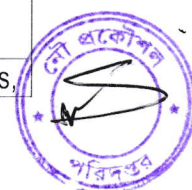
11. **Scope of Supply.** The scope of supply is to include the followings:
  - a. Main items (03 x Divers Launching and Recovery System), complete with all items necessary for immediate operation without the requirement of any other items (standard fittings/attachments, accessories, etc) (as per paragraph 12, 13 and 14).
  - b. Optional items (as per paragraph 15).
  - c. Tools (as per paragraph 16).
  - d. Spare Parts (as per paragraph 17).



- e. Documents (instruction, operation and maintenance manual, spare parts catalogue, certificates, Installation instruction, drawings etc, as applicable) (as per paragraph 18).
- f. Factory Acceptance Test (FAT) (as per paragraph 19).
- g. Installation, Test/Trial, Acceptance and Training (as per paragraph 20 to 22).
- h. Warranty and Guarantee (as per paragraph 25 and 26).

## 12. Technical Specification

a.	Model	To be mentioned
b.	Country of Origin	USA, UK, Canada, Turkey, Germany, France, Netherland, Spain, Italy and Norway
c.	Country of Manufacture	USA, UK, Canada, Turkey, Germany, France, Netherland, Spain, Italy and Norway
d.	Operational Depth	Minimum 120 m
e.	Design	To be mentioned
f.	Primary Basket / Cage Cylinders	03 divers carrying capacity
g.	Secondary Basket	Single diver carrying capacity
h.	Safe Working Load.	
	(1) Primary Diver Basket	1600 kg ( $\pm 5\%$ )
	(2) Secondary Diver Basket	1100 kg ( $\pm 5\%$ )
	(3) Winch	3350 kg continuous ( $\pm 5\%$ )
	(4) Clump Winch	1600 kg continuous ( $\pm 5\%$ )
j.	Basket Weight in air.	
	(1) Primary Diver Basket	900 kg ( $\pm 5\%$ )
	(2) Secondary Diver Basket	650 kg ( $\pm 5\%$ )
k.	System Total Weight	7100 kg ( $\pm 50$ kg)
l.	HPU Electrical Requirements	25 kw Approx.
m.	Oil Capacity	To be mentioned
n.	Main Lift Wire	150m ( $\pm 10\%$ )
p.	Clump Weight Wire	600 kg Approx.
q.	<u>Components.</u> The main components of the system are to be provided as mentioned below:	
	(1) Base Skid	
	(2) 'A'Frame	
	(3) Two Clump Weights	
	(4) Primary Dive Basket	
	(5) Secondary Dive Basket	
	(6) Electric Hydraulic Power pack with Triple Motors and Pumps	
	(7) Winches	
r.	<u>Base Skid.</u>	
	(1) Constructed of heavy section Universal Column with the Vertical 'A' Frame section situated at one end, Winch Platforms and the Hydraulic Power Unit at the other. Hydraulic Cylinders should be fixed to the base clevises to operate the 'A' Frame	
	(2) The base frame should be covered with a light weight, non-slip, corrosion proof composite material grating. The winches should be integrally piped in 316 Stainless Steel to the hydraulic control valve block, which in turn are connected directly to the supply and return hydraulic supplies of the winches	
	(3) The base skid should be additionally fitted with two inward opening safety gates,	



