

Corrigendum-I to GeM Tender No.: GEM/2025/B/6594396

Description: Supply of 5" Hand Operated Aldis Lantern for Yard-16101 (01 CTS), Yard 16401 to 16406 (06 NGOPVs) & Yard 16501 to 16514 (14 FPVs).

Sr. No.	Reference	Original Clause	Amended clause to be read as
1	SOTR Clause No. 10 (b) - Documentation of Section I for 01 Training Ship -Remarks	SOTR No.: 5101(C) rev 2 dated 11.07.2025 For approval by ABS and IRS equipment quality assurance during production and Test & Trial accordingly.	SOTR No.: 5101(C) rev 3 dated 12.09.2025 For approval by MDL / ICG equipment quality assurance during production and Test & Trial accordingly.
2	SOTR Clause No. 10 (b) Documentation of Section I for 06 NGOPV - Remarks	SOTR No.: 5101(C) rev 2 dated 11.07.2025 For approval by ABS and IRS equipment quality assurance during production and Test & Trial accordingly.	SOTR No.: 5101(C) rev 3 dated 12.09.2025 For approval by MDL / ICG equipment quality assurance during production and Test & Trial accordingly.



Additional Tender Terms & Conditions

I. **DESCRIPTION & SCOPE OF WORK:**

- (a) **MAIN EQUIPMENT/ITEM/SYSTEM:** Supply of 5" Hand Operated Aldis Lantern for Yard-16101 (01 CTS), Yard 16401 to 16406 (06 NGOPVs) & Yard 16501 to 16514 (14 FPVs).
- (b) **APPLICABLE SPECIFICATION:**
 - (i) SOTR No. 5101(C) Rev 1 dated 11.07.2025 for Yard-16101 of Training ship for ICGP Ship.
 - (ii) SOTR No. 5101(B) Rev 2 dated 11.07.2025 for Yard-16401 to 16406 of six Next Generation Offshore Petrol Vessels (NGOPV).
 - (iii) SOTR No. 5101(A) Rev 2 dated 11.07.2025 for Yard-16501 to 16514 of fourteen Fast Petrol Vessels (FPVs).
- (c) **DOCUMENTATION:** As per respective SOTRs.
- (d) **ON BOARD SPARES (OBS):** Not Applicable.
- (e) **SERVICES OF ENGINEERS:**
 - (i) Technical assistance is to be provided as per the scope mentioned in respective SOTRs.
 - (ii) Price for Services of Engineers to be quoted on Lump sum basis. The quoted price should be inclusive of To & Fro travelling expenses, lodging and boarding and local conveyance for each activity as per TSP.
 - (iii) Please note that it is the sole responsibility of the vendor to complete the trials till SATs including commissioning within quoted prices of services of Engineers.
 - (iv) While deputing Service Engineers for attending on board activity against MDL's call, checklist/prerequisites for that activity to be forwarded three working days in advance, to enable MDL to keep the system ready for that activity. Timely availability of Service Engineers shall be ensured.
- (f) **BASE & DEPOT (B&D) SPARES:** Not Applicable.
- (g) **EXTENSION OF WARRANTY:** Supplier shall mandatorily indicate the **monthly rate** for extended warranty period beyond standard warranty period (as mentioned in the SOTR), in the event of expiry of warranty period. The extended warranty charges to be quoted for Main equipment excluding documentation.

Note:

- i. Bidders shall quote for all line item in the tender, failing of which offer of the firm falls under rejection criteria.
- ii. MDL reserves the right to invoke the option of Extension of Warranty charges as and when required. It is not mandatory to MDL to avail this services.

II. **EARNEST MONEY DEPOSIT (EMD) / BID SECURITY:** Rs. 75,000/- (Rupees Seventy-five thousand only). EMD shall be submitted as per GeM Terms & condition

- (a) EMD exemption will be applicable as per GeM conditions and bidders shall upload valid EMD/EMD Exemption Certificate along with the bid. In case valid exemption certificate is not submitted along with original bid, the offer of the firm will be rejected.
- (b) EMD is also exempted for the bidder's permanent registered with MDL. To qualify for EMD exemption, bidder shall upload valid copy of the Registration Certificate



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issued by MDL, for the tendered items (Material group- N004011, Search Light) for which the offer is being submitted. Firms in the process of obtaining MDL registration will not be considered for EMD exemption.

- (c) EMD shall be forwarded to DGM/PE(C-CGP), 5th Floor, New Service Block, North Yard, Mazagon Dock Shipbuilders Limited, Shipbuilding Division, Dock Yard Road, Mumbai 400010, Maharashtra, in sealed envelope super scribing Tender Enquiry No. and Due date, so as to reach us within 7 MDL working days from the tender closing date. The scanned image of EMD shall be uploaded at Part-I tender stage.

Note:

- (i) EMD of unsuccessful bidders will be returned after finalization of the tender and shall be interest free.
- (ii) EMD of successful bidders may be converted into performance security or refunded on receipt of performance security. The returned / refunded EMD would be interest free.
- (iii) Bids / Offers without EMD along with Part-I bid will not be considered.

MDL BANK DETAILS:

Name of Bank A/C Holder: Mazagon Dock Shipbuilders Limited
Bank and Branch: State Bank of India, Commercial Branch, Fort, Mumbai-400023
Type of Account: Current Bank
Account No: 11079519138
IFSC Code: SBIN0006070
Swift Code: SBININBB101
PAN No.: AAACM8029J
MDL GST: 27AAACM8029J1ZA

III. **VALIDITY PERIOD OF OFFER:** 180 days from the tender closing date.

IV. **PRE-QUALIFICATION CRITERIA:**

- a) **Technical Qualification/Work Experience Criteria for Goods:** Vendor shall have experience in Design, Manufacturing & Supply of the Aldis Lantern to any sea going vessel.

Supporting Documents:

- (i) Vendor shall submit their experience details including work completion certificates/ relevant Purchase orders/ Delivery Challan/ Invoice for having this type of equipment.
- (ii) Vendor shall submit a declaration in their letterhead that there are no adverse reports from any of their customers for this type of equipment supplied by them. In case any such adverse report/ remark exist, the details of the same may be furnished along with the reference purchase order and customer details.

- (i) **Commercial Pre-qualification:** Bidders are requested to submit documents required for Vendor registration (i.e. GST certificate, PAN card and cancelled cheque).

V. **SUBMISSION OF OFFER IN TWO BID SYSTEM:** Offer must be submitted in two parts as follows:

- a) **Part I (Techno Commercial Bid):** The bidder shall ensure following are essentially included in the Part-I bid as applicable:



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- (i) EMD/Valid EMD exemption certificate.
- (ii) Technical & Commercial offer.
- (iii) Pre-qualification documents.
- (iv) Declaration of Local Content, preference for MSE Order 2012 and/or PPP Order 2017 for purchase preference.
- (v) Blank rate sheet indicating quoted/not quoted against each line item, tax percentage, type of taxes.
- (vi) Bank details for payment by RTGS/NEFT in the format enclosed.
- (vii) Additional documents as applicable to this tender.
- (viii) Submission of offer to MDL: Supplier / Bidder / Vendor to ensure that four copies of technical offer shall be submitted by equipment suppliers in hard & soft form (as per SOTR). "Technical offer" shall be sent to "HOS (SB Design), Kind Attn: Mr. Rohith S. Pillai, Manager (Design- Electrical & Weapon), Mazagon Dock Shipbuilders Limited, 2nd Floor, West Block, Dockyard Road, Mumbai - 400010" Tel. no. 022 23763029, 022 2376 3383.

Note: In any case, prices are not to be mentioned in Part-I bid.

b) **Part-II (Price Bid):** Prices for each of the listed items has to be uploaded on GEM.

VI. **BID REJECTION CRITERIA**

- a) Categorical rejection criteria: The following conditions / deviations are non-negotiable and therefore any bid falling under these conditions / deviations shall be summarily rejected. Bidders to note that they shall not be provided any opportunity to rectify these conditions / deviations post Part-I bid opening:
 - (i) Bids received without EMD (other than those who are exempted from payment of EMD).
 - (ii) Bids received after tender closing date and time.
 - (iii) Bids received other than through GeM portal
 - (iv) Bidders who are debarred under PPP MII order 2017, GeM, CPPP including Tender holiday issued by MDL.
- b) Liable rejection criteria:
 - (i) Incomplete / misleading / ambiguous bids in the considered opinion of TNC /CNC.
 - (ii) Bid with technical requirements and or terms not acceptable to MDL / Customers / External agency nominated as applicable.
 - (iii) Any deviation sought, which is not accepted to MDL.
 - (iv) Bid received from non –local supplier i.e. Bidder who submit their quote with less than 20% local content.
 - (v) Bidders not furnishing Warranty extension charges.

VII. **DELIVERY PERIOD/COMPLETION SCHEDULE:**

Sr. No.	Item	Qty.	Unit	Yard	Delivery Period
1.	5'11 HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AS PER PATT No. 0558/462-4287 OR EQUIVALENT APPROVED/ACCEPTED BY NAVY AND SPARE BATTERY.	3	NOS	16101	PO + 05 Months
2.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER	3	NOS	16101	PO + 05 Months



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	UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC				
3.	STOWAGE BOX (Patt No. 0558/462-4204 or equivalent approved/accepted by Navy) suitable for stowing 5'' Hand Operated Aldis Lamp.	3	NOS	16101	PO + 05 Months
4.	MONTHLY WARRANTY EXTENSION CHARGES	12	MON	16101	PO + 46 Months
5.	DOCUMENTATION FOR ALDIS LANTERN	1	SET	16101	PO + 05 Months
6.	SERVICE OF ENGINEERS -STW	1	AU	16101	PO + 09 Months
7.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AS PER PATT No. 0558/462-4287 OR EQUIVALENT APPROVED/ACCEPTED BY NAVY AND SPARE BATTERY	3	NOS	16401	PO + 13 Months
8.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE : 24V DC	3	NOS	16401	PO + 13 Months
9.	STOWAGE BOX (Patt No. 0558/462-4204 or equivalent approved/accepted by Navy) suitable for stowing 5'' Hand Operated Aldis Lamp.	3	NOS	16401	PO + 13 Months
10.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Jul-2028	12	MON	16401	PO + 46 Months
11.	NGOPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16401	PO + 13 Months
12.	SERVICE OF ENGINEERS -STW	1	AU	16401	PO + 17 Months
13.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AS PER PATT No. 0558/462-4287 OR EQUIVALENT APPROVED/ACCEPTED BY NAVY AND SPARE BATTERY	3	NOS	16402	PO + 18 Months
14.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE : 24V DC	3	NOS	16402	PO + 18 Months
15.	STOWAGE BOX (Patt No. 0558/462-4204 or equivalent approved/accepted by Navy) suitable for stowing 5'' Hand Operated Aldis Lamp.	3	NOS	16402	PO + 18 Months
16.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Dec-2028	12	MON	16402	PO + 51 Months



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17.	NGOPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16402	PO + 18 Months
18.	SERVICE OF ENGINEERS -STW	1	AU	16402	PO + 22 Months
19.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AS PER PATT No. 0558/462-4287 OR EQUIVALENT APPROVED/ACCEPTED BY NAVY AND SPARE BATTERY	3	NOS	16403	PO + 23 Months
20.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE : 24V DC	3	NOS	16403	PO + 23 Months
21.	STOWAGE BOX (Patt No. 0558/462-4204 or equivalent approved/accepted by Navy) suitable for stowing 5'' Hand Operated Aldis Lamp.	3	NOS	16403	PO + 23 Months
22.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND May-2029	12	MON	16403	PO + 56 Months
23.	NGOPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16403	PO + 23 Months
24.	SERVICE OF ENGINEERS -STW	1	AU	16403	PO + 27 Months
25.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AS PER PATT No. 0558/462-4287 OR EQUIVALENT APPROVED/ACCEPTED BY NAVY AND SPARE BATTERY	3	NOS	16404	PO + 28 Months
26.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE : 24V DC	3	NOS	16404	PO + 28 Months
27.	STOWAGE BOX (Patt No. 0558/462-4204 or equivalent approved/accepted by Navy) suitable for stowing 5'' Hand Operated Aldis Lamp.	3	NOS	16404	PO + 28 Months
28.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Oct-2029	12	MON	16404	PO + 61 Months
29.	NGOPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16404	PO + 28 Months
30.	SERVICE OF ENGINEERS -STW	1	AU	16404	PO + 32 Months
31.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AS PER PATT No. 0558/462-4287 OR EQUIVALENT APPROVED/ACCEPTED BY NAVY AND SPARE BATTERY	3	NOS	16405	PO + 33 Months



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32.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE : 24V DC	3	NOS	16405	PO + 33 Months
33.	STOWAGE BOX (Patt No. 0558/462-4204 or equivalent approved/accepted by Navy) suitable for stowing 5'' Hand Operated Aldis Lamp.	3	NOS	16405	PO + 33 Months
34.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Mar-2030	12	MON	16405	PO + 66 Months
35.	NGOPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16405	PO + 33 Months
36.	SERVICE OF ENGINEERS -STW	1	AU	16405	PO + 37 Months
37.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AS PER PATT No. 0558/462-4287 OR EQUIVALENT APPROVED/ACCEPTED BY NAVY AND SPARE BATTERY	3	NOS	16406	PO + 38 Months
38.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE : 24V DC	3	NOS	16406	PO + 38 Months
39.	STOWAGE BOX (Patt No. 0558/462-4204 or equivalent approved/accepted by Navy) suitable for stowing 5'' Hand Operated Aldis Lamp.	3	NOS	16406	PO + 38 Months
40.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Aug-2030	12	MON	16406	PO + 71 Months
41.	NGOPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16406	PO + 38 Months
42.	SERVICE OF ENGINEERS -STW	1	AU	16406	PO + 42 Months
43.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16501	PO + 3 Months
44.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16501	PO + 3 Months
45.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16501	PO + 3 Months
46.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND MAR-2027	12	MON	16501	PO + 33 Months
47.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16501	PO + 3 Months



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48.	SERVICE OF ENGINEERS -STW	1	AU	16501	PO + 4 Months
49.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16502	PO + 6 Months
50.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16502	PO + 6 Months
51.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16502	PO + 6 Months
52.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Jun-2027	12	MON	16502	PO + 36 Months
53.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16502	PO + 6 Months
54.	SERVICE OF ENGINEERS -STW	1	AU	16502	PO + 7 Months
55.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16503	PO + 9 Months
56.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16503	PO + 9 Months
57.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16503	PO + 9 Months
58.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Sept-2027	12	MON	16503	PO + 39 Months
59.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16503	PO + 9 Months
60.	SERVICE OF ENGINEERS -STW	1	AU	16503	PO + 10 Months
61.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16504	PO + 12 Months
62.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16504	PO + 12 Months
63.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16504	PO + 12 Months
64.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Dec-2027	12	MON	16504	PO + 42 Months
65.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16504	PO + 12 Months
66.	SERVICE OF ENGINEERS -STW	1	AU	16504	PO + 13 Months



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67.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16505	PO + 15 Months
68.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16505	PO + 15 Months
69.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16505	PO + 15 Months
70.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Mar-2028	12	MON	16505	PO + 45 Months
71.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16505	PO + 15 Months
72.	SERVICE OF ENGINEERS -STW	1	AU	16505	PO + 16 Months
73.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16506	PO + 18 Months
74.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16506	PO + 18 Months
75.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16506	PO + 18 Months
76.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Jun-2028	12	MON	16506	PO + 48 Months
77.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16506	PO + 18 Months
78.	SERVICE OF ENGINEERS -STW	1	AU	16506	PO + 19 Months
79.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16507	PO + 21 Months
80.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16507	PO + 21 Months
81.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16507	PO + 21 Months
82.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Sept-2028	12	MON	16507	PO + 51 Months
83.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16507	PO + 21 Months
84.	SERVICE OF ENGINEERS -STW	1	AU	16507	PO + 22 Months
85.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED	1	NOS	16508	PO + 24 Months



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	FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.				
86.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16508	PO + 24 Months
87.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16508	PO + 24 Months
88.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Dec-2028	12	MON	16508	PO + 54 Months
89.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16508	PO + 24 Months
90.	SERVICE OF ENGINEERS -STW	1	AU	16508	PO + 25 Months
91.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16509	PO + 27 Months
92.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16509	PO + 27 Months
93.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16509	PO + 27 Months
94.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Mar-2029	12	MON	16509	PO + 57 Months
95.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16509	PO + 27 Months
96.	SERVICE OF ENGINEERS -STW	1	AU	16509	PO + 28 Months
97.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16510	PO + 30 Months
98.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16510	PO + 30 Months
99.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16510	PO + 30 Months
100.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Jun-2029	12	MON	16510	PO + 60 Months
101.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16510	PO + 30 Months
102.	SERVICE OF ENGINEERS -STW	1	AU	16510	PO + 31 Months
103.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16511	PO + 33 Months



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104.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16511	PO + 33 Months
105.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16511	PO + 33 Months
106.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Sept-2029	12	MON	16511	PO + 63 Months
107.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16511	PO + 33 Months
108.	SERVICE OF ENGINEERS -STW	1	AU	16511	PO + 34 Months
109.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16512	PO + 36 Months
110.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16512	PO + 36 Months
111.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16512	PO + 36 Months
112.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Dec-2029	12	MON	16512	PO + 66 Months
113.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16512	PO + 36 Months
114.	SERVICE OF ENGINEERS -STW	1	AU	16512	PO + 37 Months
115.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16513	PO + 39 Months
116.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC	1	NOS	16513	PO + 39 Months
117.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16513	PO + 39 Months
118.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Mar-2030	12	MON	16513	PO + 69 Months
119.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16513	PO + 39 Months
120.	SERVICE OF ENGINEERS -STW	1	AU	16513	PO + 40 Months
121.	5'' HAND OPERATED ALDIS LAMP COMPLETE WITH 2 CORE, 10 METER LONG INSULATED FLEXIBLE CABLE, 60W BULB/LAMP 24V DC AND SPARE BATTERY.	1	NOS	16514	PO + 42 Months
122.	BULKHEAD MOUNTED TYPE CONTROL UNIT WITH BATTERY CHARGER CUM RECTIFIER	1	NOS	16514	PO + 42 Months



Additional Tender Terms & Conditions

	UNIT WITH INTEGRAL 24V MAINTENANCE FREE BATTERY AND SOCKET SUITABLE FOR PLUG PROVIDED WITH ALDIS LANTERN INPUT VOLTAGE: 230V, 1Ph, 50Hz AC OUTPUT VOLTAGE: 24V DC				
123.	STOWAGE BOX suitable for stowing 5'' Hand Operated Aldis Lamp.	1	NOS	16514	PO + 42 Months
124.	MONTHLY WARRANTY EXTENSION CHARGES FOR 12 MONTHS BEYOND Jun-2030	12	MON	16514	PO + 72 Months
125.	FPV_DOCUMENTATION FOR ALDIS LANTERN	1	SET	16514	PO + 42 Months
126.	SERVICE OF ENGINEERS -STW	1	AU	16514	PO + 43 Months

VIII. CONSIGNEE/DELIVERY LOCATION:

- a) Material scheduled for delivery are to be delivered at MDL (Anik Chembur - Electrical & Electronic store, Kurla, Mahul Road, Mumbai - 400074 store located in Mumbai)

Note: - In order to avoid inconvenience during the delivery of material, it is advisable for supplier to depute their representative in their own interest to coordinate the activities between the transporter, and MDL stores.

- b) Following document should be submitted along with material:
- (i) PO copy & subsequent amendments issued to it, if any.
 - (ii) Test Certificate
 - (iii) Delivery Challans clearly indicating MDL Purchase Order No, Inspection Note Details and Packing List co-relating the items in the inspection report.
 - (iv) Copy of Warranty Certificate etc.
 - (v) Technical documentation, if applicable.
 - (vi) E-Way bill (if applicable) details are to be submitted during the delivery of the items.
- c) Unloading of the equipment/ items will be arranged by MDL. In case of delivery of Large/ Bulky/ Heavy consignments, supplier is required to give 2 to 4 day's advance intimation to MDL clearly indicating approx. dimensions and weight of consignments for arranging fork lift/crane for unloading.

IX. WARRANTY/GUARANTEE:

- a) The equipment along with associated auxiliaries/components shall be warranted by the equipment supplier for the stipulated performance for a period of twenty (20) months from the date of delivery of equipment to MDL or twelve (12) months after planned delivery date of ship to ICG whichever is later for 01 CTS & 06 NGOPVs.
- b) The equipment along with associated auxiliaries/components shall be warranted by the equipment supplier for the stipulated performance for a period of twelve (12) months from the date of delivery of equipment to MDL or twelve (12) months after planned delivery date of ship to ICG whichever is later for 14 FPVs.
- c) The Supplier cannot absolve their responsibility for warranty of system even though it is inspected & approved by Coast Guard and MDL.
- d) During the period of warranty / guarantee if any defect noticed in the equipment / item supplied, the supplier/ contractor will have to rectify such defects immediately at no extra cost to MDL.
- e) If the defects are not remedied within a reasonable/stipulated time, MDL may proceed to rectify the defects at the supplier's risk & cost, but without prejudice to MDL's rights under the contract.



Additional Tender Terms & Conditions

- X. **PERFORMANCE SECURITY (EPBG):**
- (a) Performance Security for an amount equal to 5% of order value payable in Indian Rupees shall be submitted.
 - (b) Performance Security is to be furnished as per GeM after notification of the award of contract and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the supplier, including warranty obligations.
- XI. **PRESERVATION & PACKING:** As per respective SOTRs.
- XII. **PRICING:**
- (a) Prices of all items/services shall be quoted for delivery of the items/services to MDL Anik Chembur store / Dockyard road (Mumbai) / Nhava Yard destination including Charges towards inland transportation, insurance, and other local costs incidental to the delivery of the Goods/Services.
 - (b) The prices quoted shall remain firm and fixed during the currency of the order / contract unless agreed otherwise by MDL.
 - (c) **Price Variation Clause: (For Goods & Services):** Not Applicable
- XIII. **TAXES & DUTIES:** To be included in the submitted quote, as per GEM & Govt. guidelines.
- XIV. **INSPECTION:** As per respective SOTRs.
- (a) Inspection Agency: MDL appointed third party agency will conduct inspection as per MDL approved BD, QAP and FAT protocol. The Third Party Inspection (TPI) charges shall be borne by MDL.
 - (b) Receipt Inspection: MDL & CGRPT(MBI).
 - (c) The decision of the Inspecting Authority or their representatives, as the case may be, on any question of the intent, meaning and the scope of Specifications / Standards shall be final, conclusive and binding on the Bidder/ Supplier / Contractor.
- XV. **Payment Terms:**
- (a) **Main Equipment / Item / System:**
 - (i) On receipt of Invoice, 95 % of Payment shall be made within 15 days from generation of Consignee Receipt & Acceptance Certificate (CRAC) of material and as reduced by any deductibles and / or the amount leviable towards liquidated damages, if any plus 100% taxes, duties etc. as applicable.
 - (ii) Payment of the balance of the value of the supplies may be payable and as reduced by any deductibles and / or the amount leviable towards liquidated damages, if any, on submission & confirmation of PS of equivalent amount valid up to warranty period plus 60 days claim period.
 - (b) **Services:** 100% payment for all kinds of services like STW, HAT, SAT, installation, commissioning assistance, training wherever included in the same order will be admissible for payment within 15 days from Generation of CRAC & submission of original Work Completion Certificate & SAP Service Sheet signed by CM or above of production/planning dept. and ink signed invoice.
- XVI. **Exchange Rate Variation (ERV):**
- (a) ERV clause is applicable where the delivery period is more than one year (One-year period shall be from date of order) and there is FE content.




