



# भारतीय समुद्रीय विश्वविद्यालय Indian Maritime University

(केन्द्रीय विश्वविद्यालय, भारत सरकार / A Central University, Govt. of India)  
कोलकत्ता परिसर / Kolkata Campus



IMU-KC/BST/2020-21

01 March 2021

Sub: Quotation for Rigid Life Raft, Life Jacket and Inflatable Life Raft  
for the BST Course at IMU-KC

Sealed quotations are invited towards procurement of Rigid Life Raft, Inflatable Life Jacket and Inflatable Life Raft for the BST Course at IMU-KC based on the following Technical Specification:

**I. Technical specs for RIGID LIFE RAFT – Reqd. Qty: 01 no.**

**Must be SOLAS compliant**

Technical Parameters

Capacity: for six number of passengers;

Must be constructed as per SOLAS regulations (as amended) with proper workmanship and materials;

be constructed with proper workmanship and materials;

be fitted with retro-reflective material as per IMO resolution A.658 (16)

be clearly marked with approval information, including the administration which approved it and any operational restrictions;

**Constructional parameters**

The floating liferaft shall be capable of withstanding repeated jumps on to it from a height of at least 4.5 m above its floor both with and without the canopy erected.

Construction must according to SOLAS requirements (as amended). Some highlight points are as

The canopy shall comply with the following:

- It shall provide insulation against heat and cold
- Its interior shall be of a colour that does not cause discomfort to the occupants;
- Each entrance shall be clearly indicated and be provided with efficient adjustable closing arrangements which can be easily and quickly opened by persons clothed in immersion suits from inside and outside, and closed from inside the liferaft.
- It shall admit sufficient air for the occupants at all times, even with the entrance closed;
- It shall be provided with at least one viewing port;
- It shall be provided with means for collecting rain water;
- It shall be provided with means to mount a survival craft radar transponder at a height of at least 1 m above the sea; and
- It shall have sufficient headroom for sitting occupants under all parts of the canopy.

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RIGID LIFE RAFT FITTINGS as per SOLAS requirements (as amended)

- a) Life lines shall be securely bracketed around the inside and outside of the liferaft.
- b) The liferaft shall be fitted with an efficient painter of length equal to not less than 10 m. The breaking strength of the painter system, including its means of attachment to the liferaft, except the weak link shall be not less than 7.5 kN.
- c) A manually controlled lamp shall be fitted to the top of the liferaft canopy. The light shall be white and with a luminous intensity of not less than 4.3 cd in all directions of the upper hemisphere. Batteries shall be of a type that does not deteriorate due to dampness or humidity.

#### EQUIPMENT

The normal equipment of every liferaft shall consist of, as per SOLAS requirements (as amended). A complete equipment set is required for demonstration purpose.

- 1) one buoyant rescue quoits, attached to not less than 30 m of buoyant line;
- 2) one knife of the non-folding type having a buoyant handle and lanyard attached and stowed in a pocket on the exterior of the canopy near the point at which the painter is attached to the liferaft.
- 3) one buoyant bailer
- 4) two sponges;
- 5) two sea anchors each with a shock resistant hawser and tripping line is fitted, one being spare and the other permanently attached to the liferaft in such a way that when the liferaft inflates or is water-borne it will cause the liferaft to lie oriented to the wind in the most stable manner. The strength of each sea anchor and its hawser and tripping line, if fitted shall be adequate in all sea conditions. The sea anchors shall have means to prevent twisting of the line and shall be of a type which is unlikely to turn inside out between its shroud lines.
- 6) two buoyant paddles;
- 7) three tin openers and a pair of scissors. Safety knives containing special tin opener blades are satisfactory for this requirement;
- 8) one first aid outfit in a waterproof case capable of being closed tightly after use;
- 9) one whistle or equivalent sound signal;
- 10) four rocket parachute flares complying to the requirements of International LSA code;
- 11) six hand flares complying to the requirements of International LSA code;
- 12) two buoyant smoke signals to the requirements of International LSA code;
- 13) one waterproof electric torch suitable for Morse signalling together with one spare set of batteries and one spare bulb in a waterproof container;
- 14) an efficient radar reflector, unless a survival craft radar transponder is stowed in the liferaft;
- 15) one daylight signalling mirror
- 16) one copy of the life saving signals as referred in relevant regulation of LSA code on a waterproof card or in a waterproof container;
- 17) one set of fishing tackle;
- 18) a watertight container for food storage for demo;
- 19) watertight receptacles for FW.
- 20) one rust proof graduated drinking vessel;
- 21) instructions on how to survive [as per IMO resolution A.657 (16)];
- 22) instructions for immediate action; and

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**MARKING**

The liferaft shall be marked with as per SOLAS requirements (as amended)

**Type Test approval**

Should be approved (type test) by any classification society (approved as RO by DG Shipping). Copy of approval to be provided during bidding and time of supply.

All necessary Test reports must be available.