		which should have integrated 316 stainless steel multi rollers fitted for umbilical handling.
s.	<u>'A' Frame.</u>	
	(1)	The 'A' Frame should be moved by hydraulic cylinders to the inboard or outboard positions by operation of the proportional hydraulic control valves. The 'A' Frame should be fitted with two central sheaves, where the lift wire should be positioned for lifting and lowering the dive baskets
	(2)	The head of the 'A' Frame should facilitate spotlight for illumination during hours of darkness and an electrically interlocked chandelier which activates a failsafe lock-out system when the basket is raised above the pre-set level
t.	<u>Clump Weight</u> At least two pre-fabricated Clump Weights which allows the Clump Weight wire to be doubled weaved through the sheaves situated at each end of the Clump Weight. The Clumps Weights should be of different sizes which relate to the primary or secondary basket size	
u.	<u>Triple Electric Hydraulic Power Unit (HPU).</u>	
	(1)	The Triple Hydraulic Power pack should be equipped with three separate hydraulic reservoirs, return line filters, sight glasses and fill point
	(2)	The skid should be fitted with three electric motors, each with 22kW motors, all with fixed displacement, vane pumps. The third electrically driven hydraulic power pack acts as an independent secondary supply in the event of failure the two primary units
	(3)	The hydraulic circuitry should be fitted with non-return valves and over-pressurization safety valves which operate as and when required during the operation of the diver's recovery system
v.	<u>Diving Basket / Cage /Primary Dive Basket.</u>	
	(1)	Primary basket should have clear openings (W X H) 900mm (±20mm) X 1150mm (±20mm). Diving Cage with overhead protective frame suitable for three divers
	(2)	Clump Weight wire guides and diver access points from both sides
	(3)	Hand hold points should be situated within the cage and the base of the basket should be fitted with a light weight, non-slip corrosion proof composite type material grating
	(4)	Stainless steel mesh cladding is to be used to enclose the top and sides of the basket. Stainless steel chains, carabineers and nuts and bolts are to be used as standard for the assembly of this basket
	(5)	The main lift wire connection should have two additional emergency lift points.
w.	<u>Secondary Dive Basket.</u>	
	(1)	Secondary basket should have clear openings (W X H) 600mm (±15mm) X 1150mm (±20mm). Diving Cage with overhead protective frame suitable for one diver
	(2)	Other arrangements should be same as primary basket
x.	<u>Man Riding Winches</u>	
	(1)	All Winches should be of planetary type Winches of high performance
	(2)	The Winches should be powered by high efficiency gear motors designed specifically for applications to provide smooth application
	(3)	The load control system should be maintained by a patented brake valve
	(4)	Portable Remote Electro / Hydraulic Console- Portable control console for operation of the system remotely

13. **Standard Accessories.** Standard accessories must include all items and accessories which are essential to the Divers Launching and Recovery System, whether those are mentioned in this specification or not. The price of standard accessories is to be included in FOB value. However, item wise price list of standard accessories is to be provided with the offer for reference value only.

14. **Safety Devices.** To be mentioned. Standard safety devices should be included with the offer.



15. **Optional Items.** A list of optional items (if any) is to be provided indicating item wise unit price. Technical details of these items should be given in the offer. Only the prices of selected items by BN will be added with total price while evaluating the comparative price of the suppliers.

16. **Tools.** One (01) set of standard tools for maintenance of each the system is to be provided indicating item wise price. Nomenclature, quantity and specification of the tools are to be mentioned in details in the quotation. That price will be added with total price while evaluating the comparative price of the suppliers.

17. **Spare Parts.** A list of recommended spare parts for the Divers Launching and Recovery System for 05 years running is to be provided with the quotation as optional items indicating item wise price. Only the prices of selected items by BN will be added with total price while evaluating the comparative price of the suppliers.

18. **Documents.** 02 sets of following documents are to be submitted with each set of LARS (One set to be supplied with the offer) free of cost:

- a. Two sets of original Catalogue/Brochure in English.
- b. List of Standard Accessories.
- c. List of Optional Accessories.
- d. List of Installation Materials.
- e. List of spares parts for 5 years.
- f. Manufacturer's authenticity certificate
- g. Certificate of assurance for minimum 10 years supply of spares.
- h. List of tools required for servicing and maintenance.
- j. Necessary drawings of the equipment shall be handed over to the BN at no additional cost.

19. **Factory Acceptance Test (FAT).**

a. Factory Acceptance Test (FAT) will be carried out by Three (03) BN Officers for the first set of LARS for a duration of total three (03) days excluding journey period, at the buyer's expenses. Both way air fare, accommodation and food for the FAT team will be borne by BN. The bidder should inform the buyer about the date and schedule of FAT at least 08 (eight) weeks prior to the date of commencement of the said FAT. After inspection a joint inspection report will be prepared and signed by both the seller and buyer's representatives.

b. On return from the country of supplier, the BN officers will submit a report to NHQ concerned directorate. NHQ concerned directorate will, in turn, forward final decision along with FAT report within two (02) weeks, basing on which DGDP will render clearance for shipment of stores to the bidder concerned. The bidder will not make shipment of any item of the contract without clearance from the DGDP.

c. All types of movement/ transportation (air, sea, road and rail) of the BN officers within the manufacturer/ bidder's country, reception and arrangement for entry into country/ concerned area for the FAT are to be arranged by the bidder. The cost of FAT in this respect is to be quoted in the offer.