Additional Tender Terms & Conditions

- (b) F.E. Elements: **Indigenous bidders quoting imported component should clearly state** Base Exchange rate for each such foreign currency used for converting the foreign exchange content into Indian Rupees **and FE content. The allowed foreign currency for quoting FE content are USD & EURO.**
- (c) To work out the variation due to changes (if any) in the exchange rate(s), the base date for this purpose will be the due date of opening of tenders. The variation may be allowed between the above base date and exchange rate applicable on the date of Bill of lading/contractual delivery if bill of lading is delayed whichever is earlier. ERV shall be reimbursed subject to submission of proof and limited to FE content in their offer/actual whichever is less.
- (d) The applicable exchange rates as above will be according to the TT selling rates of exchange as quoted by authorised exchange bankers approved by RBI on the dates in question
- (e) Please note that no upward revision in F.E. content, once specified in the order based on your quote will be entertained.
- (f) FE variation up to +/- 2.5% to be absorbed by either side. FE Variation only on the percentage beyond +/- 2.5% (i.e. upward and downward) at the time of actual import shall be reimbursed/recovered by MDL. for e.g. if there is an FE variation of +/- 8%, then only +/-5.5% shall be reimbursed/recovered by MDL.
- (g) No ERV shall be payable on the portion of contract price paid to the contractor as an interest free advance.
- (h) Wherever stage payment, if any, is allowed with reference to procurement of bulk material, ERV will be limited to the date of such procurement or upto a date three months before scheduled delivery whichever is earlier.
- (i) Any increase or decrease in the customs duty by reason of the variation in the rate of exchange in terms of the contract will be to the buyer's account. In case the delivery period is revised/ extended, ERV will not be admissible, if this is due to the supplier's default; however, ERV benefits arising out of downward trends should be passed on to MDL.
- (j) Following documents are required for claiming ERV.
- A bill of ERV claim enclosing worksheet.
 - Banker's Certificate / debit advice detailing FE paid & Exchange rate, date of the transaction.
 - Copies of import orders placed on the suppliers.
 - Invoice of supplier for the relevant import orders

XVII. **CONTACT DETAILS FOR QUERIES:** In case of any clarifications regarding tender condition/TSP/specification, bidders are requested to contact the following person, before the closing date of the tender.

Design Dept.	Mr. Vinit S Wagh, DGM/PE(D-CGP)	+91 22 2376 3017	vswagh@mazdock.com
	Mr. Rohith S Pillai, M (D-L & Weapon)	+91 22 2376 3383	rspillai@mazdock.com
Commercial Dept.	Mr. Dattatray S Chavan, DGM/PE (C-CGP)	+91 22 2376 2782	dschavan@mazdock.com
	Mr. Deepak Kumar, Asst. Manager (C-P15B)	+91 22 2376 2762	deepakkumar100565@mazdock.com

XVIII. We look forward to receive your most competitive and reasonable offer against this tender.

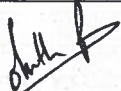


	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN- ELECTRICAL & WEAPON	SOTR No.	5101(C)
		YARD 16101	REV. NO.	3
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STATEMENT OF TECHNICAL REQUIREMENT
FOR
ALDIS LANTERN



PROJECT	:	01 TRAINING SHIP
YARD NOS MDL	:	16101
CLIENT	:	INDIAN COAST GUARD
DOCUMENT NO	:	5101(C)
ICG HQ REFERENCE / APPROVAL	:	
CLASSIFICATION NOTATION	:	+ A1 (E) (Government Service) + AMS NIBS +ACC,FFV1-NS CS-Ready, HELIDK(SRF) by ABS or equivalent of LRS/DNV/GL/BV/IRS/NK


3	Clause no. 10 b) in Section I updated	12.09.2025	
2	Annexures Updated	11.07.2025	
1	a. CGHQ approval with comments received via letter SA/0157/01TS/Elect Eqpt dated 04 Dec 2024 incorporated.	26.06.2025	
0	First Issue	23.11.2024	
REV	DESCRIPTION	DATE	AUTHORISED BY

		
ROHITH S PILLAI	SUDHIR SONAWANE	P. K. MODAK
M (D-L)	CM (D-L)	DGM / HOS (D-L&Wn)
Prepared By	Checked By	Approved By


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ACRONYMS


FATs	-	Factory Acceptance Trials
HATs	-	Harbour Acceptance Trials
MDL	-	M/s Mazagon Dock Shipbuilders Limited, Mumbai
OEM	-	Original Equipment Manufacturer
SATs	-	Sea Acceptance Trials
STW	-	Setting to Work
CGRPT	-	Coast Guard Refit and Production team
ICG	-	Indian Coast Guard
TS	-	Training Ship

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SECTION I	
INTRODUCTION	
Sl. No.	Description
1.	This General Specifications relate to Design, approval of the equipment by the classification society, Manufacture and Supply of one ship set of Equipment for Project 01 Training Ship (TS) of Indian Coast Guard
2.	Project 01 TS consist of Diesel Engine propulsion system comprises of two propulsion plants, each plant consisting of one Diesel Engine driving a Controllable Pitch Propeller and External Fi-Fi pump through single input and twin output Reduction Gearbox and respective shaft line. Each propulsion plant broadly comprises of:
(a)	One Diesel Engine of minimum 5000 KW power output.
(b)	One single input, twin-output Reduction Gearbox with built in thrust block.
(c)	One set of shafting along with associated components
(d)	One Controllable Pitch Propeller
(e)	Propulsion plant support systems (for Diesel engines, Gearboxes, Shafting & CPP)
(f)	Associated Controls & Monitoring System.
3.	Class notation for Training Ship is: + A1 (E) (Government Service) + AMS NIBS +ACC,FFV1-NS CS-Ready, HELIDK(SRF) by ABS or equivalent of LRS/DNV/GL/BV/IRS/NK
4.	The Supplier should submit the quotation based on this General Conditions & Requirements (GCR) and the separate Technical Specifications for Procurement (TSP) of each equipment. Should there be any discrepancies between the GCR and the Technical specification of each equipment, the technical specification shall prevail.
5.	The reference list of the equipment fitted in Indian or International Navy / Coast Guard or similar platform such as ocean going vessel, Offshore Platforms and Oil-Rigs to be submitted along with the offer.
6.	The Year of production of equipment and system to be of latest manufacture (during or after Year 2023). This is to confirm to the current production standards and should have 100% of the defined life at the time of delivery. (other than permitted running hours during assembly / acceptance trials)

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SECTION I																																		
GENERAL CONDITIONS & REQUIREMENTS																																		
Sl. No	Description																																	
GENERAL CONDITIONS & REQUIREMENTS																																		
1.	Subject The general conditions and requirements specified in this chapter are intended to meet the functional requirements of a Training platform with integral helicopter capable for operation in oceans environment and performance of all the ICG charter of duties.																																	
2.	Ship's Basic Particulars Project TS-01 class of ships would be Training ships for cadets. Ship's basic particulars, are indicated below:- <table><tr><th colspan="2">PARTICULARS</th><th>REFERENCE DATA</th></tr><tr><td rowspan="3">Ship's dimensions</td><td>Length overall (LOA)</td><td>107 m</td></tr><tr><td>Beam (water line)</td><td>15.2 m</td></tr><tr><td>Draft (deep displacement)</td><td>4.02 m</td></tr><tr><td>Ship's displacement</td><td>Deep displacement</td><td>Around 3300Tonnes</td></tr><tr><td>Endurance</td><td>At cruising speed of 12 to 15 knots</td><td>7500 NM</td></tr><tr><td colspan="2">Expected ship's life</td><td>25 Years</td></tr><tr><td rowspan="3">Operating profile</td><td>Continuous slow speeds</td><td>Below 8 knots</td></tr><tr><td>Cruising</td><td>12 - 15 knots</td></tr><tr><td>Maximum</td><td>20 knots</td></tr><tr><td colspan="2">Unrestricted continuous rating of Diesel engine, at 45 degree centigrade ambient temperature</td><td>Min 5000 KW</td></tr><tr><td colspan="2">Material of Hull</td><td>ABS Gr B or equivalent</td></tr></table>		PARTICULARS		REFERENCE DATA	Ship's dimensions	Length overall (LOA)	107 m	Beam (water line)	15.2 m	Draft (deep displacement)	4.02 m	Ship's displacement	Deep displacement	Around 3300Tonnes	Endurance	At cruising speed of 12 to 15 knots	7500 NM	Expected ship's life		25 Years	Operating profile	Continuous slow speeds	Below 8 knots	Cruising	12 - 15 knots	Maximum	20 knots	Unrestricted continuous rating of Diesel engine, at 45 degree centigrade ambient temperature		Min 5000 KW	Material of Hull		ABS Gr B or equivalent
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3.	Reference Environmental Conditions																																	
3.1	The equipment shall be suitable for marine applications and achieve specified performance smoothly under tropical marine conditions.																																	
3.2	The equipment is to be designed for continuous operation & survival under the environmental conditions specified for ambient conditions as specified table below:- <table><tr><th>Sr. No.</th><th>Design Parameter</th><th>Value</th></tr><tr><td>(a)</td><td>Air Temperature</td><td>Minimum of 5 deg C and Maximum of 45 deg C</td></tr><tr><td>(b)</td><td>Sea water temperature</td><td>32 deg. C</td></tr><tr><td>(c)</td><td>Relative humidity</td><td>90% at 35 deg C</td></tr><tr><td>(d)</td><td>Atmospheric pressure</td><td>750 mm of Hg column (1000 mbar)</td></tr></table>		Sr. No.	Design Parameter	Value	(a)	Air Temperature	Minimum of 5 deg C and Maximum of 45 deg C	(b)	Sea water temperature	32 deg. C	(c)	Relative humidity	90% at 35 deg C	(d)	Atmospheric pressure	750 mm of Hg column (1000 mbar)																	
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3.3	Seaway Conditions: Seaway conditions are defined at a sea water temperature of 1 to + 32 Deg. C, Ambient air temperature of 5 to 45 Deg. C and humidity up to 90% at 35 Deg. C. Salinity of water up to 35000 ppm. The equipment shall be capable of efficient and unrestricted operation without any deviation from its normal operating parameters under the seaway conditions, as below:- <table><tr><td colspan="2">Operational (up to sea state 7)</td></tr><tr><td>Roll</td><td>Maximum ± 22.5 degree</td></tr></table>		Operational (up to sea state 7)		Roll	Maximum ± 22.5 degree																												
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SECTION I				
GENERAL CONDITIONS & REQUIREMENTS				
Sl. No	Description			
		Pitch	Maximum ± 7.5 degree	
		Survival	(up to sea state 7)	
		List	Maximum ± 15 degree from vertical (permanent)	
		Trim	Maximum ± 05 degree	
3.4	Complement:			
	(a)	Officers	12	
	(b)	Subordinate Officers(SOs)/ Enrolled Personnel (EPs)	95	
	(c)	Training Staff		
		(i) Officers.	08	
		(ii) SOs/EPs	38	
	(d)	Under Trainee officers	70	
		Total	223	
3.5	Propulsion Plant Operating Profile: The ship is to be available for exploitation for minimum of 190 days in a year. Each shaft is expected to clock a minimum of 3500 running hours per year. Operational cycle of the ship will be around 36 months			
3.6	Service life of ship: The expected service life of ship is 25 years @ 4500 hrs. annual exploitation			
4.	Ship's Support Systems Supplies Following ship's support supplies shall be available for the propulsion system. For electrical supplies, in case of different requirements (voltage/frequency, etc.), the equipment supplier shall provide suitable provision (transformer/converter/UPS, etc.).			
	Sr. No	SYSTEM	SUPPLIES	REMARKS
	(a)	Electrical	415 V AC @ 50 Hz, 3 phase 230 V AC @ 50 Hz, 1 phase 24V DC	Any other power requirement shall be met by the equipment supplier.
5.	Noise & Vibration			
5.1	Design of the equipment along with its associated auxiliaries/accessories/controls and mounting system, should ensure minimal vibration and noise.			
5.2	All components of the equipment and accessories are to be designed for ensuring resistance to misalignment due to forces of vibration.			
5.3	Suitable flexible hoses, bellows and noise reduction clamps are to be used for associated piping connections with the main equipment/auxiliaries.			
5.4	Specific requirements on Noise & Vibration are to be as per respective equipment Technical Specification for Procurement.			
5.5	Noise and Vibration levels of the equipment shall meet the classification rules and guidelines.			
6.	Noise Levels in Machinery Spaces Permissible noise levels in machinery spaces are to be in accordance ISO-6954:2000. The noise criteria for the compartments are as follows:			

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		Sr. No.	Compartments	dB (A)	
		1.	Machinery spaces	110	
		2.	MCR	75	
		3.	Work places	85	
		4.	Non Specific workshops	90	
		5.	Bridge and Chartroom	65	
		6.	Radio Rooms	65	
		7.	Cabins	60	
		8.	Dining Hall/Offices	65	
		9.	Service spaces (galley, pantry)	75	
		10.	Normally unoccupied spaces	90	
7.	Vibration Isolators (Anti Vibration Mounts)				
7.1	For resiliently mounted equipment, the mounting system shall be capable of attenuating the vibrations of the offered equipment within the limit specified in Technical requirement.				
7.2	The installation and connections of the equipment shall account for the extreme displacements that may occur under loading conditions. Wherever necessary, suitable stops /snubbers shall be provided to prevent excessive motion.				
7.3	Vibration measurements are to be carried out as per ISO 4868(XII) / latest amendment.				
8.	IP Rating for Electrical Equipment				
	IP rating for associated electrical equipment enclosure is IP 44. Specific IP rating to be as per Technical requirement in Section II.				
9.	Availability/ Reliability/ Redundancy/ Self Sufficiency				
9.1	Maximum time required for bringing the equipment to full operational condition while undertaking daily, weekly and monthly maintenance routines, are to be indicated by the equipment supplier				
9.2	Equipment should be robust in design for ensuring high reliability, ease of operation and minimum maintenance.				
10.	Documentation				
	Various documentation will be submitted by the equipment supplier as per the scope of supply and responsibility. Quality documentation is to be submitted in comprehensive and time bound manner for meeting ship's detailed design and production targets as well as equipment production and delivery schedule. Documentation to be submitted by the equipment supplier are broadly indicated below:				
	Sr. No.	Documentation	Remarks		
	(a)	Binding design documentation	For progressing with detailed design, integration & installation.		
	(b)	(i) Quality Assurance Plan (QAP) (ii) Equipment manufacturing/ production documentation (iii) Test and Trial procedure/ Reports	For approval by MDL/ICG equipment quality assurance during production and Test & Trial accordingly.		

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	(c)	Equipment STW/ HATs/ SATs documentation	For preparing installation inspection/ Test and trials documentation	
	(d)	Technical Manuals for equipment operation, maintenance, logistics, etc.	For ship's crew, training and repair organizations.	
10.1	All documentation (including documents, drawings, data, reports, manuals, etc.) should be in English language. Dimensional details in the drawings should be as per scale. Technical data and parameters should be in metric units (SI Units).			
10.2	Following file/formats would be acceptable:			
10.2.1	Documents, data & reports in MS-WORD/EXCEL, as applicable			
10.2.2	Data base files in ACCESS			
10.2.3	Orthographic drawings (2D) in DXF/DWG format			
10.2.4	3D model of external topography of the equipment only in AVEVA MARINE/.STP format of max size of 5 MB			
10.2.5	Above drawings/data are to be submitted in soft copies in latest software version.			
10.3	Hard documents to be provided suitably grouped (section wise H, E, L, Navigation & Communication etc.) indexed and in moisture proof bound folders			
10.4	<u>Binding Design Documentation:</u> Comprehensive list of binding design documentation is to be submitted by equipment supplier, , along with time schedule.- Binding Data: Three copies (one set for MDL, Two sets for ICG) and three sets on CD ROM of the following binding drawings/documents are to be supplied by the OEM within one month of placement of order:- (In addition to hard copies, all equipment drawings are also to be submitted in .stp format)			
10.4.1	(a) Block diagram of the system			
10.4.2	(b) Installation documents if any covering detailed procedure for installation with sequence of activities.			
10.4.3	(c) Installation drawings indicating overall dimensions, C.G., weight, maintenance envelope, IP, rating, shock mount details, mounting arrangement, bolting plan, lifting points, material specification etc. of each unit			
10.4.4	(d) Recommended arrangement of devices in nominated compartments.			
10.4.5	(e) Inter unit-cabling diagram with cables specifications.			
10.4.6	(f) Cable connection Schedule			
10.4.7	(g) Power supply scheme for the system			
10.4.8	(h) Heat dissipation of individual units in compartment & in close loop ventilation system, as required for the system			
10.4.9	(i) Parts identification list, indicating part no, qty., maker's name, Specification etc.			
10.4.10	(j) Requirements for support systems such as fire fighting, communication, lighting etc.			
10.4.11	(k) Cable length limitation etc., if any.			

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10.4.12	(l) Detailed foundation drawing including bolting plan.			
10.4.13	(m) Power consumption of each equipment			
10.4.14	(n) Any other design data/details, calculations, analysis, specifications, drawings, etc., as applicable			
10.4.15	(o) Shipping/Unshipping requirements			
10.4.16	(p) Training Plan			
10.4.17		Description	Content	Number of copies
		Technical Manuals	Technical Description and Operating Instructions Manual	7
			On board Maintenance Manual	7
			Field and Depot Maintenance Manual	7
			Installation and Testing Manual	7
			Parts and Tools Catalogue including CPL & PIL in ILMS/SLMS Format	7
		Technical Documentation	Installation Drawings	7
			As fitted Drawings	7
			Applicable Standards Utilised	7
			Test Procedure and Documentation	7
			Certified Test Reports (FATs, Material Test Certificates, Calibration Certificates, Weight Certificate etc.) & Records (including Type Test Certificate).	7
			Class certification	
	(a) Preservation and Represervation and upkeep procedure			
11.	<u>Documentation Associated with Quality Assurance Plan, Equipment Manufacturing & FATs/Test & Trials:</u> Documentation associated with quality assurance plan (QAP), equipment manufacturing and FATs(Factory Acceptance Tests), will be submitted by the equipment supplier in time bound manner, well in advance for approval by MDL / ICG.			
11.1.1	While preliminary quality assurance & test plan shall be submitted by the equipment supplier along with the technical offer, detailed QAP is to be submitted <u>within 15 days</u> after placement of equipment order, for approval of MDL / ICG.			
11.1.2	Prior to commencement of equipment production activities, equipment supplier shall consult MDL/ICG			
11.1.3	Documentation associated with equipment FATs procedure shall also be submitted by equipment supplier well in advance in time bound manner, for approval by MDL / ICG.			

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12.	Technical Manuals for Equipment (Operation, Maintenance & Logistics) : The technical manuals/documentation pertaining to equipment & its associated auxiliaries/support systems, shall include technical description/information, specifications, drawings, performance data, installation, operational & maintenance requirements, spares & logistics, etc., in systematic, structured & comprehensive manner.
12.1.1	Under operating instructions, pre-starting inspection/checks, starting & shutdown procedures, functional parameters, trouble shooting, fault analysis, precautions, etc. to be suitably covered.
12.1.2	Procedures for undertaking all maintenance routines till the end of service life (for the entire life cycle) (including major overhaul), are to be clearly specified along with preservation/ de-preservation & upkeep requirements (when equipment is not in use, during long refit of ship).
12.1.3	Procedures for setting to work, test & trials of equipment are also to be well documented.
12.1.4	Following technical manuals/documentation (in hard and soft form) shall be provided by the equipment supplier along with equipment supply. NOTE: 1) Draft copy of the above listed Manuals & Documentations (in hard and soft form) shall be prepared by the supplier and shall be submitted to shipyards for comments & to classification society under copy to MDL/ICG for approval, well ahead of the delivery date of the equipment. Approval on the same shall be given within two weeks of receipt of the Manuals & Documentations complete in all respects & required format. 2) Delivery of main equipment shall be considered completed only on receipt of all approved Manuals & Documentations as detailed in Table above. 3) All Manuals & Documentations should be categorised as per the above subject / content description only.
13.	Quality Assurance and Testing Quality assurance and testing requirements, pertaining to this equipment should confirm to standard conditions of quality assurance of Nominated classification society as mentioned in Technical Requirement of this SOTR.
14.	Design Standards Following rules and regulations as applicable shall be met:
14.1.1	Nominated Classification Society Class Rules.
14.1.2	International load line reg. 1966 as amended by Protocol of 1988 and any other subsequent amendments.
14.1.3	IMO/MARPOL-73/78 reg and any further / latest amendments including MS Act 58 and their rules.
14.1.4	COLREG 72 and any further/ latest amendments.
14.1.5	IMO /Anti Fouling System.
14.1.6	International tonnage 1969 and any further/ latest amendments.
14.1.7	SOLAS 1992 as amended in 2002 and any further / latest amendments.
14.1.8	Stability standard as per NES 109.
14.1.9	Naval Magazine Explosive Regulations (NMER).