Qualification Requirements. The supplier shall draw up a qualification plan describing the steps it takes to prove the technical requirements are met. The prototype has to be certified by any authority approved by Flag State (DG Shipping) for intended use.

The prototype will be subjected to minimum of shall include the following test –

Drop test, Jump test, Weight test, Towing test, mooring out test, Painter system test, Life raft light test, Loading and seating test, boarding test, Stability test, Manoeuvrability test, Swamp test, Canopy closure hose test, float free buoyancy test detail inspection, wind tunnel test, damage test, righting test, inflation test, Pressure test, seam strength.

**Guarantee**

The manufactures shall guarantee the design, material & workmanship of the Rigid Life Raft as per the specification for a period of Two year from the date of supply. Life jacket with any manufacturing defect/faulty workmanship found during this period shall be replaced by the vendor without any extra cost to buyer within 15 days from the date of intimation through email etc.

**II. Technical specs for SOLAS INFLATABLE LIFE JACKET – Req'd. Qty: 05 nos.**

SOLAS Inflatable life jacket is suitable for all kinds of vessels and ships, used by seamen and passengers as life-saving equipment.

**Must be SOLAS compliant** - Approval Regulations

In compliance with SOLAS 74 as amended by

SOLAS 74, as amended, Regulation III/4, III/7.2, III/34, X/3, 2000 IISC Codes VIII/8 8.3

The LSA Code, Regulation I/1.2 and II/2.2

IMO Resolution MSC.201(81),MSC.216(82);MSC.48(66)(LSA Code)

MSC.207(81),MSC218(82);MSC.81(70) MSC.200(80),MSC.226(82),MSC.393(89).

**Technical Parameters**

Size – Adult size

Buoyancy 150N or more

Material of cover waterproof polyester oxford

Expand inflation time 5s

Floating Duration 24 hours

Buoyancy loss after 24 hours ≤5%

Weight of CO2 cylinder 33g ×2

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**Constructional parameters**

Weight < 1.3kg

Wear Type - Reflective

Gender- Unisex

Buoyancy -150N/170N

Chamber material - TPU

Color - made up of high visibility Orange color

Suitable Plastic **Quick** Lock Buckle for tightening

It shall be provided with Retro reflective tape as per regulatory requirements.

Proper markings - Name of manufacturer, Product Name, Model No/ Trade Name, Product Description, Weight, Girth, It should be clearly marked with Class approval information and any operational restrictions., height

**Type Test approval**

Should be approved (type test) by any classification society. Copy of approval to be provided during bidding and time of supply.

Test reports must be available.

**Guarantee**

The manufactures shall guarantee the design, material & workmanship of the Inflatable Life Jacket as per the specification for a period of One year from the date of supply. Life jacket with any manufacturing defect/faulty workmanship found during this period shall be replaced by the vendor without any extra cost to buyer within 15 days from the date of intimation through email etc.

**III. Technical specs for INFLATABLE LIFE RAFT – Req'd. Qty: 02 nos.**

**Must be SOLAS compliant**

Technical Parameters

Capacity: for twenty number of adult passengers;

Must be constructed as per SOLAS regulations (as amended) with proper workmanship and materials;

Must be fitted with retro-reflective material as per IMO resolution A.658 (16)

Must be clearly marked with approval information, including the administration which approved it and any operational restrictions;

The floating liferaft shall be capable of withstanding repeated jumps on to it from a height of at least 4.5 m above its floor both with and without the canopy erected.

Construction must according to SOLAS requirements (as amended).

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**Constructional parameters**

Technical parameters for Inflatable Life Rafts as per SOLAS Standards:

Specification	20 Persons
Physical Shape	Octagonal
Length (mm)	---
Width (mm)	3700
Height (mm)	1765
Working Pressure (in mm, wc)	1400
Weight in Kg. for 'A' pack (approx)	172

Must be constructed with proper workmanship and materials;

An inflatable structure made up of two ring-shaped floats.

Two inflatable access ramps integral with the lower float

One inflation cylinder.

One inflatable floor glued to the lower float.

A manual inflating/deflating valve fitted to each inflatable component.

Two doors located on the canopy and fitted with zip fasteners.

Two rainwater recovery pouches located on the canopy. At their lower ends a tube closed off by a plug makes it possible to collect the water inside the raft.

Four water pockets located underneath the floor.

A fabric sea anchor connected to the life raft by an attachment line and a swivel.

Internal grab strap, external grab strap and grab handles.

One righting strap.

A canopy made of orange-red material and glued to the upper float.

The canopy shall comply with the following:

- a) It shall provide insulation against heat and cold
- b) Its interior shall be of a colour that does not cause discomfort to the occupants;
- c) Each entrance shall be clearly indicated and be provided with efficient adjustable closing arrangements which can be easily and quickly opened by persons clothed in immersion suits from inside and outside, and closed from inside the liferaft.
- d) It shall admit sufficient air for the occupants at all times, even with the entrance closed;
- e) It shall be provided with at least one viewing port;
- f) It shall be provided with means for collecting rain water;
- g) It shall be provided with means to mount a survival craft radar transponder at a height of at least 1 m above the sea; and
- h) It shall have sufficient headroom for sitting occupants under all parts of the canopy.