20. **Installation.** KSY, Khulna will install the Divers Launching and Recovery System under the supervision of OEM engineer on board under construction ship at Khulna Shipyard, Khulna.

21. **Test, Trial and Acceptance.** Test and trials of the equipment at various level i.e. STW (Setting to Work/ Installation), HAT, SAT etc. as applicable will be done jointly by BN representative/ PIT (Project Implementation Team) and supplier on board/ shipyard mutually agreed place. Test and trial procedure of each stage will be submitted to BN representative well in advance duly for necessary approval. Acceptance of each LARS will be signed by BN representative upon satisfactory completion of SAT.



22. **Training.** The supplier shall provide operators, training (including day to day routine maintenance training) consists of 08 (eight) personnel of each boat nominated by BN for a duration of 05 (five) days. These training will be conducted by the Original Equipment Manufacturer (OEM) representative during Installation/STW of the first LARS in Bangladesh. Bidder is to quote the cost of training separately in their financial offer. Cost of air ticket, internal transportation, accommodation, food, medical support etc are to be borne by the supplier.
23. **Certification.** IMCA certified.
24. **Quality Assurance Certificate.** Quality assurance certificate in respect of the associated equipment in regards to its manufacturing and performance is to be provided at the time of delivery of the items.
25. **Warranty Repair/ Replacement.** The Supplier shall undertake the full responsibility to rectify/replace any defect on part of SUPPLIER provided that the defects are revealed/ discover during the period of 12 (twelve) months after Acceptance of the equipment at Supplier's expense. Warranty repair/ replacement shall be accomplished within 03 months of notification of the relevant defect. Otherwise warranty will be extended by non-operational period of the equipment.
26. **Guarantee.** The manufacturer will guarantee to supply the spare parts for at least 10 years at reasonable price. Yearly increase of price of spares should not be more than 5% of the price list for spares provided with the quotation.
27. **Shipment.**
- Shipping Port.** The supplier will arrange shipment of all items by sea to any sea port of Bangladesh.
  - Packing.** All items are to be delivered in sea-worthy packing to ensure safe transportation by sea. All packages should have packing notes showing their contents in details and marked with the name and address of the consignee with gross weight.
  - Place of Delivery.** The supplier will arrange transportation of all supplied items to the Naval Stores Depot, Khulna.
  - Port of Shipment.** Any port of manufacturing country. If item not supplied from manufacturing country, Port of Dealer's country to be mentioned with authentic/appropriate reason.
  - Consignee.**  
The Officer-in-Charge  
Naval Stores Depot Khulna  
Khalishpur, Khulna  
Bangladesh
28. **Delivery.** The supplied items are to be delivered within the following schedule (Part shipment allowed):
- 1<sup>st</sup> LARS with all accessories by June 2022.
  - 2<sup>nd</sup> LARS with all accessories by December 2022.
  - 3<sup>rd</sup> LARS with all accessories by June 2023.
29. **Validity of Offer.** The offer should remain valid until June 2022.
30. **Terms of Payment.** All payments under this contract will be made in Bangladeshi Currency i.eBD Taka. Terms of payment will be as follows:
- 75% (Seventy Five Percent) of the total contract price (TCP) will be paid after receiving of LARS at NSD, Khulna and visual inspection (25% of this TCP may be paid on receiving each LARS).



b. Final 25% (Twenty Five Percent) of the total contract price (TCP) will be paid after the acceptance of all 03 sets of LARS.

31. **Condition for Acceptance of Quotation.** Quotation has to have supporting documents (all required certificates as mentioned before, booklets, leaflet, catalogue, brochure etc from OEM in English) having detailed particulars of the Divers Launching and Recovery System. If detailed information regarding specifications, maker's books and catalogue about the same model of the lath machine quoted, spare parts accessories, scope of supply, etc are not provided; the quotation will not be accepted.

32. **Compliance Statement.** A compliance statement (in a tabular format) fulfilling all the requirement of the tender is to be submitted for evaluation of the quotations. Stating mere 'Yes' or 'No' will not suffice and detailed description/ information as required is to be given. An incomplete compliance statement may attribute to cancellation of the offer. If any clause of this specification does not commensurate with the offered Divers Launching and Recovery System, the deviation has to be spelt out clearly.