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14.1.10	Helo deck Regulation as per IRS Rules and Regulations for construction of Coast Guard Vessels (Ch-5, Section -8) or equivalent ABS/LRS/BV/DNV/GL/NK rules.			
14.1.11	Superior/higher specifications of standard are acceptable subject to proving and satisfactory trial by Yard.			
14.2	During execution of the project, following organizations would be associated for ship design, construction, quality control and Ship trials/acceptance			
	(a)	Design	:	Shipyard / Nominated Classification society
	(b)	Construction	:	MDL and CGRPT Mumbai, at Shipyard.
	(c)	Quality Control	:	Nominated Classification society
	(d)	Ship Trials	:	Indian Coast Guard / Shipyard / Nominated Classification Society.
15.	Quality Standard:			
15.1.1	Design and production of equipment should conform to the best worldwide engineering practices, for ensuring high quality, reliability, durability, ease of operation and maintenance for meeting the ship's requirements.			
15.1.2	During equipment production the equipment shall be subjected to various stage inspections. Equipment supplier shall ensure high quality of production as per approved quality assurance plan. Quality assurance should meet the specified standards and intent of ISO 9001: 2015 (quality management systems) or its latest version.			
15.1.3	During equipment production, any deviation to the QAP/finalized specifications/standards shall be brought to the notice of designated classification society and Shipyard/ICG, along with valid reasons and recommended solution, without any compromise on quality, reliability and performance of the equipment			
16.	Maintenance & Logistics			
16.1	Equipment supplier shall ensure high reliability and low maintenance of equipment.			
16.2	While equipment maintenance and repair between major overhauls would be carried out in-situ on-board the ship, major maintenance/overhaul would be undertaken ashore by repair organization.			
16.3	Equipment design should therefore ensure ease of maintenance and accessibility to important sub-assemblies/components/accessories.			
16.4	Suitable provisions (such as inspection windows, etc.) as feasible, are to be made for ease of in-situ visual inspection of important sub-assemblies/components/accessories for routine inspection, checks and maintenance, without dismantling the equipment assembly/components.			
16.5	Equipment supplier shall provide maintenance schedules, planned maintenance intervals and procedure for undertaking maintenance of equipment on-board and ashore.			
17.	Installation Tools and Commissioning Consumables:			
17.1	Installation Tools: Special tools, jigs and fixtures & test equipment required for flushing, setting to work, testing & tuning, on-board trials (HATs/SATs) and post CST inspection of critical internal parts and reassembly of the equipment and its auxiliary systems shall be			

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	supplied. Tools shall be ordered along with the main equipment & delivered along with the main equipment.
17.2	<u>Commissioning Consumables:</u> The Commissioning consumables (first charge like coolants, greases, special oil, filters, gaskets, refrigerant etc.) shall be included in the scope of supply. Commissioning consumables shall be delivered before STW of the main equipment, tentative schedule of which shall be indicated in the Tender Enquiry.
17.3	An itemised list with cost for the same is also to be indicated in the offer to facilitate their procurement in future, if required.
17.4	One set of standard tools adequate for undertaking the maintenance onboard should be supplied along with the offer.
18.	Indigenisation / Local Support (Applicable to equipment with import content)
18.1	The supplier is to indicate if the equipment is original OEM supply or manufactured in INDIA under license (specifying the import content). The manufacturer is to engage into a co-operation with a reputed manufacturer of similar equipment's in India and accordingly plan for progressive indigenization.
18.2	In this respect, the equipment manufacturer shall confirm that he will be able to authorize priority works at his works and provide the necessary local support as required to meet the ship construction and trial programme and provide the necessary after sale support to the ICG. Future plans for indigenous production of the equipment associated control/monitoring devices and transfers of technology are to be indicated in the proposal for consideration of Indian Coast Guard Headquarters.
19.	Product Support
19.1	Equipment supplier is to provide product support for ship's life of 25 years. In case the equipment is likely to be obsolescent, the supplier shall notify the Coast Guard with at least two years prior notice, along with valid reasons and recommended solution
19.2	The firm/OEM to submit undertaking to provide product support for minimum period of 25 years from date of delivery of the vessel.
19.3	Undertaking for upgrade/currency of software for all equipment min 05 years from date of delivery of vessel. In case of obsolescence within 05 years from date of delivery of the Training ship, the same to be upgraded without any additional cost.
19.4	Firm to indicate after sales and product support facilities in India with response time for attending defect and providing spares.
19.5	All upgradation and modification carried out on equipment during its life cycle must to be intimated to ICG. Further, any upgradation/modification during guarantee period of the equipment same to be included free of cost.
19.6	Firm should agree to enter into the rate contract / All-inclusive Annual maintenance contract (AIAMC) with ICG for maintenance and supply of spares
20.	Operational Cycle: The operating refit cycle of ship is as follows:
20.1	1 st and 2 nd Ops refit cycle – Operation cycle of 24 months followed by a refit.
20.2	3 rd and 4 th Ops refit cycle – Operation cycle of 18 month followed by a refit.
20.3	Balance Ops and refit cycle – Operation cycle of 15 month followed by a refit.
20.4	First three refits are short refit (SR) followed by a normal refit (NR). Second NR will be medium repair (MR).
20.5	Short refit is for duration of 04 months. Normal refit is for duration of 05 months and medium refit for duration of 12 months

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21.	Interchangeability Equipment design is to ensure that components and parts having same dimensions and characteristics should be inter-changeable between different units of similar kind in the ship, without affecting the specified equipment performance.
22.	Tally and Diagram Plates All major components should be provided with suitable identification tallies for appropriate identification. Tally plates shall be in English language and in SI units. All tallies and diagrammatic plates shall be of SS/ chrome plated. Tallies for safety, caution & warning considerations should be in bold black letters. Size of tally plates, diagrammatic plates, etc. shall conform to International Standards.
22.1	All tallies and diagram plates shall be as per OEM Standards and must generally indicate the following- <ul style="list-style-type: none"> a) Manufacture's Name- b) Manufacturer's Serial No. c) Type/Model:- d) Year of Manufacture.- e) Electrical parameters viz. Ratings, Voltage, Frequency, Current, Insulation details etc as applicable- f) Weight of Equipment.- g) IP Rating of the equipment.- h) Danger labels in Red colour with white lettering are to be provided on all electrical equipment operating on 115 Volts or higher. i) Internal Cable-Cores terminating at the connection terminal strip shall have the same corresponding terminal ferrule no. Fixed / fitted on it. j) Tally of JB/Panel and other equipments internal diagram plate to be prepared by OEM. k) Cable Tallies as per approved system drawing to be prepared by OEM. l) Cable tallies should be supply for both the ends
23.	Instruction Plates Instruction plates listing the starting/shut-down procedure and precautions in brief are to be prominently displayed on the equipment. The Instruction plates are to be SS/ chrome plated. Equipment is to be supplied with a set of instruction plates duly mounted on equipment or supplied loose.
24.	Painting Specification Standard painting procedure shall be applicable for suitability for marine environment. Details to be forwarded with the offer. Painting of machinery and electric equipment shall be as per the manufacturer's standard but finish colour shall be in accordance with painting schedule, wherever specified.
25.	Lifting Arrangement Equipment components weighing more than 40 kilograms are to be provided with eyebolts/lifting arrangement, for ease of handling/lifting on board the ship or ashore. During transportation/transit of equipment, adequate provisions (such as supports, locking arrangement, jacking, etc.) are to be made for preventing any damage to the equipment & its associated components. Any component requiring special handling shall be clearly marked and appropriate handling instructions shall be provided by equipment supplier. One set of special lifting gear (if any) shall be supplied to shipyard.

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26.	Preservation / Conditioning
26.1	Equipment supplier is to provide high quality packing for the complete scope of supply along with handling arrangements. The package/container should display clear instructions for stowage, handling, care and accessibility for inspection of equipment preservation condition.
26.2	Equipment shall be supplied with Initial preservation for a period of 12 months for tropical conditions and protected against high humidity. The equipment are to be preserved on delivery as per the standard marine engineering practice. Closing plates/plugs/caps (duly filled with nitrogen gas) are to be provided on all openings.
26.3	For re-preservation requirements, at shipyard or on board ship beyond initial preservation period, suitable provision is to be catered for by equipment supplier. Equipment supplier shall provide re-preservation & upkeep procedure, preservatives/consumables and technical assistance/supervision to the shipyard, as per requirements (if special equipment/Pumps, hoses, fittings, etc. required shall be brought by the supplier along with them for carrying out the preservation on board the ship.
26.4	In the event of storage getting extended beyond a period of 12 months, re-preservation shall be carried out on 6 month extensions basis. The conditions and cost shall be stated in the offer for further two re-preservation of 6 months. Details of the preservative used (oils & greases etc.) and the procedure for de-preservation and re-preservation, in shop or on board the ship, shall be indicated in the offer.
26.5	Preservation requirement, procedures and schedule for main equipment, are to be indicated in the offer.
27.	Packing & Shipping
27.1	All equipment shall be adequately packed and protected with supports to ensure adequate protection during all methods of transportation. Each unit within a package/container shall be clearly marked in English for identification. The container shall clearly indicate the commodity description with caution marks, weight, size, etc.
27.2	A separate document giving complete details & instruction for storage, preservation, handling & transportation after delivery shall be supplied & a copy must be included with the shipping document. The supplier should indicate the delivery schedule port of embarkation, transport, packing, preservation, insurance etc.
27.3	The instrumentation, sensors and meters etc. which are fitted on the equipment are to be removed from the equipment and shall be staggered delivered according to shipyard schedule in a separate suitable box/packing during STW.
27.4	Following items shall be packed in separate containers/boxes with proper colour coding (with description) & list of their contents in English for their easy identification and traceability:
27.4.1	Deliverables related to Main Equipment (to be marked in green colour).
27.4.2	Deliverables related to Auxiliary Equipment (to be marked in green colour).
27.4.3	Deliverables related to Installation material and Tools related to Main & Auxiliary Equipment (to be marked in green colour).
27.4.4	Commissioning consumables and Tools (to be marked in green colour).
27.4.5	On Board spares and Tools (to be marked in red colour) in SPTA boxes. (Not applicable)
27.4.6	Base & Depot Spares (to be marked in red colour). (Not applicable)
27.4.7	Documentation (to be marked in blue colour).

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27.4.8	The list of actual deliverables against each of the above serials shall be forwarded to shipyards in soft copy (MS Excel format) with required part nos. <u>within one week of finalization of PNC</u> in order to detail them in the purchase order.
27.4.9	Packing list should give further breakup of items, wherever particular item is quantified by set
28.	Training
28.1	The equipment supplier is to impart training, to ship's crew, on aspects related to operation, installation, maintenance and repair of the equipment.
28.2	For imparting training, complete training package in hard & soft form (including suitable training material, dockets, computer based aids, etc.), is to be provided by the supplier to the participants.
28.3	Training would be conducted by the equipment supplier at Shipyard/ On-board Ship. Training plan will be submitted by the equipment supplier, along with the technical offer. Training is required to cover the following aspects (but not limited to)
28.3.1	Design and installation
28.3.2	Operation and trouble shooting
28.3.3	Control & monitoring
28.3.4	Upkeep and routine maintenance
28.3.5	On board maintenance including major repairs and overhaul
29.	Security of Information The information contained in this document is not to be divulged to any other firm/third party without the prior permission of the Indian Coast Guard and MDL. Adequate measures are to be taken to ensure safe custody of this document.
30.	Warranty
30.1	The equipment along with associated auxiliaries/components shall be warranted by the equipment supplier for the stipulated performance for a period of twenty (20) months from the date of delivery of equipment to MDL or twelve (12) months after planned delivery date (D) (mentioned in subsequent Para) of the ship by shipyard MDL to the Indian Coast Guard, whichever is later. This is to be referred as 'Standard Warranty'.
30.2	During the said period, the equipment supplied shall be warranted against any malfunction, defects, material failure, non-compliance to ordered specifications, sub-optimal performance, design deficiency, poor workmanship and quality. Any expenditure on account of equipment malfunction, repair or supply of spares against warranty defects shall be borne by the equipment supplier. If any defective part is required to be taken back to OEM's factory/works (i.e. importing and re-exporting from Country of origin) for the purpose of service, the entire liability including expenditure towards the same shall be borne by the supplier. The spare parts required / consumed for scheduled servicing & maintenance activities in the period of 'Standard Warranty' shall also be provided by the OEM without any commercial implication.
30.3	In case of systems/equipment, which have not completed trials prior delivery, the warranty of that particular system/equipment and service would commence from the day of successful completion of trials. The Supplier will undertake update (if any) of software's for all equipment up to 5 years from the date of acceptance of the vessel
30.4	If within the period of warranty, the Training ship and (or) stores and (or) spares are reported by the Shipyard to have failed to perform as per the specifications, the Supplier shall either replace or rectify the same free of charge, maximum within 15 days of notification of such

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	defect by the Shipyard provided that the goods are used and maintained by the Shipyard as per instructions contained in the operating Manual.						
30.5	Warranty of the equipment would be extended by user in log book, Spares and all consumables required for warranty repairs shall be provided free of cost by Supplier. All activities including diagnosis, rectification, calibration, transportation etc., required for making equipment serviceable and available would be Supplier's responsibility.						
30.6	The Supplier also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Shipyard and the Supplier subject to acceptability by the Shipyard. The Supplier shall intimate the assignable cause of the failures.						
30.7	Supplier hereby warrants that necessary service and repair backup during the warranty period, shall be provided by the Supplier and he will ensure that cumulative downtime period for the Training Ship and or the fitted equipment /system equipment does not exceed 45 days of the warranty period. Thereafter, the Shipyard reserves the right to make good the defects at suppliers risk and cost.						
30.8	If the associated equipment and service, spares of Training Ship fails frequently and/or, the cumulative down time exceeds 45 days of the warranty period or a common defect is noticed repeatedly with respect to a particular item/component/sub-component, that complete item/ equipment shall be replaced free of cost by the Supplier within 45 days of receipt of the notification from the Shipyard duly modified/upgraded through design improvement in all equipment supplied/yet to be supplied and Engineering Support Package (ESP) supplied/yet to be supplied. Thereafter, the Shipyard reserves the right to make the defects at Supplier risk and cost.						
30.9	In case the complete delivery of the ESP is delayed beyond the period stipulated in this contract, then the Supplier undertakes that the warranty period for the goods/stores shall be extended to that extent.						
30.10	The Supplier warrants that the Training ship, the associated equipment and service supplied will conform to the Temperature and Humidity conditions as mentioned in this document.						
30.11	The Supplier agrees to provide back to back warranty of equipment /system or any other item whose specified warranty by the OEM is more than 12 months and shall extend the same warranty to the Shipyard at no. additional terms and conditions.						
30.12	Extension of Warranty: Supplier shall mandatorily indicate, in the offer, the annual rate for extended warranty period, in the event of expiry of warranty period as detailed above along with the attendant commercial terms and conditions if any						
31.	Planned Ship Delivery date (D) The planned date for delivery of the Ships to the Indian Coastguard by MDL are tabulated below: <table><tr><th>Ship no.</th><th>Yard No.</th><th>Planned Delivery date</th></tr><tr><td>1</td><td>16101</td><td>December 2026</td></tr></table>	Ship no.	Yard No.	Planned Delivery date	1	16101	December 2026
Ship no.	Yard No.	Planned Delivery date					
1	16101	December 2026					
32.	Weight Recording / Weight Certificate Weights of all components are to be recorded and a suitable certificate shall be submitted, by the equipment supplier. The designated inspection authorities shall countersign such certificates. Format for weight control data sheet, is placed at Annexure '4' of this document.						

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Sl. No	Description
32.1	Net weight of each component is to be recorded in presence of designated inspection authority and the weight certificate is to be submitted by the equipment supplier, along with equipment supply. Format for weight certificate, is placed at Annexure '5' of this document.
32.2	The supplier shall have to submit, reasons for variation between allocated weight and actual/certified weight for each and every item, wherever applicable, to Coast Guard and MDL for their consideration and further necessary action
33.	Technical Assistance
33.1	The Supplier shall provide the necessary representative(s) as and when required , in carrying out inspection and supervise the work that is done on the equipment, during the following phases:
33.1.1	Preparation for installation of equipment by shipyard.
33.1.2	Monitoring of proper equipment preservation during storage.
33.1.3	On-board erection and alignment.
33.1.4	Setting to Work (including fitment of latest calibrated instrumentation).
33.1.5	Harbour Trials
33.1.6	Assistance in trouble shooting.
33.1.7	Customer Sea Trials
33.1.8	Post CST equipment Inspections.
33.1.9	Final Machinery Trials.
33.1.10	Assistance in operation during equipment guarantee period
33.2	Shipyard has to progress on ship construction activities, simultaneously on ships of the coastguard project or on ships of different projects. View this, there shall be every likelihood of clash of requirement of technical assistance. In such eventuality, in order to avoid delays on one ship due to similar work requirement on other ship, supplier shall depute their dedicated separate/independent team of supervisors/specialists for required technical assistance, on the required ships. Rotation of supervisors/specialist amongst the various ships/projects shall be avoided.
34.	Receipt Inspection Receipt inspection for the major equipment shall be carried out in the presence of OEM rep to verify completeness of the scope of supply and intactness of the supplied equipment. Defective / damaged parts and deficiency, if any, in supply shall be made good by OEM free of cost. OEM shall be intimated the date of receipt inspection.
35.	Compliance Matrix Para-wise compliance matrix, including paras which are not applicable, as per the technical specifications (contained in this document) shall be submitted by the equipment supplier along with the technical offer, in the format as per Annexure-7 (preferably in excel sheet). The technical offer received without Compliance Matrix shall be <u>liable for rejection</u> .
36.	OEM's responsibility-
36.1	OEM to Prepare system drawing/Cable drawing in autocad .dwg format
36.2	OEM to prepare cable schedule, connection schedule of the system.

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		ALDIS LANTERN	DATE	12.09.2025
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SECTION – II TECHNICAL SPECIFICATION AND REQUIREMENTS		
1.	Equipment Description: This technical specification covers the manufacturing, supply of main equipment, spares and documentation and on-board commissioning of latest version of Aldis Lantern.	
	Refer to class notation of the vessel mentioned at Sr no. 3 of Section – I (Introduction). The equipment and components shall be manufactured as per ABS and IRS classification rules / statutory requirements as applicable.	
2.	Scope of Supply	Qty. Per Vessel:
2.1	5" Hand operated ALDIS Lamp complete with 2 core, 10 meter long insulated flexible cable, 60 W bulb/Lamp 24V DC as per patt. No. 0558/462-4287 or equivalent approved/accepted by Navy and spare battery.	3 Nos.
2.2	Bulkhead mounted type control unit with battery charger cum rectifier unit with integral 24V maintenance free battery and socket suitable for plug provided with Aldis Lantern Input voltage :230V,1Ph,50Hz AC Output voltage : 24V DC.	3 Nos.
2.3	Stowage box (Patt. No. 0558/462-4204 or equivalent approved/accepted by Navy.)suitable for stowing 5" Hand Operated Aldis Lamp	3 Nos.
2.4	Additional item & accessories, if any, not indicated in the above stated scope of supply but required to achieve completeness of system/equipment will be the responsibility of the firm to supply without any price implication.	3 Set
2.5	Scope of supply indicated above is based on the MDL previous experience. If any item/equipment required to complete the system/scope of supply, firm may please quote for the same and the same be clearly indicated with individual quantity of each accessories in the offer. If such item is not quoted and found, the same is required at the time of commissioning/installation, it is responsibility of the firm to supply such item/equipment free of cost.	
2.6	The supplier is responsible in all respects for the completeness of the system and should prove satisfactory performance of the system/equipment on board the ship to the CGHQ rep/Local Surveyor/MDL QA rep as per approved trial schedule, including Service of Engineers, Commissioning.	
3.	Technical Specification	
3.1	The Aldis Lantern must be suitable for operation 230V, 1 phase, 50 Hz AC supply and 24V DC supply from battery incase of failure of 230V,1 Phase AC supply.	
3.2	Warning plates are to be fitted for battery charger cum rectifier unit in prominent position indicating dangerous voltage e.g. 'DANGER 230 VOLTS'	
3.3	All wirings should be flexible LFH type copper cable of 1000 V grade and minimum 1.5 sq mm. Wiring to be marked at both ends with identification ferrules.	
	Safety :	
	The design of the equipment is to provide the maximum safety to the operator against the risk of electric shock.	
4.	Installation MDL's responsibility:-	
4.1	All installation works on board, including shipping of equipment on board, its placement on its seating and connection of the delivered equipment will be carried out by MDL / MDL authorized contractor.	
4.2	Termination of the cables will be undertaken by MDL / MDL authorized contractor.	

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SECTION – II TECHNICAL SPECIFICATION AND REQUIREMENTS	
5.	Standard, Inspection, Factory Tests & Acceptance of Equipment/ System:-
5.1	Any modification/changes if required on account of type testing or otherwise, the same are to be made good free of cost by supplier.
5.2	Factory Test to be undertaken in the premises of manufacturer and manufacturer's Quality Assurance Certificate, Shop Test Trial Report to be supplied along with the equipment/system
5.3	Manufacturer's standard factory test procedure will be acceptable for imported equipment of non-classification category.
5.4	CGHQ /ABS /IRS Inspection certificates / Manufacturer's work test certificate issued by firms Q/A, as applicable is to be supplied in triplicate along with the equipment.
6.	Receipt Inspection
6.1	All items will be subjected to final inspection on receipt in MDL by our Inspection Authority and CGRPT, Mumbai.
6.2	Receipt inspection for the major equipment shall be carried out in the presence of OEM supply to verify the completeness of the scope of supply
6.3	Any Damage or deviation from Purchase order will be rectified by OEM at firm cost
7.	Performance:-
7.1	Any Design deficiency or shortages in material, deficiency in capacities of components, noticed at a later date & time shall be the responsibility of the supplier to make it good as to meet and prove the performance of Aldis Lantern
8.	Specific Requirements:-
8.1	Firm to indicate if there is any specific requirement of special preservation for the equipment/accessories.
8.2	List of firm's own manufactured items and list of bought out items by the firm if any to be clearly indicated in the offer.
9.	GENERAL TECHNICAL REQUIREMENTS:-
9.1	The equipment shall be supplied in its entirety to make it fully operational. All the items/materials as indicated in the P.O & TNC are to be supplied in single delivery.
9.2	Equipment, Units to be provided with Earthing studs/bolts on both the sides
9.3	The equipment shall be supplied with all its accessories including interconnecting cables, cable gland, connector, nuts, bolts, consumables etc. required for installation and satisfactory performance of the equipment.
9.4	All terminal blocks and connectors should be of Wago / reputed make.
9.5	Painting/Preservation: Proper preservation/ paint of standard marine quality to be applied to the equipment. Details to be forwarded with the offer.
9.6	Delivery challan are to be made in details indicating technical specification, description of the main item(s) & other auxiliary item(s).
9.7	The entire inspection & test certificate and their results, acceptance need to be supplied along with consignment as indicated in the P.O.
9.8	All the items are to be provided with inspection agency stamping and are to be legible.
9.9	All the defects, discrepancies & damages that are indicated in MDL inspection report are to be rectified/ made good and re-offered by the firm immediately.
9.10	All the item(s)/material(s) are to be provided with adequate packing materials in order to prevent transit damage.
9.11	Calibration certificates if any are to be supplied along with the consignment
9.12	Any change in model due to upgradation will be considered if and only if found feasible

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SECTION – II TECHNICAL SPECIFICATION AND REQUIREMENTS	
	by MDL/CGHQ and only after obtaining approval from CGHQ/MDL and should have no cost implications to MDL/CGHQ.
9.13	Any changes corrections in drawing due to upgradation if approved by MDL/CGHQ must be undertaken by the firm with no cost implication.
9.14	Any additional unit required over and above the quoted items as a result of design changes by the firm would be supplied to MDL without any price implication.
10.	Technical Offer as Per Shipyard Tender: As a minimum, the following technical and design details applicable to equipment / item shall be submitted with the technical proposal:-
10.1	Equipment description with block diagram, system components, system operation, weight, CG and dimensions of the equipment and units.
10.2	Technical specifications of equipment.
10.3	Certificate of Conformity as per Annexure- 1 of SOTR
10.4	List of Deviations as per Annexure-2 of SOTR
10.5	Compliance matrix (Para-wise compliance to tender specifications) as per Annexure -3 of SOTR
10.6	Reference list for order executed for similar equipment with Indian / International Navy / Coast guard or similar platform such as ocean going vessel, offshore platforms and Oil-Rigs
10.7	Compliance to Pre-Qualification criteria along with reference list
10.8	Clear demarcation between the scope of supply of firm and that of ship builder.
10.9	Delivery time from receipt of order.
10.10	Trial and commissioning time of complete system on board
10.11	Supply of documentation
10.12	Product Support Certificate
10.13	Confirmation for Technical Assistance for System.
10.14	Preliminary quality assurance and test plan (QAP)
10.15	Authorization letter from OEM
10.16	Four copies of technical offer shall be submitted by equipment supplier; in hard and soft form (CD-ROM).
11.	Upgradation of Electronic Equipment.
11.1	The OEMs of electronic equipment being fitted should provide upgradation of the equipment/sub components/software in case of obsolescence within 05 years from date of acceptance of the vessel without any additional cost
11.2	The Vendor shall submit an undertaking to maintain currency/upgrade of software for the equipment upto 05 years from the date of delivery of the Vessel
11.3	In the event of any obsolescence during the above mentioned period of product support in respect of any component or sub system, mutual consultation between the vendor and MDL/ Owner / Indian manufacture will be undertaken to arrive at an acceptable solution including additional cost, if any.
11.4	Any improvement/Modification /up gradation being undertaken by the OEM or their sub-suppliers will be communicated to MDL/ Owner. During the guarantee period, these improvement/ modification/up gradation will be carried out by the vendor at vendors cost and post guarantee period at Owners cost if required by the owner
11.5	The OEM of Electronic Equipment being fitted should provide Upgradation of the equipment/sub components/software in case of obsolescence within 05 Years from date

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SECTION – II TECHNICAL SPECIFICATION AND REQUIREMENTS	
	of delivery of the vessel without any additional cost
12.	Certificate of Malicious code:
12.1	<p>OEM would undertake necessary measure to ensure strict adherence to the following certificate of Malicious Code submitted by them while bidding the tender.</p> <p>“This is to certify that the Hardware and the Software beings offered as part of the contract does not contain embedded malicious code that could activate procedures to:-</p> <p>Inhibit the desired function of equipment</p> <p>Cause physical damage to the user or his equipment during the operational exploitation of the equipment</p> <p>The OEM is liable in case physical damage or malfunctioning is caused due to activation of any such malicious code in embedded software.</p> <p>The OEM will be considered to be in breach of the contract in case physical damage, loss of information or infringement related to copyrights and Intellectual Property Rights (IPRs) are caused due to activation of any such malicious code in embedded software.”</p>
13.	Certificate of Conformity:-
13.1	<p>The offer should be complete with CERTIFICATE OF CONFORMITY as per format detailed at Annexure - 1 .The offer received without the “Certificate of Conformity”, duly filled in and signed, may not be considered.</p>

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Annexure - 1

CERTIFICATE OF CONFORMITY

(To be filled in by the **SUPPLIER** & submitted as part of the Offer)

M/s. _____

With reference to the subject **Requisition** received along with the MDL Inquiry and our QUOTATION No. _____ Dated _____ we hereby confirm / clarify the following:

1. REGISTRATION WITH DQA (WP) / DQA (N) / MDL:

We are NOT Registered / already REGISTERED (*) with _____ for manufacture and supply of following items

- (a) _____
(b) _____

2. PAST PERFORMANCE:

We have NOT Supplied / have SUPPLIED (*) identical / similar (*) ITEM to MDL in the past. The relevant Order references are given below :

- (a) _____
(b) _____

3. REQUISITION / DRAWINGS / SPECIFICATIONS / SOR:

We ARE NOT / ARE (*) fully aware of the relevant Drawings / Specifications / TSP etc. indicated in the REQUISITION and the related Documents.