LIFE RAFT FITTINGS as per SOLAS requirements (as amended)

a) Life lines shall be securely bracketed around the inside and outside of the liferaft.

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c) A manually controlled lamp shall be fitted to the top of the liferaft canopy. The light shall be white and with a luminous intensity of not less than 4.3 cd in all directions of the upper hemisphere. Batteries shall be of a type that does not deteriorate due to dampness or humidity.

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## **EQUIPMENT**

The normal equipment of every liferaft shall consist of, as per SOLAS requirements (as amended). A complete equipment set is required for demonstration purpose.

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- 2) one knife of the non-folding type having a buoyant handle and lanyard attached and stowed in a pocket on the exterior of the canopy near the point at which the painter is attached to the liferaft.
- 3) one buoyant bailer, bellows
- 4) two sponges;
- 5) two sea anchors each with a shock resistant hawser and tripping line is fitted, one being spare and the other permanently attached to the liferaft in such a way that when the liferaft inflates or is water-borne it will cause the liferaft to lie oriented to the wind in the most stable manner. The strength of each sea anchor and its hawser and tripping line, if fitted shall be adequate in all sea conditions. The sea anchors shall have means to prevent twisting of the line and shall be of a type which is unlikely to turn inside out between its shroud lines.
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- 8) one first aid outfit in a waterproof case capable of being closed tightly after use;
- 9) one whistle or equivalent sound signal;
- 10) four rocket parachute flares complying to the requirements of International LSA code;
- 11) six hand flares complying to the requirements of International LSA code;
- 12) two buoyant smoke signals to the requirements of International LSA code;
- 13) one waterproof electric torch suitable for Morse signalling together with one spare set of batteries and one spare bulb in a waterproof container;
- 14) an efficient radar reflector, unless a survival craft radar transponder is stowed in the liferaft;
- 15) one daylight signalling mirror
- 16) one copy of the life saving signals as referred in relevant regulation of LSA code on a waterproof card or in a waterproof container;
- 17) one set of fishing tackle;
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- 20) one rust proof graduated drinking vessel;
- 21) instructions on how to survive [as per IMO resolution A.657 (16)];
- 22) instructions for immediate action; and

## **MARKING**

The liferaft shall be marked with as per SOLAS requirements (as amended)

## **Type Test approval**

Should be approved (type test) by any classification society (approved as RO by DG Shipping). Copy of approval to be provided during bidding and time of supply.

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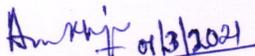
Drop test, Jump test, Weight test, Towing test, mooring out test, Painter system test, Life raft light test, Loading and seating test, boarding test, Stability test, Manoeuvrability test, Swamp test, Canopy closure hose test, float free buoyancy test detail inspection, wind tunnel test, damage test, righting test, inflation test, Pressure test, seam strength.

### **Guarantee**

The manufactures shall guarantee the design, material & workmanship of the Inflatable Life Raft as per the specification for a period of Two years from the date of supply. Life jacket with any manufacturing defect/faulty workmanship found during this period shall be replaced by the vendor without any extra cost to IMU-KC within 15 days from the date of intimation through email etc.

### **Terms & Conditions:**

1. Bidders should quote their rates based on the above specification and scope of the work.
2. The rates quoted should be inclusive of all but excluding taxes, which should be stated separately.
3. The rates quoted should be valid for two months from the last date of submission of quotation.
4. Said items may be checked and confirmed by consulting Shri Sunil Kumar Panda, Associate Professor, IMU-KC before submission of your quotation.
5. The Guarantee period against each item as mentioned above should be followed.
6. Items should be supplied within one month of placing order.
7. EMD of Rs. 10,000.00 should be submitted along with the quotation by the firm in the form of Demand Draft favouring "Indian Maritime University, Kolkata Campus" payable at Kolkata.
8. Submission of multiple bids by a single firm will lead to rejection of the bids and IMU-KC may black list such firms from future participation.
9. Last date of submission of quotation is 15.03.2021.
10. E-invoicing is mandatory as per Notification No. 61/2020 – Central Tax dated 30.07.2020.
11. The quotation is to be submitted in sealed envelope clearly subscribing "Quotation for Rigid Life Raft, Life Jacket and Inflatable Life Raft for the BST Course at IMU-KC".
12. The envelope should be addressed to the Dy. Registrar, Indian Maritime University, P – 19, Taratala Road, Kolkata — 700 088 and deposited in the Tender Box kept at the Dy. Registrar's office (1<sup>st</sup> floor, Room No. 130) or can be sent by post.
13. The envelopes are to be sealed properly with gum and not by stapler pin.
14. Payment will be made through Bank Transfer after successful delivery of the work.

  
O.I.C. - Purchase