4. DEVIATION:

The OFFER is fully in compliance with the Requisition WITHOUT any deviation / EXCEPT for the deviations listed in the attached format (*).

5. BINDING DATA:

OUR Drawings with necessary BINDING DATA such as Overall Dimensions, SEATING Details / Bolting Plan, Connection / Interface Details, Face to Face Dimensions is ENCLOSED / NOT Enclosed (*) with the offer. We have noted that any change in Binding Data shall require specific approval from MDL/IHQ of MoD (N).

6. DOCUMENTS / DATA:

The following Technical Documents / DATA SHEETS are enclosed herewith

- (a) (To be specified if applicable)


For M/s. _____

Signature:

Date : _____

Stamp:

(*) **Strike out which is NOT APPLICABLE.**

 <p>MAZAGON DOCK SHIPBUILDERS LTD.</p> <p>(A Govt. Of India Undertaking)</p> <p>Dockyard Road, Mumbai –400 010.</p>	DESIGN- ELECTRICAL & WEAPON	SOTR No.	5101(C)
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Annexure - 2

[illegible]

The Supplier shall fill in this form for the deviations of their bid from the requirements as stated in the Material Requisition. If no deviation is required Supplier shall fill in "NIL" in the 'Deviation column. Supplier shall sign/date and affix their company seal.

[illegible]


SUPPLIER'S COMPANY SEAL
DATE

SUPPLIER'S SIGNATURE &

**A-ACCEPTED
ATTACHED SHEET)**


N-NOT ACCEPTED

C-CONDITIONAL ACCEPTANCE (SEE

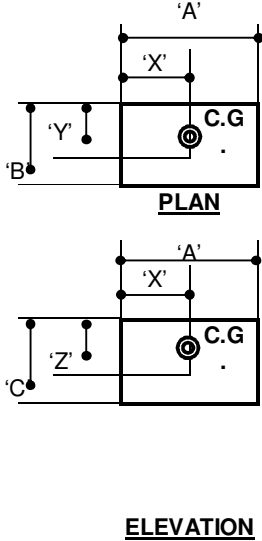
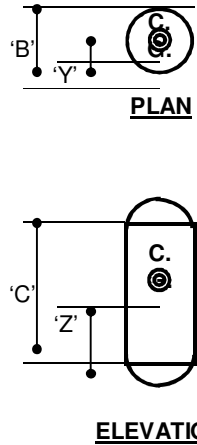
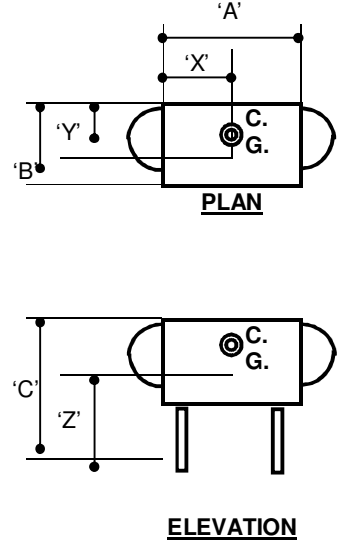
	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN- ELECTRICAL & WEAPON	SOTR No.	5101(C)
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Annexure - 3

COMPLIANCE MATRIX					
EQUIPMENT DESCRIPTION:				EQUIPMENT NO. :	
The form shall be completed by Supplier & shall be supplied along with the equipment.					
SUPPLIER'S NAME				Ref. Drg. No.	
ADDRESS					
TELEPHONE NO.				Part No.	
ORDER NO.				EQPT. NO.	
S No.	Tender Specifications Para reference	Brief Description as per Relevant Tender Specifications	Compliance to Tender Specifications	Deviations if any, with Reasons	Remarks if any
SUPPLIER'S COMPANY SEAL				SUPPLIER'S SIGNATURE & DATE	

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Annexure - 4

WEIGHT CONTROL DATA SHEET																			
EQUIPMENT DESCRIPTION		EQUIPMENT NO.																	
COMPARTMENT		LOCATION																	
SWBD : <input type="checkbox"/> TOLERANCE CODE <input type="checkbox"/> PRELIMINARY EST. <input type="checkbox"/> DESIGN EST. <input type="checkbox"/> M.T.O (CALC) <input type="checkbox"/> WEIGHED <input type="checkbox"/> TOLERANCE ± %																			
1. WEIGHT (Kg.)																			
(a)	DRY	Kg ±	%																
(b)	FLUID	Kg ±	%																
(c)	OPERATING	Kg ±	%																
(d)	TEST	Kg ±	%																
(e)	TOTAL	Kg ±	%																
2. EQUIPMENT DIMENSIONAL DATA (mm) & Co-ordinates of CoG																			
 <p>PLAN</p> <p>ELEVATION</p>	 <p>PLAN</p> <p>ELEVATION</p>	 <p>PLAN</p> <p>ELEVATION</p>																	
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">OVERALL SIZE</th> <th colspan="2">CENTRE OF GRAVITY</th> </tr> </thead> <tbody> <tr> <td>'A'</td> <td></td> <td>'X'</td> <td></td> </tr> <tr> <td>'B'</td> <td></td> <td>'Y'</td> <td></td> </tr> <tr> <td>'C'</td> <td></td> <td>'Z'</td> <td></td> </tr> </tbody> </table>		OVERALL SIZE		CENTRE OF GRAVITY		'A'		'X'		'B'		'Y'		'C'		'Z'			
OVERALL SIZE		CENTRE OF GRAVITY																	
'A'		'X'																	
'B'		'Y'																	
'C'		'Z'																	
NOTE : <ul style="list-style-type: none"> ALL OFFERS SHALL INCLUDE THIS DATA SHEET DULY FILLED IN BY THE SUPPLIER (SIGNED, DATED & SEAL AFFIXED). ALL FINISHED ITEMS SHALL BE WEIGHED & A CERTIFICATE SHALL BE PROVIDED AS PER ATTACHED SHEET. SEPARATE SHEETS SHALL BE COMPLETED FOR EACH INSTALLED EQUIPMENT. ORIGIN OF 'X', 'Y' AND 'Z' TO BE INDICIATED. 																			
SUPPLIER'S SEAL		SUPPLIER'S SIGNATURE & DATE																	

	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN- ELECTRICAL & WEAPON	SOTR No.	5101(C)
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Annexure - 5


WEIGHT CERTIFICATE			
EQUIPMENT DESCRIPTION:		EQUIPMENT NO. :	
The form shall be completed by Supplier & shall be supplied along with the equipment.			
SUPPLIER'S NAME		Ref. Drg. No.	
ADDRESS		Part No.	
TELEPHONE NO.		EQPT. NO.	
ORDER NO.			
METHOD OF WEIGHING: Supplier shall prescribe Method & Equipment Used:			
	DATE OF LAST CALIBRATION	SPECIFIED ACCURACY REQUIREMENT	
	NOTE :-		
RESULT OF WEIGHING TOTAL EQUIPMENT DRY WEIGHT (Excluding packing, temporary protection etc.)		<input style="width: 150px; height: 20px;" type="text"/>	
ALLOCATED WEIGHT (Weight estimate agreed by purchaser and supplier based on order specs).		<input style="width: 150px; height: 20px;" type="text"/>	
REASONS FOR VARIATION BETWEEN ALLOCATED WEIGHT AND CERTIFIED WEIGHT:			
WEIGHING ADDRESS:		WITNESSED BY	
		FOR SUPPLIER	FOR PURCHASER
		Representative	Representative
Date:	Signature / Date & Seal	Signature/Date & Seal	

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Annexure - 6

TABLE OF CABLE CONNECTION SCHEDULE FORMAT

SR NO	CABLE NO	CABLE TYPE	NO: OF CORES	FROM DEVICE	CONN REF	TERMINAL / PIN NO	TO DEVICE	CONN REF	TERMINAL / PIN NO	SIGNAL	REMARKS
1	CAB-1	XXX 3 CORE CABLE	1	DEV-A	P1	1	DEV-B	J1	1		
			2			2			2		
			3			3			3		

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Annexure - 7

CABLE PATTERN LIST

SR NO	CABLE NO	CABLE PATTERN NO	CABLE SPEC DESCRIPTION	FROM UNIT	TO UNIT	OD	LENGTH	ANY SPECIFIC INSTRUCTIONS FOR CABLE LAYING



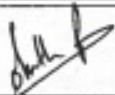


MAZAGON DOCK SHIPBUILDERS LIMITED


(A Govt. Of India Undertaking)

**SHIPBUILDING DESIGN ENGINEERING
DOCKYARD ROAD, MUMBAI - 400 010**

**STATEMENT OF TECHNICAL REQUIREMENTS
FOR
ALDIS LANTERN**


PROJECT	:	06 NEXT GENERATION OFFSHORE PATROL VESSELS (NGOPV)
YARD NOS MDL	:	16401/16402/16403/16404/16405/16406
CLIENT	:	INDIAN COAST GUARD
DOCUMENT NO	:	5101 (C)
ICG HQ REFERENCE / APPROVAL	:	
CLASSIFICATION NOTATION	:	+ A1 HSC(E) (Government Service) + AMS NIBS +ACC +DPS-1,FFV1-NS CS-Ready, HELIDK(SRF) by ABS or equivalent of LRS/DNV/GL/BV/IRS/NK

3	Clause no. 10 b) in Section I updated	12.09.2025	
2	Annexures Updated	11.07.2025	
1	a. CGHQ approval with comments received via letter SA/0159/06NGOPVs/14 dated 06 Dec 2024 incorporated.	26.06.2025	
0	First Issue	23.11.2024	
REV	DESCRIPTION	DATE	AUTHORISED BY
			
ROHITH S PILLAI	SUDHIR SONAWANE	P. K. MODAK	
M (D-L)	CM (D-L)	DGM / HOS (D-L&Wn)	
Prepared By	Checked By	Approved By	


	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN ENGINEERING	SOTR No.	5101(C)
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ACRONYMS


FATs	-	Factory Acceptance Trials
HATs	-	Harbour Acceptance Trials
MDL	-	M/s Mazagon Dock Shipbuilders Limited, Mumbai
OEM	-	Original Equipment Manufacturer
SATs	-	Sea Acceptance Trials
STW	-	Setting to Work
CGRPT	-	Coast Guard Refit and Production Team
ICG	-	Indian Coast Guard
NGOPV	-	Next Generation Offshore Patrol Vessels

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SECTION I INTRODUCTION		
Sl. No.	Description	Remarks
1.	This General Specifications relate to Design, approval of the equipment by the classification society, Manufacture and Supply of 06 (six) ship set of Equipment for Project “Next Generation Offshore Patrol Vessels (NGOPVs)” of Indian Coast Guard.	
2.	Project 06 NGOPV consist of Diesel Engine propulsion system comprises of two propulsion plants, each plant consisting of one Diesel Engine driving a Controllable Pitch Propeller and External Fi-Fi pump through single input and twin output Reduction Gearbox and respective shaft line. Each propulsion plant broadly comprises of:	
(a)	One Diesel Engine of minimum 9000 KW power output.	
(b)	One single input, twin-output Reduction Gearbox with built in thrust block.	
(c)	One set of shafting along with associated components	
(d)	One Controllable Pitch Propeller	
(e)	Propulsion plant support systems (for Diesel engines, Gearboxes, Shafting & CPP)	
(f)	Associated Controls & Monitoring System.	
3.	Class notation for 06 NGOPV is + A1 HSC (E) (Special Government Service) + AMS NIBS +ACC +DPS-1, FFV1-NS CS-Ready, HELIDK (SRF) by ABS or equivalent LRS/DNV/GL/BV/IRS/NK.	
4.	The Supplier should submit the quotation based on the General Conditions & Requirements (GCR) and the Technical Requirement for Procurement of each equipment. Should there be any discrepancies between the GCR and the Technical requirement of each equipment, the technical requirement/ specification shall prevail.	
5.	The reference list of the equipment fitted in Indian or International Navy / Coast Guard or similar platform such as ocean going vessel, Offshore Platforms and Oil-Rigs to be submitted along with the offer.	
6.	The Year of production of equipment and system to be of latest manufacture (during or after Year 2023). This is to confirm to the current production standards and should have 100% of the defined life at the time of delivery. (other than permitted running hours during assembly / acceptance trials)	


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SECTION I GENERAL CONDITIONS & REQUIREMENTS																															
Sl. No	Description	Remarks																													
	GENERAL CONDITIONS & REQUIREMENTS																														
1.	Subject The general conditions and requirements specified in this chapter are intended to meet the functional requirements of a NGOPV (with integral helicopter capable for operation in oceans environment and performance of all the ICG charter of duties.																														
2.	Ship's Basic Particulars The role of NGOPV class of ships would be Coastal and offshore Patrolling, Policing Maritime Zones of India, Fisheries Protection and Monitoring, Control and Surveillance, Anti-Smuggling and Anti-Piracy, Search and Rescue, Limited Pollution Response against Marine Oil spill etc. Ship's basic particulars, are indicated below: <table border="1"> <thead> <tr> <th colspan="2">PARTICULARS</th><th>REFERENCE DATA</th></tr> </thead> <tbody> <tr> <td rowspan="3">Ship's dimensions</td><td>Length overall (LOA)</td><td>115.3 m</td></tr> <tr> <td>Beam (water line)</td><td>14.5 m</td></tr> <tr> <td>Draft (deep displacement)</td><td>3.84 m</td></tr> <tr> <td>Ship's displacement</td><td>Deep displacement</td><td>Around 2886Tonnes</td></tr> <tr> <td>Endurance</td><td>At cruising speed of 12 to 15 knots</td><td>5000 NM</td></tr> <tr> <td colspan="2">Expected ship's life</td><td>30 Years</td></tr> <tr> <td rowspan="3">Operating profile</td><td>Continuous slow speeds</td><td>Below 8 knots</td></tr> <tr> <td>Cruising</td><td>08 - 15 knots</td></tr> <tr> <td>Maximum</td><td>23 knots at 92% MCR at full load displacement</td></tr> <tr> <td colspan="2">Unrestricted continuous rating of Diesel engine, at 45 degree centigrade ambient temperature</td><td>Min 9000 KW</td></tr> </tbody> </table>	PARTICULARS		REFERENCE DATA	Ship's dimensions	Length overall (LOA)	115.3 m	Beam (water line)	14.5 m	Draft (deep displacement)	3.84 m	Ship's displacement	Deep displacement	Around 2886Tonnes	Endurance	At cruising speed of 12 to 15 knots	5000 NM	Expected ship's life		30 Years	Operating profile	Continuous slow speeds	Below 8 knots	Cruising	08 - 15 knots	Maximum	23 knots at 92% MCR at full load displacement	Unrestricted continuous rating of Diesel engine, at 45 degree centigrade ambient temperature		Min 9000 KW	
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Unrestricted continuous rating of Diesel engine, at 45 degree centigrade ambient temperature		Min 9000 KW																													
3.	Reference Environmental Conditions																														
3.1.	The equipment shall be suitable for marine applications and achieve specified performance smoothly under tropical marine conditions.																														


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SECTION I
GENERAL CONDITIONS & REQUIREMENTS


Sl. No	Description	Remarks																		
3.2.	<p>The equipment is to be designed for continuous operation & survival under the environmental conditions specified for ambient conditions as specified table below:</p> <table><tr><th>Sr. No.</th><th>Design Parameter</th><th>Value</th></tr><tr><td>(a)</td><td>Air Temperature</td><td>Minimum of 5 deg C and Maximum of 45 deg C</td></tr><tr><td>(b)</td><td>Sea water temperature</td><td>32 deg C</td></tr><tr><td>(c)</td><td>Relative humidity</td><td>90% at 35 deg C</td></tr><tr><td>(d)</td><td>Atmospheric pressure</td><td>750 mm of Hg column (1000mbar)</td></tr></table>	Sr. No.	Design Parameter	Value	(a)	Air Temperature	Minimum of 5 deg C and Maximum of 45 deg C	(b)	Sea water temperature	32 deg C	(c)	Relative humidity	90% at 35 deg C	(d)	Atmospheric pressure	750 mm of Hg column (1000mbar)				
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(c)	Relative humidity	90% at 35 deg C																		
(d)	Atmospheric pressure	750 mm of Hg column (1000mbar)																		
3.3.	<p>Seaway Conditions: Ship is seaworthy for transit in all headings and undertake operational mission's upto sea state 7 and upto a significant wave height of 8.65 m Seaway conditions are defined at a sea water temperature of 1 to + 32 Deg. C, Ambient air temperature of 5 to 45 Deg. C and humidity up to 90% at 35 Deg. C. Salinity of water up to 35000 ppm. The equipment shall be capable of efficient and unrestricted operation without any deviation from its normal operating parameters under the seaway conditions, as below:</p> <table><tr><td colspan="3">Operational (up to sea state 7)</td></tr><tr><td>Roll</td><td colspan="2">Maximum ± 22.5 degree</td></tr><tr><td>Pitch</td><td colspan="2">Maximum ± 7.5 degree</td></tr><tr><td colspan="3">Survival (up to sea state 7)</td></tr><tr><td>List</td><td colspan="2">Maximum ± 15 degree from vertical (permanent)</td></tr><tr><td>Trim</td><td colspan="2">Maximum ± 05 degree</td></tr></table>	Operational (up to sea state 7)			Roll	Maximum ± 22.5 degree		Pitch	Maximum ± 7.5 degree		Survival (up to sea state 7)			List	Maximum ± 15 degree from vertical (permanent)		Trim	Maximum ± 05 degree		
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Pitch	Maximum ± 7.5 degree																			
Survival (up to sea state 7)																				
List	Maximum ± 15 degree from vertical (permanent)																			
Trim	Maximum ± 05 degree																			
3.4.	<p>Complement:</p> <table><tr><td>(a)</td><td>Officers</td><td>11</td></tr><tr><td>(b)</td><td>Subordinate Officers</td><td>32</td></tr><tr><td>(c)</td><td>Others</td><td>78</td></tr><tr><td></td><td>Total</td><td>121</td></tr></table>	(a)	Officers	11	(b)	Subordinate Officers	32	(c)	Others	78		Total	121							
(a)	Officers	11																		
(b)	Subordinate Officers	32																		
(c)	Others	78																		
	Total	121																		
3.5.	<p>Propulsion Plant Operating Profile: The ship is to be available for exploitation for minimum of 120 days in a year. Each shaft is expected to clock a minimum of 2500 running hours per year. Operational cycle of the ship will be around 36 months.</p>																			

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SECTION I GENERAL CONDITIONS & REQUIREMENTS				
Sl. No	Description			Remarks
3.6.	Service life of ship: The expected service life of ship is 30 years @ 2500 hours annual exploitation.			
4.	Ship's Support Systems Supplies Following ship's support supplies shall be available for the propulsion system. For electrical supplies, in case of different requirements (voltage/frequency, etc.), the equipment supplier shall provide suitable provision (transformer/converter/UPS, etc.)			
	Sr.	SYSTEM	SUPPLIES	REMARKS
	(a)	Electrical	415 V AC @ 50 Hz, 3 phase 230 V AC @ 50 Hz, 1 phase 24V DC Supplies	Any other power requirement shall be met by the equipment supplier.
5.	Noise & Vibration			
5.1.	Design of the equipment along with its associated auxiliaries/accessories/controls and mounting system, should ensure minimal vibration and noise.			
5.2.	All components of the equipment and accessories are to be designed for ensuring resistance to misalignment due to forces of vibration.			
5.3.	Suitable flexible hoses, bellows and noise reduction clamps are to be used for associated piping connections with the main equipment/auxiliaries.			
5.4.	Specific requirements on Noise & Vibration are to be as per respective equipment Technical Specification for Procurement.			
5.5.	Noise and Vibration levels of the equipment shall meet the classification rules and guidelines.			
6.	Noise Levels in Machinery Spaces Permissible noise levels in machinery spaces are to be in accordance ISO-6954:2000. The noise criteria laid down by IMO resolution A 468(XII) is to be taken as reference. The noise criteria for the compartments are as follows:			
	Sr. No.	Compartments	dB(A)	
	1.	Machinery spaces	110	
	2.	MCR	75	
	3.	Work places	85	
	4.	Non Specific workshops	90	
	5.	Bridge and Chartroom	65	
	6.	Radio Rooms	65	
	7.	Cabins	60	
	8.	Dining Hall/Offices	65	

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SECTION I GENERAL CONDITIONS & REQUIREMENTS					
Sl. No	Description				Remarks
	9.	Service spaces (galley, pantry)	75		
	10.	Normally unoccupied spaces	90		
7.	Vibration Isolators (Anti Vibration Mounts)				
7.1	For resiliently mounted equipment, the mounting system shall be capable of attenuating the vibrations of the offered equipment within the limit specified in Technical requirement.				
7.2	The installation and connections of the equipment shall account for the extreme displacements that may occur under loading conditions. Wherever necessary, suitable stops/snubbers shall be provided to prevent excessive motion.				
7.3	Vibration measurements are to be carried out as per ISO 4868(XII)/latest amendment.				
8.	IP Rating for Electrical Equipment IP rating for associated electrical equipment enclosure is IP 44. Specific IP rating to be as per Technical requirement in Section II.				
9.	Availability/ Reliability/ Redundancy/ Self Sufficiency Maximum time required for bringing the equipment to full operational condition while undertaking daily, weekly and monthly maintenance routines, are to be indicated by the equipment supplier.				
9.1.	Equipment should be robust in design for ensuring high reliability, ease of operation and minimum maintenance.				
10.	Documentation Various documentation will be submitted by the equipment supplier as per the scope of supply and responsibility. Quality documentation is to be submitted in comprehensive and time bound manner for meeting ship's detailed design and production targets as well as equipment production and delivery schedule. Documentation to be submitted by the equipment supplier are broadly indicated below:				
	Sr. No.	Documentation	Remarks		
	(a)	Binding design documentation	For progressing with detailed design, integration & installation.		
	(b)	(i) Quality Assurance Plan (QAP) (ii) Equipment manufacturing/ production documentation (iii) Test and Trial procedure/Reports	For approval by MDL / ICG equipment quality assurance during production and Test & Trial accordingly.		
	(c)	Equipment STW/HATs/SATs documentation	For preparing installation inspection/Test and trials documentation		

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Sl. No	Description			Remarks
	(d)	Technical Manuals for equipment operation, maintenance, logistics, etc.	For ship's crew, training and repair organizations.	
10.1.	All documentation (including documents, drawings, data, reports, manuals, etc.) should be in English language. Dimensional details in the drawings should be as per scale. Technical data and parameters should be in metric units (SI Units).			
10.2.	Following file/formats would be acceptable:			
10.2.1.	Documents, data & reports in MS-WORD/EXCEL, as applicable			
10.2.2.	Data base files in ACCESS			
10.2.3.	Orthographic drawings (2D) in DXF/DWG format			
10.2.4.	3D model of external topography of the equipment only in AVEVA MARINE/.STP format of max size of 5 MB			
10.2.5.	Above drawings/data are to be submitted in soft copies in latest software version.			
10.3.	Hard documents to be provided suitably grouped (section wise H, E, L, Navigation & Communication etc.) indexed and in moisture proof bound folders.			
10.4.	Binding Design Documentation: Comprehensive list of binding design documentation is to be submitted by equipment supplier, along with time schedule.- Binding Data: Three copies (one set for MDL, Two sets for ICG) and three sets on CD ROM of the following binding drawings/documents are to be supplied by the OEM within one month of placement of order:- (In addition to hard copies, all equipment drawings are also to be submitted in .stp format) (a)Block diagram of the system (b)Installation documents if any covering detailed procedure for installation with sequence of activities. (c)Installation drawings indicating overall dimensions, C.G., weight, maintenance envelope, IP, rating, shock mount details, mounting arrangement, bolting plan, lifting points, material specification etc. of each unit (d)Recommended arrangement of devices in nominated compartments. (e)Inter unit-cabling diagram with cables specifications. (f)Cable connection Schedule. (g)Power supply scheme for the system. (h)Heat dissipation of individual units in compartment & in close loop ventilation system, as required for the system			

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SECTION I GENERAL CONDITIONS & REQUIREMENTS		
Sl. No	Description	Remarks
	(i)Parts identification list, indicating part no, qty., maker's name, Specification etc. (j)Requirements for support systems such as fire fighting, communication, lighting etc. (k)Cable length limitation etc., if any. (l)Detailed foundation drawing including bolting plan. (m)Power consumption of each equipment (n) Any other design data/details, calculations, analysis, specifications, drawings, etc., as applicable (o) Shipping/Unshipping requirements (p) Training Plan (q) Preservation and Reperservation and upkeep procedure	
11.	<u>Documentation Associated with Quality Assurance Plan, Equipment Manufacturing & FATs/Test & Trials:</u> Documentation associated with quality assurance plan (QAP), equipment manufacturing and FATs(Factory Acceptance Tests), will be submitted by the equipment supplier in time bound manner, well in advance for approval by MDL / ICG.	
11.1.1.	While preliminary quality assurance & test plan shall be submitted by the equipment supplier along with the technical offer, detailed QAP is to be submitted <u>within 15 days</u> after placement of equipment order, for approval of MDL / ICG.	
11.1.2.	Prior to commencement of equipment production activities, equipment supplier shall consult MDL / ICG.	
11.1.3.	Documentation associated with equipment manufacturing would be submitted by equipment supplier progressively in time bound manner, for approval by MDL / ICG.	
11.1.4.	Documentation associated with equipment FATs procedure shall also be submitted by equipment supplier well in advance in time bound manner, for approval by MDL / ICG.	
12.	<u>Technical Manuals for Equipment (Operation, Maintenance & Logistics)</u> : The technical manuals/documentation pertaining to equipment & its associated auxiliaries/support systems, shall include technical description/information, specifications, drawings, performance data, installation, operational & maintenance requirements, spares & logistics, etc., in systematic, structured & comprehensive manner.	
12.1.	Under operating instructions, pre-starting inspection/checks, starting & shutdown procedures, functional parameters, trouble shooting, fault analysis, precautions, etc. to be suitably covered.	
12.2.	Procedures for undertaking all maintenance routines till the end of service life (for the entire life cycle) (including major overhaul), are to be clearly specified along with preservation/ de-preservation & upkeep requirements (when equipment is not in use, during long refit of ship).	

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SECTION I GENERAL CONDITIONS & REQUIREMENTS																											
Sl. No	Description	Remarks																									
12.3.	Procedures for setting to work, test & trials of equipment are also to be well documented.																										
12.4.	<p>Following technical manuals/documentation (in hard and soft form) shall be provided by the equipment supplier along with equipment supply.</p> <table border="1"> <thead> <tr> <th>Description</th><th>Content</th><th>Total number of copies per ship</th></tr> </thead> <tbody> <tr> <td rowspan="5">Technical Manuals</td><td>Technical Description and Operating Instructions Manual</td><td>7</td></tr> <tr> <td>On board Maintenance Manual</td><td>7</td></tr> <tr> <td>Field and Depot Maintenance Manual</td><td>7</td></tr> <tr> <td>Installation and Testing Manual</td><td>7</td></tr> <tr> <td>Parts and Tools Catalogue including CPL & PIL in ILMS/SLMS Format</td><td>7</td></tr> <tr> <td rowspan="5">Technical Documentation</td><td>Installation Drawings</td><td>7</td></tr> <tr> <td>As fitted Drawings</td><td>7</td></tr> <tr> <td>Applicable Standards Utilised</td><td>7</td></tr> <tr> <td>Test Procedure and Documentation</td><td>7</td></tr> <tr> <td>Certified Test Reports (FATs, Material Test Certificates, Calibration Certificates, and Weight Certificate etc.) & Records. Class certification</td><td>7</td></tr> </tbody> </table> <p>NOTE:</p> <p>1) Draft copy of the above listed Manuals & Documentations (in hard and soft form) shall be prepared by the supplier and shall be submitted to shipyards for comments & to classification society under copy to MDL/ICG for approval, well ahead of the delivery date of the equipment. Approval on the same shall be given within two weeks of receipt of the Manuals & Documentations complete in all respects & required format.</p> <p>2) Delivery of main equipment shall be considered completed only on receipt of all approved Manuals & Documentations as detailed in Table -7 above.</p>	Description	Content	Total number of copies per ship	Technical Manuals	Technical Description and Operating Instructions Manual	7	On board Maintenance Manual	7	Field and Depot Maintenance Manual	7	Installation and Testing Manual	7	Parts and Tools Catalogue including CPL & PIL in ILMS/SLMS Format	7	Technical Documentation	Installation Drawings	7	As fitted Drawings	7	Applicable Standards Utilised	7	Test Procedure and Documentation	7	Certified Test Reports (FATs, Material Test Certificates, Calibration Certificates, and Weight Certificate etc.) & Records. Class certification	7	
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	Field and Depot Maintenance Manual	7																									
	Installation and Testing Manual	7																									
	Parts and Tools Catalogue including CPL & PIL in ILMS/SLMS Format	7																									
Technical Documentation	Installation Drawings	7																									
	As fitted Drawings	7																									
	Applicable Standards Utilised	7																									
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SECTION I GENERAL CONDITIONS & REQUIREMENTS																				
Sl. No	Description			Remarks																
	3) All Manuals & Documentations should be categorised as per the above subject/content description only.																			
13.	Quality Assurance and Testing Quality assurance and testing requirements, pertaining to this equipment should confirm to standard conditions of quality assurance of Nominated classification society as mentioned in Technical Requirement of this SOTR.																			
14.	Design Standards Following rules and regulations as applicable shall be met:																			
14.1.	Nominated Classification Society Class Rules.																			
14.2.	International load line reg. 1966 as amended by Protocol of 1988 and any other subsequent amendments.																			
14.3.	IMO/MARPOL-73/78 reg and any further / latest amendments including MS Act 58 and their rules.																			
14.4.	COLREG 72 and any further/ latest amendments.																			
14.5.	IMO /Anti Fouling System.																			
14.6.	International tonnage 1969 and any further/ latest amendments.																			
14.7.	SOLAS 1992 as amended in 2002 and any further / latest amendments.																			
14.8.	Stability standard as per NES 109.																			
14.9.	Naval Magazine Explosive Regulations (NMER).																			
14.10.	Helo deck Regulation as per IRS Rules and Regulations for construction of Coast Guard Vessels (Ch-5, Section -8) or equivalent ABS/LRS/BV/DNV/GL/NK rules.																			
14.11.	Superior/higher specifications of standard are acceptable subject to proving and satisfactory trial by Yard.																			
14.12.	During execution of the project, following organizations would be associated for ship design, construction, quality control and Ship trials/acceptance: <table><tr><td>(a)</td><td>Design</td><td>:</td><td>Shipyard / Nominated Classification society</td></tr><tr><td>(b)</td><td>Construction</td><td>:</td><td>MDL and CGRPT Mumbai, at Shipyard.</td></tr><tr><td>(c)</td><td>Quality Control</td><td>:</td><td>Nominated Classification society</td></tr><tr><td>(d)</td><td>Ship Trials</td><td>:</td><td>Indian Coast Guard/Shipyard/ Nominated Classification Society.</td></tr></table>			(a)	Design	:	Shipyard / Nominated Classification society	(b)	Construction	:	MDL and CGRPT Mumbai, at Shipyard.	(c)	Quality Control	:	Nominated Classification society	(d)	Ship Trials	:	Indian Coast Guard/Shipyard/ Nominated Classification Society.	
(a)	Design	:	Shipyard / Nominated Classification society																	
(b)	Construction	:	MDL and CGRPT Mumbai, at Shipyard.																	
(c)	Quality Control	:	Nominated Classification society																	
(d)	Ship Trials	:	Indian Coast Guard/Shipyard/ Nominated Classification Society.																	
15.	Quality Standard: Design and production of equipment should conform to the best worldwide engineering practices, for ensuring high quality, reliability,																			

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Sl. No	Description	Remarks
	durability, ease of operation and maintenance for meeting the ship's requirements.	
15.1.	During equipment production the equipment shall be subjected to various stage inspections. Equipment supplier shall ensure high quality of production as per approved quality assurance plan. Quality assurance should meet the specified standards and intent of ISO 9001: 2015 (quality management systems) or its latest version.	
16.2	During equipment production, any deviation to the QAP/finalized specifications/standards shall be brought to the notice of designated classification society and Shipyard/ICG, along with valid reasons and recommended solution, without any compromise on quality, reliability and performance of the equipment.	
16.	Maintenance & Logistics	
16.1.	Equipment supplier shall ensure high reliability and low maintenance of equipment.	
16.2.	While equipment maintenance and repair between major overhauls would be carried out in-situ on-board the ship, major maintenance/overhaul would be undertaken ashore by repair organization.	
16.3.	Equipment design should therefore ensure ease of maintenance and accessibility to important sub-assemblies/components/accessories.	
16.4.	Suitable provisions (such as inspection windows, etc.) as feasible, are to be made for ease of in-situ visual inspection of important sub-assemblies/components/accessories for routine inspection, checks and maintenance, without dismantling the equipment assembly/components.	
16.5.	Equipment supplier shall provide maintenance schedules, planned maintenance intervals and procedure for undertaking maintenance of equipment on-board and ashore.	
17.	<u>Installation Tools and Commissioning Consumables:</u>	
17.1.1.	Installation Tools: Special tools, jigs and fixtures & test equipment required for flushing, setting to work, testing & tuning, on-board trials (HATs/SATs) and post CST inspection of critical internal parts and reassembly of the equipment and its auxiliary systems shall be supplied. Tools shall be ordered along with the main equipment & delivered along with the main equipment.	
17.1.2.	Commissioning Consumables: The Commissioning consumables (first charge like coolants, greases, special oil, filters, gaskets, refrigerant etc.) shall be included in the scope of supply. Commissioning consumables shall be delivered before STW of the main equipment, tentative schedule of which shall be indicated in the Tender Enquiry.	
17.1.3.	An itemised list with cost for the same is also to be indicated in the offer to facilitate their procurement in future, if required.	
17.1.4.	One set of standard tools adequate for undertaking the maintenance on-board should be supplied along with the offer.	

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18.	Indigenisation / Local Support (Applicable to equipment with import content)	
18.1.	The supplier is to indicate if the equipment is original OEM supply or manufactured in INDIA under license (specifying the import content). The manufacturer is to engage into a co-operation with a reputed manufacturer of similar equipment's in India and accordingly plan for progressive indigenization.	
18.2.	In this respect, the equipment manufacturer shall confirm that he will be able to authorize priority works at his works and provide the necessary local support as required to meet the ship construction and trial programme and provide the necessary after sale support to the ICG. Future plans for indigenous production of the equipment associated control/monitoring devices and transfers of technology are to be indicated in the proposal for consideration of Indian Coast Guard Headquarters.	
19.	Product Support Equipment supplier is to provide product support for ship's life for a minimum period of 30 years. In case the equipment is likely to be obsolescent, the supplier shall notify the Coast Guard with at least two years prior notice, along with valid reasons and recommended solution.	
19.1.	The firm/OEM to submit undertaking to provide product support for minimum period of 30 years from date of delivery of the vessel.	
19.2.	Undertaking for upgrade/currency of software for all equipment min 05 years from date of delivery of vessel. In case of obsolescence within 05 years from date of delivery of the ship, the same to be upgraded without any additional cost.	
19.3.	Firm to indicate after sales and product support facilities in India with response time for attending defect and providing spares.	
19.4.	All upgradation and modification carried out on equipment during its life cycle must to be intimated to ICG. Further, any upgradation/modification during guarantee period of the equipment same to be included free of cost.	
19.5.	Firm should agree to enter into the rate contract / All-inclusive Annual maintenance contract (AIAMC) with ICG for maintenance and supply of spares.	
20.	Operational Cycle: The operating refit cycle of ship is as follows:	
20.1.1.	1st and 2nd Ops refit cycle – Operation cycle of 24 months followed by a refit.	
20.1.2.	3rd and 4th Ops refit cycle – Operation cycle of 18 month followed by a refit.	
20.1.3.	Balance Ops and refit cycle – Operation cycle of 15 month followed by a refit.	
20.1.4.	First three refits are short refit (SR) followed by a normal refit (NR). Second NR will be medium repair (MR).	
20.1.5.	Short refit is for duration of 04 months. Normal refit is for duration of 05 months and medium refit for duration of 12 months.	
21.	Interchangeability Equipment design is to ensure that components and parts having same dimensions and characteristics should be inter-changeable between different	

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	units of similar kind in the ship, without affecting the specified equipment performance.	
22.	Tally and Diagram Plates: All tallies and diagram plates shall be as per OEM Standards and must generally indicate the following-	
22.1.	Manufacture's Name-	
22.2.	Manufacturer's Serial No. Type/Model:-	
22.3.	Year of Manufacture.-	
22.4.	Electrical parameters viz. Ratings, Voltage, Frequency, Current, Insulation details etc as applicable-	
22.5.	Weight of Equipment.-	
22.6.	IP Rating of the equipment.-	
22.7.	Danger labels in Red colour with white lettering are to be provided on all electrical equipment operating on 150Volts or higher.	
22.8.	Other important instructions are to be given on tally plate.	
22.9.	Tally of JB/Panel and other equipments internal diagram plate to be prepared by OEM.	
22.10.	Cable Tallies as per approved system drawing to be prepared by OEM. Laminated circuit drawing indicating connection details of connections to be provided.	
22.11.	Cable tallies should be supply for both the ends.	
23.	Instruction Plates Instruction plates listing the starting/shut-down procedure and precautions in brief are to be prominently displayed on the equipment. The Instruction plates are to be SS/ chrome plated. Equipment is to be supplied with a set of instruction plates duly mounted on equipment or supplied loose. Laminated circuit drawing indicating connection details of connections to be provided.	
24.	Painting Specification Standard painting procedure shall be applicable for suitability for marine environment. Equipment shall be cleaned, degreased and painted with two coats of anticorrosive marine paint & two finish coats. All equipment painting shall conform to CGBR 382 or equivalent International Standards.	
25.	Lifting Arrangement Equipment components weighing more than 40 kilograms are to be provided with eyebolts/lifting arrangement, for ease of handling/lifting on board the ship or ashore. During transportation/transit of equipment, adequate provisions (such as supports, locking arrangement, jacking, etc.) are to be made for preventing any damage to the equipment & its associated components. Any component requiring special handling shall be clearly marked and appropriate handling instructions shall be provided by equipment supplier. One set of special lifting gear (if any) shall be supplied to shipyard.	

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26.	Preservation / Conditioning	
26.1.	Equipment supplier is to provide high quality packing for the complete scope of supply along with handling arrangements. The package/container should display clear instructions for stowage, handling, care and accessibility for inspection of equipment preservation condition.	
26.2.	Equipment shall be supplied with Initial preservation for a period of 12 months for tropical conditions and protected against high humidity. The equipment are to be preserved on delivery as per the standard marine engineering practice. Closing plates/plugs/caps (duly filled with nitrogen gas) are to be provided on all openings.	
26.3.	For re-preservation requirements, at shipyard or on board ship beyond initial preservation period, suitable provision is to be catered for by equipment supplier. Equipment supplier shall provide re-preservation & upkeep procedure, preservatives/consumables and technical assistance/supervision to the shipyard, as per requirements (if special equipment/Pumps, hoses, fittings, etc. required shall be brought by the supplier along with them for carrying out the preservation on board the ship.	
26.4.	In the event of storage getting extended beyond a period of 12 months, re-preservation shall be carried out on 6 month extensions basis. The conditions and cost shall be stated in the offer for further two re-preservation of 6 months. Details of the preservative used (oils & greases etc.) and the procedure for de preservation and re preservation, in shop or on board the ship, shall be indicated in the offer.	
26.5.	Preservation requirement, procedures and schedule for main equipment, are to be indicated in the offer.	
27.	Packing & Shipping	
27.1.	All equipment shall be adequately packed and protected with supports to ensure adequate protection during all methods of transportation. Each unit within a package/container shall be clearly marked in English for identification. The container shall clearly indicate the commodity description with caution marks, weight, size, etc.	
27.2.	A separate document giving complete details & instruction for storage, preservation, handling & transportation after delivery shall be supplied & a copy must be included with the shipping document. The supplier should indicate the delivery schedule port of embarkation, transport, packing, preservation, insurance etc.	
27.3.	The instrumentation, sensors and meters etc. which are fitted on the equipment are to be removed from the equipment and shall be staggered delivered according to shipyard schedule in a separate suitable box/packing during STW.	
27.4.	Following items shall be packed in separate containers/boxes with proper colour coding (with description) & list of their contents in English for their easy identification and traceability:	

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27.4.1.	Deliverables related to Main Equipment (to be marked in green colour).	
27.4.2.	Deliverables related to Auxiliary Equipment (to be marked in green colour).	
27.4.3.	Deliverables related to Installation material and Tools related to Main & Auxiliary Equipment (to be marked in green colour).	
27.4.4.	Commissioning consumables and Tools (to be marked in green colour).	
27.4.5.	On Board spares and Tools (to be marked in red colour) in SPTA boxes. .(Not applicable)	
27.4.6.	Base & Depot Spares (to be marked in red colour). .(Not applicable)	
27.4.7.	Documentation (to be marked in blue colour).	
27.4.8.	The list of actual deliverables against each of the above serials shall be forwarded to shipyards in soft copy (MS Excel format) with required part nos. <u>within one week of finalization of PNC</u> in order to detail them in the purchase order.	
27.4.9.	Packing list should give further breakup of items, wherever particular item is quantified by set.	
28.	Training	
28.1.	The equipment supplier is to impart training, to ship's crew, on aspects related to operation, installation, maintenance and repair of the equipment.	
28.2.	For imparting training, complete training package in hard & soft form (including suitable training material, dockets, computer based aids, etc.), is to be provided by the supplier to the participants.	
28.3.	Training would be conducted by the equipment supplier at Shipyard/ On-board Ship. Training plan will be submitted by the equipment supplier, along with the technical offer. Training is required to cover the following aspects (but not limited to):	
28.3.1.	Design and installation	
28.3.2.	Operation and trouble shooting	
28.3.3.	Control & monitoring	
28.3.4.	Upkeep and routine maintenance	
28.3.5.	On board maintenance including major repairs and overhaul.	
29.	Security of Information The information contained in this document is not to be divulged to any other firm/third party without the prior permission of the Indian Coast Guard and MDL. Adequate measures are to be taken to ensure safe custody of this document.	
30.	Warranty	
30.1.	The equipment along with associated auxiliaries/components shall be warranted by the equipment supplier for the stipulated performance for a period of twenty (20) months from the date of delivery of equipment to MDL or twelve (12) months after planned delivery date (D) (mentioned in subsequent Para) of the ship by shipyard MDL to the Indian Coast Guard, whichever is later. This is to be referred as 'Standard Warranty'.	

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30.2.	During the said period, the equipment supplied shall be warranted against any malfunction, defects, material failure, non-compliance to ordered specifications, sub-optimal performance, design deficiency, poor workmanship and quality. Any expenditure on account of equipment malfunction, repair or supply of spares against warranty defects shall be borne by the equipment supplier. If any defective part is required to be taken back to OEM's factory/works (i.e. importing and re-exporting from Country of origin) for the purpose of service, the entire liability including expenditure towards the same shall be borne by the supplier. The spare parts required / consumed for scheduled servicing & maintenance activities in the period of 'Standard Warranty' shall also be provided by the OEM without any commercial implication.	
30.3.	If within the period of warranty, the ship and (or) stores and (or) spares are reported by the Shipyard to have failed to perform as per the specifications, the Supplier shall either replace or rectify the same free of charge, maximum within 15 days of notification of such defect by the Shipyard provided that the goods are used and maintained by the Shipyard as per instructions contained in the operating Manual.	
30.4.	Warranty of the equipment would be extended by user in log book, Spares and all consumables required for warranty repairs shall be provided free of cost by Supplier. All activities including diagnosis, rectification, calibration, transportation etc., required for making equipment serviceable and available would be Supplier's responsibility.	
30.5.	The Supplier also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Shipyard and the Supplier subject to acceptability by the Shipyard. The Supplier shall intimate the assignable cause of the failures.	
30.6.	Supplier hereby warrants that necessary service and repair backup during the warranty period, shall be provided by the Supplier and he will ensure that cumulative downtime period for the Ship and or the fitted equipment /system equipment does not exceed 45 days of the warranty period. Thereafter, the Shipyard reserves the right to make good the defects at suppliers risk and cost.	
30.7.	If the associated equipment and service, spares of Ship fails frequently and/or, the cumulative down time exceeds 45 days of the warranty period or a common defect is noticed repeatedly with respect to a particular item/component/sub-component, that complete item/ equipment shall be replaced free of cost by the Supplier within 45 days of receipt of the notification from the Shipyard duly modified/upgraded through design improvement in all equipment supplied/yet to be supplied and Engineering Support Package (ESP) supplied/yet to be supplied. Thereafter, the Shipyard reserves the right to make the defects at Supplier risk and cost.	

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30.8.	In case the complete delivery of the ESP is delayed beyond the period stipulated in this contract, then the Supplier undertakes that the warranty period for the goods/stores shall be extended to that extent.																						
30.9.	The Supplier warrants that the ship, the associated equipment and service supplied will conform to the Temperature and Humidity conditions as mentioned in this document.																						
30.10.	The Supplier agrees to provide back to back warranty of equipment /system or any other item whose specified warranty by the OEM is more than 12 months and shall extend the same warranty to the Shipyard at no. additional terms and conditions.																						
30.11.	Extension of Warranty: Supplier shall mandatorily indicate, in the offer, the annual rate for extended warranty period, in the event of expiry of warranty period as detailed above along with the attendant commercial terms and conditions if any.																						
31.	Planned Ship Delivery date(D) The planned date for delivery of the Ships to the Indian Coastguard by MDL are tabulated below: <table border="1" data-bbox="386 953 1198 1205"> <thead> <tr> <th>Ship no.</th><th>Yard No.</th><th>Planned Delivery date</th></tr> </thead> <tbody> <tr> <td>1</td><td>16401</td><td>July 2027</td></tr> <tr> <td>2</td><td>16402</td><td>December 2027</td></tr> <tr> <td>3</td><td>16403</td><td>May 2028</td></tr> <tr> <td>4</td><td>16404</td><td>October 2028</td></tr> <tr> <td>5</td><td>16405</td><td>March 2029</td></tr> <tr> <td>6</td><td>16406</td><td>August 2029</td></tr> </tbody> </table>	Ship no.	Yard No.	Planned Delivery date	1	16401	July 2027	2	16402	December 2027	3	16403	May 2028	4	16404	October 2028	5	16405	March 2029	6	16406	August 2029	
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3	16403	May 2028																					
4	16404	October 2028																					
5	16405	March 2029																					
6	16406	August 2029																					
32.	Weight Recording / Weight Certificate Weights of all components are to be recorded and a suitable certificate shall be submitted, by the equipment supplier. The designated inspection authorities shall countersign such certificates. Format for weight control data sheet, is placed at Annexure '4' of this document.																						
32.1.	Net weight of each component is to be recorded in presence of designated inspection authority and the weight certificate is to be submitted by the equipment supplier, along with equipment supply. Format for weight certificate, is placed at Annexure '5' of this document.																						
32.2.	The supplier shall have to submit, reasons for variation between allocated weight and actual/certified weight for each and every item, wherever applicable, to Coast Guard and MDL for their consideration and further necessary action.																						
33.	Technical Assistance																						
33.1.	The Supplier shall provide the necessary representative(s) as and when required , in carrying out inspection and supervise the work that is done on the equipment, during the following phases:																						
33.1.1.	Preparation for installation of equipment by shipyard.																						
33.1.2.	Monitoring of proper equipment preservation during storage.																						

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33.1.3.	On-board erection and alignment.	
33.1.4.	Setting to Work (including fitment of latest calibrated instrumentation).	
33.1.5.	Harbour Trials.	
33.1.6.	Assistance in trouble shooting.	
33.1.7.	Customer Sea Trials	
33.1.8.	Post CST equipment Inspections.	
33.1.9.	Final Machinery Trials.	
33.1.10	Assistance in operation during equipment guarantee period.	
33.2.	Shipyard has to progress on ship construction activities, simultaneously on ships of the coastguard project or on ships of different projects. View this; there shall be every likelihood of clash of requirement of technical assistance. In such eventuality, in order to avoid delays on one ship due to similar work requirement on other ship, supplier shall depute their dedicated separate/independent team of supervisors/specialists for required technical assistance, on the required ships. Rotation of supervisors/specialist amongst the various ships/projects shall be avoided.	
33.3.	The supplier shall provide checklist for installation, setting to work, HATs & SATs to the shipyards to ensure the completeness of the activities by shipyards in order to avoid waiting period of the supplier specialists.	
34.	Receipt Inspection Receipt inspection for the major equipment shall be carried out in the presence of OEM rep to verify completeness of the scope of supply and intactness of the supplied equipment. Defective / damaged parts and deficiency, if any, in supply shall be made good by OEM free of cost. OEM shall be intimated the date of receipt inspection.	
35.	Compliance Matrix Para-wise compliance matrix, including paras which are not applicable, as per the technical specifications (contained in this document) shall be submitted by the equipment supplier along with the technical offer, in the format as per Annexure-3 (preferably in excel sheet). The technical offer received without Compliance Matrix shall be liable for rejection.	
36.	OEM's responsibility-	
36.1.	OEM to Prepare system drawing/Cable drawing in autocad .dwg format	
36.2.	OEM to prepare cable schedule, connection schedule of the system.	

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SECTION – II TECHNICAL SPECIFICATION AND REQUIREMENTS		
1.	Equipment Description: This technical specification covers the manufacturing, supply of main equipment, spares and documentation and on-board commissioning of latest version of Aldis Lantern.	
	Refer to class notation of the vessel mentioned at Sr no. 3 of Section – I (Introduction). The equipment and components shall be manufactured as per ABS and IRS classification rules / statutory requirements as applicable.	
2.	Scope of Supply	Qty /vessel Each set consist of:
2.1	5" Hand operated ALDIS Lamp complete with 2 core, 10 meter long insulated flexible cable, 60 W bulb/Lamp 24V DC as per Patt. No. 0558/462-4287 or equivalent approved/acceptance by Navy and spare battery	3 No.
2.2	Bulkhead mounted type control unit with battery charger cum rectifier unit with integral 24V maintenance free battery and socket suitable for plug provided with Aldis Lantern Input voltage :230V,1Ph,50Hz AC Output voltage : 24V DC.	3 No.
2.3	Stowage box(Patt. No. 0558/462-4204 or equivalent approved/acceptance by Navy). suitable for stowing 5" Hand Operated Aldis Lamp	3 No.
2.4	Additional item & accessories, if any, not indicated in the above stated scope of supply but required to achieve completeness of system/equipment will be the responsibility of the firm to supply without any price implication.	3 Set
	Scope of supply indicated above is based on the MDL previous experience. If any item/equipment required to complete the system/scope of supply, firm may please quote for the same and the same be clearly indicated with individual quantity of each accessories in the offer. If such item is not quoted and found, the same is required at the time of commissioning/installation, it is responsibility of the firm to supply such item/equipment free of cost.	
	The supplier is responsible in all respects for the completeness of the system and should prove satisfactory performance of the system/equipment on board the ship to the CGHQ rep/Local Surveyor/MDL QA rep as per approved trial schedule, including Service of Engineers, Commissioning.	
3.	Technical Specification	
3.1	The Aldis Lantern must be suitable for operation 230V, 1 phase, 50 Hz AC supply and 24V DC supply from battery incase of failure of 230V,1 Phase AC supply.	
3.2	Warning plates are to be fitted for battery charger cum rectifier unit in prominent position indicating dangerous voltage e.g. 'DANGER 230 VOLTS'	
3.3	All wirings should be flexible LFH type copper cable of 1000 V grade and minimum 1.5 sq mm. Wiring to be marked at both ends with identification ferrules.	
	Safety :	
	The design of the equipment is to provide the maximum safety to the operator against the risk of electric shock.	
4.	Installation MDL's responsibility:-	
4.1	All installation works on board, including shipping of equipment on board, its placement on its seating and connection of the delivered equipment will be carried out by MDL / MDL authorized contractor.	
4.2	Termination of the cables will be undertaken by MDL / MDL authorized contractor.	

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5.	Standard, Inspection, Factory Tests & Acceptance of Equipment/ System:-
5.1	Any modification/changes if required on account of type testing or otherwise, the same are to be made good free of cost by supplier.
5.2	Factory Test to be undertaken in the premises of manufacturer and manufacturer's Quality Assurance Certificate, Shop Test Trial Report to be supplied along with the equipment/system
5.3	Manufacturer's standard factory test procedure will be acceptable for imported equipment of non-classification category.
5.4	CGHQ /ABS /IRS Inspection certificates / Manufacturer's work test certificate issued by firms Q/A, as applicable is to be supplied in triplicate along with the equipment.
6.	Receipt Inspection
6.1	All items will be subjected to final inspection on receipt in MDL by our Inspection Authority and CGRPT, Mumbai.
6.2	Receipt inspection for the major equipment shall be carried out in the presence of OEM supply to verify the completeness of the scope of supply
6.3	Any Damage or deviation from Purchase order will be rectified by OEM at firm cost
7.	Performance:-
7.1	Any Design deficiency or shortages in material, deficiency in capacities of components, noticed at a later date & time shall be the responsibility of the supplier to make it good as to meet and prove the performance of Aldis Lantern
8.	Specific Requirements:-
8.1	Firm to indicate if there is any specific requirement of special preservation for the equipment/accessories.
8.2	List of firm's own manufactured items and list of bought out items by the firm if any to be clearly indicated in the offer.
9.	GENERAL TECHNICAL REQUIREMENTS:-
9.1	The equipment shall be supplied in its entirety to make it fully operational. All the items/materials as indicated in the P.O & TNC are to be supplied in single delivery.
9.2	Equipment, Units to be provided with Earthing studs/bolts on both the sides
9.3	The equipment shall be supplied with all its accessories including interconnecting cables, cable gland, connector, nuts, bolts, consumables etc. required for installation and satisfactory performance of the equipment.
9.4	All terminal blocks and connectors should be of Wago / reputed make.
9.5	Painting/Preservation: Proper preservation/ paint of standard marine quality to be applied to the equipment. Details to be forwarded with the offer.
9.6	Delivery challan are to be made in details indicating technical specification, description of the main item(s) & other auxiliary item(s).
9.7	The entire inspection & test certificate and their results, acceptance need to be supplied along with consignment as indicated in the P.O.
9.8	All the items are to be provided with inspection agency stamping and are to be legible.
9.9	All the defects, discrepancies & damages that are indicated in MDL inspection report are to be rectified/ made good and re-offered by the firm immediately.
9.10	All the item(s)/material(s) are to be provided with adequate packing materials in order to prevent transit damage.
9.11	Calibration certificates if any are to be supplied along with the consignment
9.12	Any change in model due to upgradation will be considered if and only if found feasible by MDL/CGHQ and only after obtaining approval from CGHQ/MDL and should have no

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	cost implications to MDL/CGHQ.
9.13	Any changes corrections in drawing due to upgradation if approved by MDL/CGHQ must be undertaken by the firm with no cost implication.
9.14	Any additional unit required over and above the quoted items as a result of design changes by the firm would be supplied to MDL without any price implication.
10.	Technical Offer as Per Shipyard Tender: As a minimum, the following technical and design details applicable to equipment / item shall be submitted with the technical proposal:-
10.1	Equipment description with block diagram, system components, system operation, weight, CG and dimensions of the equipment and units.
10.2	Technical specifications of equipment.
10.3	Certificate of Conformity as per Annexure- 1 of SOTR
10.4	List of Deviations as per Annexure-2 of SOTR
10.5	Compliance matrix (Para-wise compliance to tender specifications) as per Annexure -3 of SOTR
10.6	Reference list for order executed for similar equipment with Indian / International Navy / Coast guard or similar platform such as ocean going vessel, offshore platforms and Oil-Rigs
10.7	Compliance to Pre-Qualification criteria along with reference list
10.8	Clear demarcation between the scope of supply of firm and that of ship builder.
10.9	Delivery time from receipt of order.
10.10	Trial and commissioning time of complete system on board
10.11	Supply of documentation
10.12	Product Support Certificate
10.13	Confirmation for Technical Assistance for System.
10.14	Preliminary quality assurance and test plan (QAP)
10.15	Authorization letter from OEM
10.16	Four copies of technical offer shall be submitted by equipment supplier; in hard and soft form (CD-ROM).
11.	Upgradation of Electronic Equipment.
11.1	The OEMs of electronic equipment being fitted should provide upgradation of the equipment/sub components/software in case of obsolescence within 05 years from date of acceptance of the vessel without any additional cost
11.2	The Vendor shall submit an undertaking to maintain currency/upgrade of software for the equipment upto 05 years from the date of delivery of the Vessel
11.3	In the event of any obsolescence during the above mentioned period of product support in respect of any component or sub system, mutual consultation between the vendor and MDL/ Owner / Indian manufacture will be undertaken to arrive at an acceptable solution including additional cost, if any.
11.4	Any improvement/Modification /up gradation being undertaken by the OEM or their sub-suppliers will be communicated to MDL/ Owner. During the guarantee period, these improvement/ modification/up gradation will be carried out by the vendor at vendors cost and post guarantee period at Owners cost if required by the owner
11.5	The OEM of Electronic Equipment being fitted should provide Upgradation of the equipment/sub components/software in case of obsolescence within 05 Years from date of delivery of the vessel without any additional cost
12.	Certificate of Malicious code:

	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN ENGINEERING	SOTR No.	5101(C)
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SECTION – II TECHNICAL SPECIFICATION AND REQUIREMENTS	
12.1	<p>OEM would undertake necessary measure to ensure strict adherence to the following certificate of Malicious Code submitted by them while bidding the tender.</p> <p>“This is to certify that the Hardware and the Software beings offered as part of the contract does not contain embedded malicious code that could activate procedures to:-</p> <p>Inhibit the desired function of equipment</p> <p>Cause physical damage to the user or his equipment during the operational exploitation of the equipment</p> <p>The OEM is liable in case physical damage or malfunctioning is caused due to activation of any such malicious code in embedded software.</p> <p>The OEM will be considered to be in breach of the contract in case physical damage, loss of information or infringement related to copyrights and Intellectual Property Rights (IPRs) are caused due to activation of any such malicious code in embedded software.”</p>
13.	Certificate of Conformity:-
13.1	<p>The offer should be complete with CERTIFICATE OF CONFORMITY as per format detailed at Annexure - 1 .The offer received without the “Certificate of Conformity”, duly filled in and signed, may not be considered.</p>

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Annexure - 1

CERTIFICATE OF CONFORMITY

(To be filled in by the **SUPPLIER** & submitted as part of the Offer)

M/s. _____

With reference to the subject **Requisition** received along with the MDL Inquiry and our QUOTATION No. _____ Dated _____ we hereby confirm / clarify the following:

1. REGISTRATION WITH DQA (WP) / DQA (N) / MDL:

We are NOT Registered / already REGISTERED (*) with _____ for manufacture and supply of following items

- (a) _____
(b) _____

2. PAST PERFORMANCE:

We have NOT Supplied / have SUPPLIED (*) identical / similar (*) ITEM to MDL in the past. The relevant Order references are given below :

- (a) _____
(b) _____

3. REQUISITION / DRAWINGS / SPECIFICATIONS / SOR:

We ARE NOT / ARE (*) fully aware of the relevant Drawings / Specifications / TSP etc. indicated in the REQUISITION and the related Documents.

4. DEVIATION:

The OFFER is fully in compliance with the Requisition WITHOUT any deviation / EXCEPT for the deviations listed in the attached format (*).

5. BINDING DATA:

OUR Drawings with necessary BINDING DATA such as Overall Dimensions, SEATING Details / Bolting Plan, Connection / Interface Details, Face to Face Dimensions is ENCLOSED / NOT Enclosed (*) with the offer. We have noted that any change in Binding Data shall require specific approval from MDL/IHQ of MoD (N).

6. DOCUMENTS / DATA:

The following Technical Documents / DATA SHEETS are enclosed herewith

- (a) (To be specified if applicable)


For M/s. _____

Signature:

Date : _____


Stamp:

(*) **Strike out which is NOT APPLICABLE.**

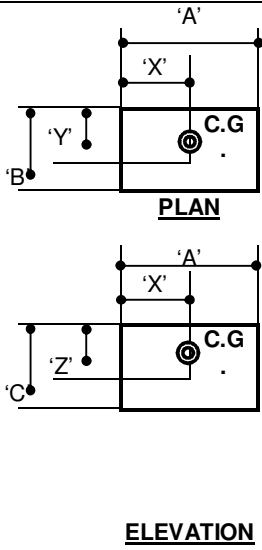
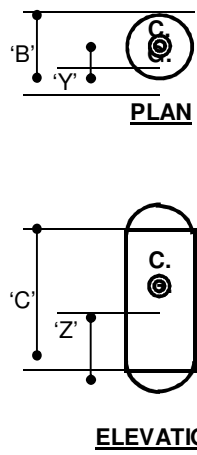
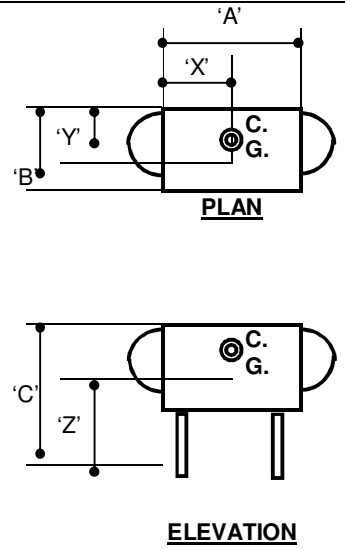
	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN ENGINEERING	SOTR No.	5101(C)
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Annexure - 3

COMPLIANCE MATRIX					
EQUIPMENT DESCRIPTION:				EQUIPMENT NO. :	
The form shall be completed by Supplier & shall be supplied along with the equipment.					
SUPPLIER'S NAME				Ref. Drg. No.	
ADDRESS					
TELEPHONE NO.				Part No.	
ORDER NO.				EQPT. NO.	
S No.	Tender Specifications Para reference	Brief Description as per Relevant Tender Specifications	Compliance to Tender Specifications	Deviations if any, with Reasons	Remarks if any
SUPPLIER'S COMPANY SEAL				SUPPLIER'S SIGNATURE & DATE	

	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN ENGINEERING	SOTR No.	5101(C)
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Annexure - 4

WEIGHT CONTROL DATA SHEET																			
EQUIPMENT DESCRIPTION		EQUIPMENT NO.																	
COMPARTMENT		LOCATION																	
SWBD : <input type="checkbox"/> TOLERANCE CODE <input type="checkbox"/> PRELIMINARY EST. <input type="checkbox"/> DESIGN EST. <input type="checkbox"/> M.T.O (CALC) <input type="checkbox"/> WEIGHED <input type="checkbox"/> TOLERANCE ± %																			
1. WEIGHT (Kg.)																			
(a)	DRY	Kg ±	%																
(b)	FLUID	Kg ±	%																
(c)	OPERATING	Kg ±	%																
(d)	TEST	Kg ±	%																
(e)	TOTAL	Kg ±	%																
2. EQUIPMENT DIMENSIONAL DATA (mm) & Co-ordinates of CoG																			
																			
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th align="center" colspan="2">OVERALL SIZE</th> <th align="center" colspan="2">CENTRE OF GRAVITY</th> </tr> </thead> <tbody> <tr> <td align="center">'A'</td> <td></td> <td align="center">'X'</td> <td></td> </tr> <tr> <td align="center">'B'</td> <td></td> <td align="center">'Y'</td> <td></td> </tr> <tr> <td align="center">'C'</td> <td></td> <td align="center">'Z'</td> <td></td> </tr> </tbody> </table>		OVERALL SIZE		CENTRE OF GRAVITY		'A'		'X'		'B'		'Y'		'C'		'Z'			
OVERALL SIZE		CENTRE OF GRAVITY																	
'A'		'X'																	
'B'		'Y'																	
'C'		'Z'																	
NOTE : <ul style="list-style-type: none"> ALL OFFERS SHALL INCLUDE THIS DATA SHEET DULY FILLED IN BY THE SUPPLIER (SIGNED, DATED & SEAL AFFIXED). ALL FINISHED ITEMS SHALL BE WEIGHED & A CERTIFICATE SHALL BE PROVIDED AS PER ATTACHED SHEET. SEPARATE SHEETS SHALL BE COMPLETED FOR EACH INSTALLED EQUIPMENT. ORIGIN OF 'X', 'Y' AND 'Z' TO BE INDICIATED. 																			
SUPPLIER'S SEAL		SUPPLIER'S SIGNATURE & DATE																	

	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN ENGINEERING	SOTR No.	5101(C)
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Annexure - 6

TABLE OF CABLE CONNECTION SCHEDULE FORMAT

SR NO	CABLE NO	CABLE TYPE	NO: OF CORES	FROM DEVICE	CONN REF	TERMINAL / PIN NO	TO DEVICE	CONN REF	TERMINAL / PIN NO	SIGNAL	REMARKS
1	CAB-1	XXX 3 CORE CABLE	1	DEV-A	P1	1	DEV-B	J1	1		
			2			2			2		
			3			3			3		



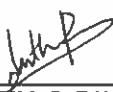


MAZAGON DOCK SHIPBUILDERS LIMITED


(A Govt. Of India Undertaking)

**SHIPBUILDING DESIGN ENGINEERING
DOCKYARD ROAD, MUMBAI - 400 010**

**STATEMENT OF TECHNICAL REQUIREMENTS
FOR
ALDIS LANTERN**

PROJECT	:	14 Nos FAST PATROL VESSELS (FPV)
YARD NOS MDL	:	16501/16502/16503/16504/16505/16506/16507/ 16508/16509/16510/16511/16512/16513/16514
CLIENT	:	INDIAN COAST GUARD
DOCUMENT NO	:	5101(C)
ICG HQ REFERENCE / APPROVAL	:	
CLASSIFICATION NOTATION	:	+ A1 HSC (Special Government Service) +AMS or equivalent.

2	Annexures Updated	11.07.2025	
1	a. CGHQ approval with comments received via letter SA/0160/14FPVs/Electrical SOTR dated 03 Dec 2024 incorporated.	26.06.2025	
0	First Issue	23.11.2024	
REV	DESCRIPTION	DATE	AUTHORISED BY
			
ROHITH S PILLAI M (D-L)	S.SONAWANE CM (D-L)	P. K. MODAK DGM / HOS (D-L&Wn)	
Prepared By	Checked By	Approved by	


	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN ELECTRICAL	SOTR No.	5101(C)
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ACRONYMS

FATs	-	Factory Acceptance Trials
HATs	-	Harbour Acceptance Trials
MDL	-	M/s Mazagon Dock Shipbuilders Limited, Mumbai
OEM	-	Original Equipment Manufacturer
SATs	-	Sea Acceptance Trials
STW	-	Setting to Work
CGRPT	-	Coast Guard Refit and Production team
ICG	-	Indian Coast Guard
FPV	-	Fast Patrol Vessel

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SECTION I INTRODUCTION		
Sl. No.	Description	Remarks
1.	This General Specifications relate to Design, approval of the equipment by the classification society, Manufacture and Supply of 14 (fourteen) ship set of Equipment for Project “Fast Patrol Vessel (FPVs)” of Indian Coast Guard.	
2.	Project 14 FPVs consist of Water Jet propulsion comprises of three propulsion plants, each plant consisting of one Diesel Engine driving a Water Jet propulsion through Reversible Reduction Gearbox and respective shaft line. Each propulsion plant broadly comprises of:	
(a)	One Diesel Engine of minimum 2800 KW power output.	
(b)	One Reversible Reduction Gearbox with built in thrust bearing.	
(c)	One set of shafting along with associated components	
(d)	One Water Jet propulsion	
(e)	Propulsion plant support systems (for Diesel engines, Gear box, Water Jet propulsion and & shafting)	
(f)	Associated Controls & Monitoring System.	
3.	Class notation for Fast Patrol Vessel (FPV) is: +A1 HSC(Special Government Service) + AMS or equivalent	
4.	The Supplier should submit the quotation based on the General Conditions & Requirements (GCR) and the Technical Requirement for Procurement of each equipment. Should there be any discrepancies between the GCR and the Technical requirement of each equipment, the technical requirement/ specification shall prevail.	
5.	The reference list of the equipment fitted in Indian or International Navy / Coast Guard or similar platform such as ocean going vessel, Offshore Platforms and Oil-Rigs to be submitted along with the offer.	
6.	The Year of production of equipment and system to be of latest manufacture (during or after Year 2023). This is to confirm to the current production standards and should have 100% of the defined life at the time of delivery. (other than permitted running hours during assembly / acceptance trials)	



SECTION I:

GENERAL CONDITIONS & REQUIREMENTS

1. **Subject:** - The general conditions and requirements specified in this chapter are intended to meet the functional requirements of a FPV for operation in oceans environment and performance of all the ICG charter of duties. The vessel shall be capable for operation on Maritime zones of India and around island territories in depths greater than 3.5 meters.


2. **Ship's Basic Particulars:** - The role of FPV class of ships would be Coastal and offshore Patrolling, Interception,, Fisheries Protection and Monitoring, Control and Surveillance, Anti-Smuggling and Anti-Piracy, Search and Rescue, Medical evacuation, Logistic support etc. Ship's basic particulars are indicated below: -

Table 1


PARTICULARS		REFERENCE DATA
Ship's dimensions	Length overall (LOA)	50-55 m (approx.) including water jet
	Beam (water line)	7.84 m (approx.)
	Draft (deep displacement)	2.0 m (approx.)
Ship's displacement	Deep displacement	341 Tonnes (approx.)
Endurance	At cruising speed of 14 knots	1500 NM
Expected ship's life		20 Years at 2500 hrs of annual exploitation
Operating profile	Continuous slow speeds	Below 8 knots
	Cruising	08 - 14 knots
	Maximum	33 knots at 92% MCR power at full load displacement
Unrestricted continuous rating of Diesel engine, at 45 degree centigrade ambient temperature		Min 2800 KW

3. **Reference Environmental Conditions:** -

3.1 The equipment shall be suitable for marine applications and achieve specified performance smoothly under tropical marine conditions.

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3.2	<p>The equipment is to be designed for continuous operation & survival under the environmental conditions specified for ambient conditions as specified table below:-</p> <p style="text-align: center;"><u>Table 2</u></p> <table><tr><th>Sr. No.</th><th>Design Parameter</th><th>Value</th></tr><tr><td>(a)</td><td>Air Temperature</td><td>Minimum of 5 deg C and Maximum of 45 deg C</td></tr><tr><td>(b)</td><td>Sea water temperature</td><td>32 deg C</td></tr><tr><td>(c)</td><td>Relative humidity</td><td>90% at 35 deg C</td></tr><tr><td>(d)</td><td>Atmospheric pressure</td><td>750 mm of Hg column (1000mbar)</td></tr></table>			Sr. No.	Design Parameter	Value	(a)	Air Temperature	Minimum of 5 deg C and Maximum of 45 deg C	(b)	Sea water temperature	32 deg C	(c)	Relative humidity	90% at 35 deg C	(d)	Atmospheric pressure	750 mm of Hg column (1000mbar)
Sr. No.	Design Parameter	Value																
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3.3	<p><u>Seaway Conditions:</u> - Seaway conditions are defined at a sea water temperature of 1 to + 32 Deg. C, Ambient air temperature of 5 to 45 Deg. C and humidity up to 90% at 35 Deg. C. Salinity of water up to 35000 ppm. The equipment shall be capable of efficient and unrestricted operation without any deviation from its normal operating parameters under the seaway conditions, as below:-</p> <p>The vessel shall be capable of operating in sea conditions up to and including sea state 4 and have sea worthiness and survivability up to sea state 6</p>																	
3.4	<p><u>Complement :</u></p> <p style="text-align: center;"><u>Table 3</u></p> <table><tr><td>(a)</td><td>Officers</td><td>07</td></tr><tr><td>(b)</td><td>Subordinate Officers</td><td>08</td></tr><tr><td>(c)</td><td>Others</td><td>27</td></tr><tr><td></td><td>Total</td><td>42</td></tr></table>			(a)	Officers	07	(b)	Subordinate Officers	08	(c)	Others	27		Total	42			
(a)	Officers	07																
(b)	Subordinate Officers	08																
(c)	Others	27																
	Total	42																
3.5	<p><u>Propulsion Plant Operating Profile / Modes:</u> - The ship is to be available for exploitation for minimum of 2500 hrs. annual exploitation</p>																	
3.6	<p><u>Service life of ship:</u> The expected service life of ship is 20 years @ 2500 hrs. annual exploitation</p>																	
4.	<p><u>Ship's Support Systems Supplies:</u> - Following ship's support supplies shall be available for the propulsion system. For electrical supplies, in case of different requirements (voltage/frequency, etc.), the equipment supplier shall provide suitable provision (transformer/converter/UPS, etc.).</p> <p style="text-align: center;"><u>Table 4</u></p> <table><tr><th>Sr. No</th><th>SYSTEM</th><th>SUPPLIES</th><th>REMARKS</th></tr><tr><td>(a)</td><td>Electrical</td><td>415 V AC @ 50 Hz, 3 phase</td><td></td></tr></table>			Sr. No	SYSTEM	SUPPLIES	REMARKS	(a)	Electrical	415 V AC @ 50 Hz, 3 phase								
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	MAZAGON DOCK SHIPBUILDERS LTD. (A Govt. Of India Undertaking) Dockyard Road, Mumbai –400 010.	DESIGN ELECTRICAL	SOTR No.	5101(C)
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			230 V AC @ 50 Hz, 1 phase 24V DC	Any other power requirement shall be met by the equipment supplier.																																		
5.	Noise & Vibration:-																																					
5.1	Design of the equipment along with its associated auxiliaries/accessories/controls and mounting system, should ensure minimal vibration and noise.																																					
5.2	Suitable flexible hoses, bellows and noise reduction clamps are to be used for associated piping connections with the main equipment/auxiliaries.																																					
5.3	Noise and Vibration levels of the equipment shall meet the classification rules and guidelines.																																					
6.	Noise Levels in Machinery Spaces: - Permissible noise levels in machinery spaces are to be in accordance ISO-6954:2000. The noise criteria laid down by IMO resolution A 468(XII) is to be taken as reference. The noise criteria for the compartments are as follows: <table><tr><td>Sr. No.</td><td>Compartments</td><td>DB(A)</td></tr><tr><td>1.</td><td>Machinery spaces</td><td>110</td></tr><tr><td>2.</td><td>MCR</td><td>75</td></tr><tr><td>3.</td><td>Work places</td><td>85</td></tr><tr><td>4.</td><td>Non Specific workshops</td><td>90</td></tr><tr><td>5.</td><td>Bridge and Chartroom</td><td>65</td></tr><tr><td>6.</td><td>Radio Rooms</td><td>65</td></tr><tr><td>7.</td><td>Cabins</td><td>60</td></tr><tr><td>8.</td><td>Dining Hall/Offices</td><td>65</td></tr><tr><td>9.</td><td>Service spaces (galley, pantry)</td><td>75</td></tr><tr><td>10.</td><td>Normally unoccupied spaces</td><td>90</td></tr></table>				Sr. No.	Compartments	DB(A)	1.	Machinery spaces	110	2.	MCR	75	3.	Work places	85	4.	Non Specific workshops	90	5.	Bridge and Chartroom	65	6.	Radio Rooms	65	7.	Cabins	60	8.	Dining Hall/Offices	65	9.	Service spaces (galley, pantry)	75	10.	Normally unoccupied spaces	90	
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7	Vibration Isolators (Anti Vibration Mounts) : 7.1 For resiliently mounted equipment, the mounting system shall be capable of attenuating the vibrations of the offered equipment within the limit specified in Technical requirement. 7.2 Vibration measurements are to be carried out as per ISO 4868(XII)/latest amendment.																																					
8.	IP Rating for Electrical Equipment: - IP rating for associated electrical equipment enclosure is IP 44.																																					

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9.	<p>Availability/ Reliability/ Redundancy/ Self Sufficiency: - Maximum time required for bringing the equipment to full operational condition while undertaking daily, weekly and monthly maintenance routines, are to be indicated by the equipment supplier.</p> <p>Equipment should be robust in design for ensuring high reliability, ease of operation and minimum maintenance.</p>																
10.	<p>Documentation: Various documentation will be submitted by the equipment supplier as per the scope of supply and responsibility. Quality documentation is to be submitted in comprehensive and time bound manner for meeting ship's detailed design and production targets as well as equipment production and delivery schedule. Documentation to be submitted by the equipment supplier are broadly indicated below:</p> <p style="text-align: center;"><u>Table 5</u></p> <table border="1"> <thead> <tr> <th>Sr. No.</th><th>Documentation</th><th>Remarks</th></tr> </thead> <tbody> <tr> <td>(a)</td><td>Binding design documentation</td><td>For progressing with detailed design, integration & installation.</td></tr> <tr> <td>(b)</td><td>(i) Quality Assurance Plan (QAP) (ii) Equipment manufacturing/ production documentation (iii) Test and Trial procedure/ Reports</td><td>For approval by MDL / ICG equipment quality assurance during production and Test & Trial accordingly.</td></tr> <tr> <td>(c)</td><td>Equipment STW/ HATs/ SATs documentation</td><td>For preparing installation inspection/ Test and trials documentation</td></tr> <tr> <td>(d)</td><td>Technical Manuals for equipment operation, maintenance, logistics, etc.</td><td>For ship's crew, training and repair organizations.</td></tr> </tbody> </table>	Sr. No.	Documentation	Remarks	(a)	Binding design documentation	For progressing with detailed design, integration & installation.	(b)	(i) Quality Assurance Plan (QAP) (ii) Equipment manufacturing/ production documentation (iii) Test and Trial procedure/ Reports	For approval by MDL / ICG equipment quality assurance during production and Test & Trial accordingly.	(c)	Equipment STW/ HATs/ SATs documentation	For preparing installation inspection/ Test and trials documentation	(d)	Technical Manuals for equipment operation, maintenance, logistics, etc.	For ship's crew, training and repair organizations.	
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10.1	All documentation (including documents, drawings, data, reports, manuals, etc.) should be in English language. Dimensional details in the drawings should be as per scale. Technical data and parameters should be in metric units (SI Units).																
10.2	<p>Following file/formats would be acceptable:</p> <p>(a) Documents, data & reports in MS-WORD/EXCEL, as applicable</p> <p>(b) Data base files in ACCESS</p> <p>(c) Orthographic drawings (2D) in DXF/DWG format</p> <p>(d) 3D model of external topography of the equipment only in AVEVA MARINE/.STP format of max size of 5 MB</p> <p>Above drawings/data are to be submitted in soft copies in latest software version.</p>																

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10.3	Hard documents to be provided suitably grouped (section wise H, E, L, Navigation & Communication etc.) indexed and in moisture proof bound folders.	
10.4	<p>Binding Design Documentation: Comprehensive list of binding design documentation is to be submitted by equipment supplier, along with time schedule.-</p> <p>Binding Data: Three copies (one set for MDL, Two sets for ICG) and three sets on CD ROM of the following binding drawings/documents are to be supplied by the OEM within one month of placement of order:- (In addition to hard copies, all equipment drawings are also to be submitted in .stp format)</p> <ul style="list-style-type: none"> (a)Block diagram of the system (b)Installation documents if any covering detailed procedure for installation with sequence of activities. (c)Installation drawings indicating overall dimensions, C.G., weight, maintenance envelope, IP, rating, shock mount details, mounting arrangement, bolting plan, lifting points, material specification etc. of each unit (d)Recommended arrangement of devices in nominated compartments. (e)Inter unit-cabling diagram with cables specifications. (f)Cable connection Schedule. (g)Power supply scheme for the system. (h)Heat dissipation of individual units in compartment & in close loop ventilation system, as required for the system (i)Parts identification list, indicating part no, qty., maker's name, Specification etc. (j)Requirements for support systems such as fire fighting, communication, lighting etc. (k)Cable length limitation etc., if any. (l)Detailed foundation drawing including bolting plan. (m)Power consumption of each equipment (n) Any other design data/details, calculations, analysis, specifications, drawings, etc., as applicable (o) Shipping/Unshipping requirements (p) Training Plan (q) Preservation and Represervation and upkeep procedure 	
11.	<p><u>Documentation Associated with Quality Assurance Plan, Equipment Manufacturing & FATs/Test & Trials:</u> Documentation associated with quality assurance plan (QAP), equipment manufacturing and FATs(Factory Acceptance Tests), will be submitted by the equipment supplier in time bound manner, well in advance for approval by MDL / ICG.</p> <p>i. While preliminary quality assurance & test plan shall be submitted by the equipment supplier along with the technical</p>	

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	<p>offer, detailed QAP is to be submitted <u>within 15 days</u> after placement of equipment order, for approval of MDL / ICG.</p> <p>ii. Documentation associated with equipment FATs procedure shall also be submitted by equipment supplier well in advance in time bound manner, for approval by the MDL / ICG.</p>																						
12.	<p><u>Technical Manuals for Equipment (Operation, Maintenance & Logistics) :</u></p> <p>a. The technical manuals/documentation pertaining to equipment & its associated auxiliaries/support systems, shall include technical description/information, specifications, drawings, performance data, installation, operational & maintenance requirements, spares & logistics, etc., in systematic, structured & comprehensive manner.</p> <p>b. Under operating instructions, pre-starting inspection/checks, starting & shutdown procedures, functional parameters, trouble shooting, fault analysis, precautions, etc. to be suitably covered.</p> <p>c. Procedures for undertaking all maintenance routines till the end of service life (for the entire life cycle) (including major overhaul), are to be clearly specified along with preservation/ de-preservation & upkeep requirements (when equipment is not in use, during long refit of ship).</p> <p>d. Procedures for setting to work, test & trials of equipment are also to be well documented.</p> <p>e. Following technical manuals/documentation (in hard and soft form) shall be provided by the equipment supplier along with equipment supply.</p> <p style="text-align: center;"><u>Table 6</u></p> <table border="1"> <thead> <tr> <th>Description</th><th>Content</th><th>Number of copies Per ship</th></tr> </thead> <tbody> <tr> <td rowspan="5">Technical Manuals</td><td>Technical Description and Operating Instructions Manual</td><td>6</td></tr> <tr> <td>On board Maintenance Manual</td><td>6</td></tr> <tr> <td>Field and Depot Maintenance Manual</td><td>6</td></tr> <tr> <td>Installation and Testing Manual</td><td>6</td></tr> <tr> <td>Parts and Tools Catalogue including CPL & PIL in ILMS/SLMS Format</td><td>6</td></tr> <tr> <td rowspan="3">Technical Documentation</td><td>Installation Drawings</td><td>3</td></tr> <tr> <td>As fitted Drawings</td><td>3</td></tr> <tr> <td>Applicable Standards Utilised</td><td>3</td></tr> </tbody> </table>	Description	Content	Number of copies Per ship	Technical Manuals	Technical Description and Operating Instructions Manual	6	On board Maintenance Manual	6	Field and Depot Maintenance Manual	6	Installation and Testing Manual	6	Parts and Tools Catalogue including CPL & PIL in ILMS/SLMS Format	6	Technical Documentation	Installation Drawings	3	As fitted Drawings	3	Applicable Standards Utilised	3	
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	<p>NOTE: 1) Draft copy of the above listed Manuals & Documentations (in hard and soft form) shall be prepared by the supplier and shall be submitted to shipyards for comments under copy to ICG for approval, well ahead of the delivery date of the equipment. Approval on the same shall be given within two weeks of receipt of the Manuals & Documentations complete in all respects & required format.</p> <p>2) Delivery of main equipment shall be considered completed only on receipt of all approved Manuals & Documentations.</p> <p>3) All Manuals & Documentations should be categorised as per the above subject/content description only.</p>					
13.	<p>Quality Assurance And Testing: Quality assurance and testing requirements, pertaining to this equipment should confirm to standard conditions of quality assurance as mentioned in Technical Requirement of this SOTR.</p>					
14.	<p>Design Standards: Following rules and regulations as applicable shall be met:</p> <ul style="list-style-type: none"> (a) Nominated Classification Society Class Rules. (b) International load line reg. 1966 as amended by Protocol of 1988 and any other subsequent amendments. (c) IMO/MARPOL-73/78 reg and any further / latest amendments including MS Act 58 and their rules. (d) COLREG 72 and any further/ latest amendments. (e) IMO /Anti Fouling System. (f) International tonnage 1969 and any further/ latest amendments. (g) SOLAS 1992 as amended in 2002 and any further / latest amendments. (h) Stability standard as per NES 109. (i) Naval Magazine Explosive Regulations (NMER). (j) Superior/higher specifications of standard are acceptable subject to proving and satisfactory trial by Yard. <p>During execution of the project, following organizations would be associated for ship design, construction, quality control and Ship trials/acceptance:-</p> <table border="1"> <tr> <td>(a)</td> <td>Design</td> <td>:</td> <td>Shipyard / Nominated Classification society</td> </tr> </table>		(a)	Design	:	Shipyard / Nominated Classification society
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	(b) Construction	:	Shipyards at West Coast Guard of India, MDL and CGRPT.	
	(c) Quality Control	:	Nominated Classification society	
	(d) Ship Trials	:	Indian Coast Guard/Nominated Classification Society.	
15.	<u>Quality standard:</u> During equipment production, any deviation to the QAP/finalized specifications/standards shall be brought to the notice of Shipyard/ICG, along with valid reasons and recommended solution, without any compromise on quality, reliability and performance of the equipment.			
16.	<u>Maintenance & Logistics:</u>			
	a) Equipment supplier shall ensure high reliability and low maintenance of equipment. While equipment maintenance and repair between major overhauls would be carried out in-situ on-board the ship, major maintenance/overhaul would be undertaken ashore by repair organization.			
	b) Equipment design should therefore ensure ease of maintenance and accessibility to important sub-assemblies/components/accessories.			
	c) Suitable provisions (such as inspection windows, etc.) as feasible, are to be made for ease of in-situ visual inspection of important sub-assemblies/components/accessories for routine inspection, checks and maintenance, without dismantling the equipment assembly/components.			
	d) Equipment supplier shall provide maintenance schedules, planned maintenance intervals and procedure for undertaking maintenance of equipment on-board and ashore.			
17	<u>Installation Tools and Commissioning Consumables:</u>			
	a) <u>Installation Tools:</u> Special tools, jigs and fixtures & test equipment required for flushing, setting to work, testing & tuning, on-board trials (HATs/SATs) and post CST inspection of critical internal parts and reassembly of the equipment and its auxiliary systems shall be supplied. Tools shall be ordered along with the main equipment & delivered along with the main equipment.			
	b) <u>Commissioning Consumables:</u> The Commissioning consumables (first charge like coolants, greases, special oil, filters, gaskets, refrigerant etc.) shall be included in the scope of supply. Commissioning consumables shall be delivered before STW of the main equipment, tentative schedule of which shall be indicated in the Tender Enquiry.			

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	c) An itemised list with cost for the same is also to be indicated in the offer to facilitate their procurement in future, if required.	
	d) One set of standard tools adequate for undertaking the maintenance onboard should be supplied along with the offer.	
18.	<u>INDIGENISATION / LOCAL SUPPORT:</u> (Applicable to equipment with import content) a) The supplier is to indicate if the equipment is original OEM supply or manufactured in INDIA under license (specifying the import content). The manufacturer is to engage into a co-operation with a reputed manufacturer of similar equipment's in India and accordingly plan for progressive indigenization.	
	b) In this respect, the equipment manufacturer shall confirm that he will be able to authorize priority works at his works and provide the necessary local support as required to meet the ship construction and trial programme and provide the necessary after sale support to the ICG. Future plans for indigenous production of the equipment associated control/monitoring devices and transfers of technology are to be indicated in the proposal for consideration of Indian Coast Guard Headquarters.	
19.	<u>Product Support:</u> Equipment supplier is to provide product support for ship's life of 20 years. In case the equipment is likely to be obsolescent, the supplier shall notify the Coast Guard with at least two years prior notice, along with valid reasons and recommended solution. (a) The firm/OEM to submit undertaking to provide product support for minimum period of 20 years from date of delivery of the vessel.	
	(b) Undertaking for upgrade/currency of software for all equipment min 05 years from date of delivery of vessel. In case of obsolescence within 05 years from date of delivery of the FPV, the same to be upgraded without any additional cost.	
	(c) Firm to indicate after sales and product support facilities in India with response time for attending defect and providing spares.	
	(d) All upgradation and modification carried out on equipment during its life cycle must to be intimated to ICG. Further, any upgradation/modification during guarantee period of the equipment same to be included free of cost.	
	(e) Firm should agree to enter into the rate contract / All-inclusive Annual maintenance contract (AIAMC) with ICG for maintenance and supply of spares.	
	(f) The Product support in terms of maintenance of equipment, assemblies/subassemblies, fitment items and consumables, SMTs subcontracted from other agencies/manufacturer equipment included in firms scope of supply for a minimum period of 20 years including one year of warranty period after the delivery of vessel(s), excluding electronic equipment for which minimum period would be 10 years.	
20.	<u>Operational Cycle:</u> The operating refit cycle of ship is as follows:	

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	<p>(a) 1st and 2nd Ops refit cycle – Operation cycle of 24 months followed by a refit.</p> <p>(b) 3rd and 4th Ops refit cycle – Operation cycle of 18 month followed by a refit.</p> <p>(c) Balance Ops and refit cycle – Operation cycle of 15 month followed by a refit.</p> <p>(d) First three refits are short refit (SR) followed by a normal refit (NR). Second NR will be medium repair (MR).</p> <p>(e) Short refit is for duration of 04 months. Normal refit is for duration of 05 months and medium refit for duration of 12 months.</p>	
21.	<p><u>Interchangeability:</u> Equipment design is to ensure that components and parts having same dimensions and characteristics should be interchangeable between different units of similar kind in the ship, without affecting the specified equipment performance.</p>	
22.	<p><u>Tally and Diagram Plates:-</u></p> <p>All tallies and diagram plates shall be as per OEM Standards and must generally indicate the following-</p> <p>Manufacture's Name-</p> <p>Manufacturer's Serial No. Type/Model:-</p> <p>Year of Manufacture.-</p> <p>Electrical parameters viz. Ratings, Voltage, Frequency, Current, Insulation details etc as applicable-</p> <p>Weight of Equipment.-</p> <p>IP Rating of the equipment.-</p> <p>Danger labels in Red colour with white lettering are to be provided on all electrical equipment operating on 150Volts or higher.</p> <p>Other important instructions are to be given on tally plate.</p> <p>Tally of JB/Panel and other equipments internal diagram plate to be prepared by OEM.</p> <p>Cable Tallies as per approved system drawing to be prepared by OEM.</p> <p>Cable tallies should be supply for both the ends.</p> <p>Laminated circuit diagram indicating details of connections are to be provided.</p>	
23.	<p><u>Instruction Plates:</u> Instruction plates listing the starting/shut-down procedure and precautions in brief are to be prominently displayed on the equipment. The Instruction plates are to be SS/ chrome plated. Equipment is to be supplied with a set of instruction plates duly mounted on equipment or supplied loose.</p> <p>Laminated circuit diagram indicating details of connections are to be provided.</p>	
24.	<p><u>Painting Specification:</u></p> <p>Standard painting procedure shall be applicable for suitability for marine environment. Equipment shall be cleaned, degreased and painted with two coats of anticorrosive marine paint & two finish coats.</p>	

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	All equipment painting shall conform to CGBR 382 or equivalent International Standards.	
25.	<u>Lifting Arrangement:</u> - Equipment components weighing more than 40 kilograms are to be provided with eyebolts/lifting arrangement, for ease of handling/lifting on board the ship or ashore. During transportation/transit of equipment, adequate provisions (such as supports, locking arrangement, jacking, etc.) are to be made for preventing any damage to the equipment & its associated components. Any component requiring special handling shall be clearly marked and appropriate handling instructions shall be provided by equipment supplier. One set of special lifting gear (if any) shall be supplied to shipyard.	
26.	<u>Preservation / Conditioning:</u> a. Equipment supplier is to provide high quality packing for the complete scope of supply along with handling arrangements. The package/container should display clear instructions for stowage, handling, care and accessibility for inspection of equipment preservation condition.	
	b. Equipment shall be supplied with Initial preservation for a period of 24 months for tropical conditions and protected against high humidity. The equipment are to be preserved on delivery as per the standard marine engineering practice. Closing plates/plugs/caps (duly filled with nitrogen gas) are to be provided on all openings.	
	c. For re-preservation requirements, at shipyard or on board ship beyond initial preservation period, suitable provision is to be catered for by equipment supplier. Equipment supplier shall provide re-preservation & upkeep procedure, preservatives/consumables and technical assistance/supervision to the shipyard, as per requirements.	
	d. Preservation requirement, procedures and schedule for main equipment, Spares are to be indicated in the offer.	
27.	<u>Packing & Shipping:</u> a. All equipment shall be adequately packed and protected with supports to ensure adequate protection during all methods of transportation. Each unit within a package/container shall be clearly marked in English for identification. The container shall clearly indicate the commodity description with caution marks, weight, size, etc.	
	b. A separate document giving complete details & instruction for storage, preservation, handling & transportation after delivery shall be supplied & a copy must be included with the shipping document. The supplier should indicate the delivery schedule	

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	port of embarkation, transport, packing, preservation, insurance etc.	
	c. The instrumentation, sensors and meters etc. which are fitted on the equipment are to be removed from the equipment and shall be staggered delivered according to shipyard schedule in a separate suitable box/packing during STW.	
	<p>d. Following items shall be packed in separate containers/boxes with proper colour coding (with description) & list of their contents in English for their easy identification and traceability:</p> <ul style="list-style-type: none"> i. Deliverables related to Main Equipment (to be marked in green colour). ii. Deliverables related to Auxiliary Equipment (to be marked in green colour). iii. Deliverables related to Installation material and Tools related to Main & Auxiliary Equipment (to be marked in green colour). iv. Commissioning consumables and Tools (to be marked in green colour). v. Documentation (to be marked in blue colour). vi. The list of actual deliverables against each of the above serials shall be forwarded to shipyards in soft copy (MS Excel format) with required part nos. within one week of finalization of PNC in order to detail them in the purchase order. vii. Packing list should give further breakup of items, wherever particular item is quantified by set. 	
28.	<p><u>Training :</u></p> <ul style="list-style-type: none"> a) The equipment supplier is to impart training, to ship's crew, on aspects related to operation, installation, maintenance and repair of the equipment. b) For imparting training, complete training package in hard & soft form (including suitable training material, dockets, computer based aids, etc.), is to be provided by the supplier to the participants. c) Training would be conducted by the equipment supplier at Shipyard/ On-board Ship. Training plan will be submitted by the equipment supplier, along with the technical offer. Training is required to cover the following aspects (but not limited to): <ul style="list-style-type: none"> i. Design and installation ii. Operation and trouble shooting iii. Control & monitoring iv. Upkeep and routine maintenance v. On board maintenance including major repairs and overhaul. 	

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29.	Security of Information: The information contained in this document is not to be divulged to any other firm/third party without the prior permission of the Indian Coast Guard and MDL. Adequate measures are to be taken to ensure safe custody of this document.	
30.	Warranty:	
a	The equipment along with associated auxiliaries/components shall be warranted by the equipment supplier for the stipulated performance for a period of twelve (12) months after planned delivery date (D) (mentioned in succeeding Para) of the ship by shipyard MDL to the Indian Coast Guard. This is to be referred as 'Standard Warranty'.	
b	During the said period of 'Standard Warranty', the equipment supplied shall be warranted against any malfunction, defects, material failure, non-compliance to ordered specifications, sub-optimal performance, design deficiency, poor workmanship and quality. Any expenditure on account of equipment malfunction, repair or supply of spares against warranty defects shall be borne by the equipment supplier. If any defective part is required to be taken back to OEM's factory/works (i.e. importing and re-exporting from Country of origin) for the purpose of service, the entire liability including expenditure towards the same shall be borne by the supplier. The spare parts required / consumed for scheduled servicing & maintenance activities in the period of 'Standard Warranty' shall also be provided by the OEM without any commercial implication.	
c	If within the period of warranty, the ship and (or) stores and (or) spares are reported by the Shipyard to have failed to perform as per the specifications, the Supplier shall either replace or rectify the same free of charge, maximum within 15 days of notification of such defect by the Shipyard provided that the goods are used and maintained by the Shipyard as per instructions contained in the operating Manual.	
d	Warranty of the equipment would be extended by user in log book, Spares and all consumables required for warranty repairs shall be provided free of cost by Supplier. All activities including diagnosis, rectification, calibration, transportation etc., required for making equipment serviceable and available would be Supplier's responsibility.	
e	The Supplier also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Shipyard and the Supplier subject to acceptability by the Shipyard. The Supplier shall intimate the assignable cause of the failures.	

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f	Supplier hereby warrants that necessary service and repair backup during the warranty period, shall be provided by the Supplier and he will ensure that cumulative downtime period for the ship and or the fitted equipment /system equipment does not exceed 45 days of the warranty period. Thereafter, the Shipyard reserves the right to make good the defects at Suppliers risk and cost.																									
g	If the associated equipment and service, spares of 14 FPVs fails frequently and/or, the cumulative down time exceeds 45 days of the warranty period or a common defect is noticed repeatedly with respect to a particular item/component/sub-component, that complete item/ equipment shall be replaced free of cost by the Supplier within 45 days of receipt of the notification from the Shipyard duly modified/upgraded through design improvement in all equipment supplied/yet to be supplied and Engineering Support Package (ESP) supplied/yet to be supplied. Thereafter, the Shipyard reserves the right to make the defects at Supplier risk and cost.																									
h	In case the complete delivery of the ESP is delayed beyond the period stipulated in this contract, then the Supplier undertakes that the warranty period for the goods/stores shall be extended to that extent.																									
i	The Supplier warrants that the 14 FPVs, the associated equipment and service supplied will conform to the Temperature and Humidity conditions as mentioned in this document.																									
j	The Supplier agrees to provide back to back warranty of equipment /system or any other item whose specified warranty by the OEM is more than 12 months and shall extend the same warranty to the Shipyard at no. additional terms and conditions.																									
k	<u>Extension of Warranty:</u> Supplier shall mandatorily indicate, in the offer, the annual rate for extended warranty period, in the event of expiry of warranty period as detailed above along with the attendant commercial terms and conditions if any.																									
31.	<u>Planned Ship Delivery date(D):</u> The planned date for delivery of the Ships to the Indian Coastguard by MDL are tabulated below: <table border="1" data-bbox="327 1691 1133 1995"> <thead> <tr> <th>Sl. No.</th><th>Yard No.</th><th>Planned Delivery Date</th></tr> </thead> <tbody> <tr><td>1.</td><td>16501</td><td>Mar-2026</td></tr> <tr><td>2.</td><td>16502</td><td>Jun-2026</td></tr> <tr><td>3.</td><td>16503</td><td>Sep-2026</td></tr> <tr><td>4.</td><td>16504</td><td>Dec-2026</td></tr> <tr><td>5.</td><td>16505</td><td>Mar-2027</td></tr> <tr><td>6.</td><td>16506</td><td>Jun-2027</td></tr> <tr><td>7.</td><td>16507</td><td>Sep-2027</td></tr> </tbody> </table>	Sl. No.	Yard No.	Planned Delivery Date	1.	16501	Mar-2026	2.	16502	Jun-2026	3.	16503	Sep-2026	4.	16504	Dec-2026	5.	16505	Mar-2027	6.	16506	Jun-2027	7.	16507	Sep-2027	
Sl. No.	Yard No.	Planned Delivery Date																								
1.	16501	Mar-2026																								
2.	16502	Jun-2026																								
3.	16503	Sep-2026																								
4.	16504	Dec-2026																								
5.	16505	Mar-2027																								
6.	16506	Jun-2027																								
7.	16507	Sep-2027																								

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		8.	16508	Dec-2027		
		9.	16509	Mar-2028		
		10.	16510	Jun-2028		
		11.	16511	Sep-2028		
		12.	16512	Dec-2028		
		13.	16513	Mar-2029		
		14.	16514	Jun-2029		
32.	Weight Recording / Weight Certificate: Weights of all components are to be recorded and a suitable certificate shall be submitted, by the equipment supplier. The designated inspection authorities shall countersign such certificates. Format for weight control data sheet, is placed at Annexure of this document.					
32.1	Net weight of each component is to be recorded in presence of designated inspection authority and the weight certificate is to be submitted by the equipment supplier, along with equipment supply. Format for weight certificate, is placed at Annexure of this document.					
32.2	The supplier shall have to submit, reasons for variation between allocated weight and actual/certified weight for each and every item, wherever applicable, to Coast Guard and MDL for their consideration and further necessary action.					
33.	Technical Assistance:					
33.1	The Supplier shall provide the necessary representative(s) as and when required , in carrying out inspection and supervise the work that is done on the equipment, during the following phases: <ul style="list-style-type: none"> (a) Preparation for installation of equipment by shipyard. (b) Monitoring of proper equipment preservation during storage. (c) On-board erection and alignment. (d) Setting to Work (including fitment of latest calibrated instrumentation). (e) Harbor Trials. (f) Assistance in trouble shooting. (g) Customer Sea Trials (h) Post CST equipment Inspections. (i) Final Machinery Trials. (j) Assistance in operation during equipment guarantee period. 					

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33.3	Shipyard has to progress on ship construction activities, simultaneously on ships of the coastguard project or on ships of different projects. View this, there shall be every likelihood of clash of requirement of technical assistance. In such eventuality, in order to avoid delays on one ship due to similar work requirement on other ship, supplier shall depute their dedicated separate/independent team of supervisors/specialists for required technical assistance, on the required ships. Rotation of supervisors/specialist amongst the various ships/projects shall be avoided.	
33.4	The supplier shall provide checklist for installation, setting to work, HATs & SATs to the shipyards to ensure the completeness of the activities by shipyards in order to avoid waiting period of the supplier specialists.	
34.	<u>Receipt Inspection:</u> Receipt inspection for the major equipment shall be carried out in the presence of OEM rep to verify completeness of the scope of supply and intactness of the supplied equipment. Defective / damaged parts and deficiency, if any, in supply shall be made good by OEM free of cost. OEM shall be intimated the date of receipt inspection.	
35.	<u>Compliance Matrix:</u> Para-wise compliance matrix, including paras which are not applicable, as per the technical specifications (contained in this document) shall be submitted by the equipment supplier along with the technical offer, in the format as per Annexure-5 (preferably in excel sheet). The technical offer received without Compliance Matrix shall be <u>liable for rejection</u> .	
36.	<u>OEM's responsibility-</u> <ol style="list-style-type: none"> OEM to Prepare system drawing/Cable drawing in autocad .dwg format . OEM to prepare cable schedule, connection schedule of the system. 	

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SECTION – II		
TECHNICAL SPECIFICATION AND REQUIREMENTS		
1.	Equipment Description: This technical specification covers the manufacturing, supply of main equipment, spares and documentation and on-board commissioning of latest version of Aldis Lantern.	
	Refer to class notation of the vessel mentioned at Sr no. 3 of Section – I (Introduction). The equipment and components shall be manufactured as per ABS and IRS classification rules / statutory requirements as applicable.	
2.	Scope of Supply	Qty. Per Vessel
2.1	5" Hand operated ALDIS Lamp complete with 2 core, 10 meter long insulated flexible cable, 60 W bulb/Lamp 24V DC and spare battery.	1 No.
2.2	Bulkhead mounted type control unit with battery charger cum rectifier unit with integral 24V maintenance free battery and socket suitable for plug provided with Aldis Lantern Input voltage :230V,1Ph,50Hz AC Output voltage : 24V DC.	1 No.
2.3	Stowage box suitable for stowing 5" Hand Operated Aldis Lamp.	1 No.
2.4	Additional item & accessories, if any, not indicated in the above stated scope of supply but required to achieve completeness of system/equipment will be the responsibility of the firm to supply without any price implication.	1 No.
	Scope of supply indicated above is based on the MDL previous experience. If any item/equipment required to complete the system/scope of supply, firm may please quote for the same and the same be clearly indicated with individual quantity of each accessories in the offer. If such item is not quoted and found, the same is required at the time of commissioning/installation, it is responsibility of the firm to supply such item/equipment free of cost.	
	The supplier is responsible in all respects for the completeness of the system and should prove satisfactory performance of the system/equipment on board the ship to the CGHQ rep/Local Surveyor/MDL QA rep as per approved trial schedule, including Service of Engineers, Commissioning.	
3.	Technical Specification	
3.1	The Aldis Lantern must be suitable for operation 230V, 1 phase, 50 Hz AC supply and 24V DC supply from battery incase of failure of 230V,1 Phase AC supply.	
3.2	Warning plates are to be fitted for battery charger cum rectifier unit in prominent position indicating dangerous voltage e.g. 'DANGER 230 VOLTS'	
3.3	All wirings should be flexible LFH type copper cable of 1000 V grade and minimum 1.5 sq mm. Wiring to be marked at both ends with identification ferrules.	
	Safety :	
	The design of the equipment is to provide the maximum safety to the operator against the risk of electric shock.	
4.	Installation MDL's responsibility:-	
4.1	All installation works on board, including shipping of equipment on board, its placement on its seating and connection of the delivered equipment will be carried out by MDL / MDL authorized contractor.	
4.2	Termination of the cables will be undertaken by MDL / MDL authorized contractor.	
5.	Standard, Inspection, Factory Tests & Acceptance of Equipment/ System:-	

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SECTION – II TECHNICAL SPECIFICATION AND REQUIREMENTS	
5.1	Any modification/changes if required on account of type testing or otherwise, the same are to be made good free of cost by supplier.
5.2	Factory Test to be undertaken in the premises of manufacturer and manufacturer's Quality Assurance Certificate, Shop Test Trial Report to be supplied along with the equipment/system
5.3	Manufacturer's standard factory test procedure will be acceptable for imported equipment of non-classification category.
5.4	CGHQ /ABS /IRS Inspection certificates / Manufacturer's work test certificate issued by firms Q/A, as applicable is to be supplied in triplicate along with the equipment.
6.	Receipt Inspection
6.1	All items will be subjected to final inspection on receipt in MDL by our Inspection Authority and CGRPT, Mumbai.
6.2	Receipt inspection for the major equipment shall be carried out in the presence of OEM supply to verify the completeness of the scope of supply
6.3	Any Damage or deviation from Purchase order will be rectified by OEM at firm cost
7.	Performance:-
7.1	Any Design deficiency or shortages in material, deficiency in capacities of components, noticed at a later date & time shall be the responsibility of the supplier to make it good as to meet and prove the performance of Aldis Lantern
8.	Specific Requirements:-
8.1	Firm to indicate if there is any specific requirement of special preservation for the equipment/accessories.
8.2	List of firm's own manufactured items and list of bought out items by the firm if any to be clearly indicated in the offer.
9.	GENERAL TECHNICAL REQUIREMENTS:-
9.1	The equipment shall be supplied in its entirety to make it fully operational. All the items/materials as indicated in the P.O & TNC are to be supplied in single delivery.
9.2	Equipment, Units to be provided with Earthing studs/bolts on both the sides
9.3	The equipment shall be supplied with all its accessories including interconnecting cables, cable gland, connector, nuts, bolts, consumables etc. required for installation and satisfactory performance of the equipment.
9.4	All terminal blocks and connectors should be of Wago / reputed make.
9.5	Painting/Preservation: Proper preservation/ paint of standard marine quality to be applied to the equipment. Details to be forwarded with the offer.
9.6	Delivery challan are to be made in details indicating technical specification, description of the main item(s) & other auxiliary item(s).
9.7	The entire inspection & test certificate and their results, acceptance need to be supplied along with consignment as indicated in the P.O.
9.8	All the items are to be provided with inspection agency stamping and are to be legible.
9.9	All the defects, discrepancies & damages that are indicated in MDL inspection report are to be rectified/ made good and re-offered by the firm immediately.
9.10	All the item(s)/material(s) are to be provided with adequate packing materials in order to prevent transit damage.
9.11	Calibration certificates if any are to be supplied along with the consignment
9.12	Any change in model due to upgradation will be considered if and only if found feasible by MDL/CGHQ and only after obtaining approval from CGHQ/MDL and should have no cost implications to MDL/CGHQ.
9.13	Any changes corrections in drawing due to upgradation if approved by MDL/CGHQ

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SECTION – II TECHNCAL SPECIFICATION AND REQUIREMENTS	
	must be undertaken by the firm with no cost implication.
9.14	Any additional unit required over and above the quoted items as a result of design changes by the firm would be supplied to MDL without any price implication.
10.	Technical Offer as Per Shipyard Tender: As a minimum, the following technical and design details applicable to equipment / item shall be submitted with the technical proposal:-
10.1	Equipment description with block diagram, system components, system operation, weight, CG and dimensions of the equipment and units.
10.2	Technical specifications of equipment.
10.3	Certificate of Conformity as per Annexure- 1 of SOTR
10.4	List of Deviations as per Annexure-2 of SOTR
10.5	Compliance matrix (Para-wise compliance to tender specifications) as per Annexure -3 of SOTR
10.6	Reference list for order executed for similar equipment with Indian / International Navy / Coast guard or similar platform such as ocean going vessel, offshore platforms and Oil-Rigs
10.7	Compliance to Pre-Qualification criteria along with reference list
10.8	Clear demarcation between the scope of supply of firm and that of ship builder.
10.9	Delivery time from receipt of order.
10.10	Trial and commissioning time of complete system on board
10.11	Supply of documentation
10.12	Product Support Certificate
10.13	Confirmation for Technical Assistance for System.
10.14	Preliminary quality assurance and test plan (QAP)
10.15	Authorization letter from OEM
10.16	Four copies of technical offer shall be submitted by equipment supplier; in hard and soft form (CD-ROM).
11.	Upgradation of Electronic Equipment.
11.1	The OEMs of electronic equipment being fitted should provide upgradation of the equipment/sub components/software in case of obsolescence within 05 years from date of acceptance of the vessel without any additional cost
11.2	The Vendor shall submit an undertaking to maintain currency/upgrade of software for the equipment upto 05 years from the date of delivery of the Vessel
11.3	In the event of any obsolescence during the above mentioned period of product support in respect of any component or sub system, mutual consultation between the vendor and MDL/ Owner / Indian manufacture will be undertaken to arrive at an acceptable solution including additional cost, if any.
11.4	Any improvement/Modification /up gradation being undertaken by the OEM or their sub-suppliers will be communicated to MDL/ Owner. During the guarantee period, these improvement/ modification/up gradation will be carried out by the vendor at vendors cost and post guarantee period at Owners cost if required by the owner
11.5	The OEM of Electronic Equipment being fitted should provide Upgradation of the equipment/sub components/software in case of obsolescence within 05 Years from date of delivery of the vessel without any additional cost
12.	Certificate of Malicious code:
12.1	OEM would undertake necessary measure to ensure strict adherence to the following certificate of Malicious Code submitted by them while bidding the tender. "This is to certify that the Hardware and the Software beings offered as part of the contract

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SECTION – II
TECHNCAL SPECIFICATION AND REQUIREMENTS

	<p>does not contain embedded malicious code that could activate procedures to:- Inhibit the desired function of equipment Cause physical damage to the user or his equipment during the operational exploitation of the equipment The OEM is liable in case physical damage or malfunctioning is caused due to activation of any such malicious code in embedded software. The OEM will be considered to be in breach of the contract in case physical damage, loss of information or infringement related to copyrights and Intellectual Property Rights (IPRs) are caused due to activation of any such malicious code in embedded software.”</p>
13.	Certificate of Conformity:-
13.1	The offer should be complete with CERTIFICATE OF CONFORMITY as per format detailed at Annexure - 1 .The offer received without the “Certificate of Conformity”, duly filled in and signed, may not be considered.



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Annexure - 1

CERTIFICATE OF CONFORMITY

(To be filled in by the **SUPPLIER** & submitted as part of the Offer)

M/s. _____

With reference to the subject **Requisition** received along with the MDL Inquiry and our QUOTATION No. _____ Dated _____ we hereby confirm / clarify the following:

1. REGISTRATION WITH DQA (WP) / DQA (N) / MDL:

We are NOT Registered / already REGISTERED (*) with _____ for manufacture and supply of following items

- (a) _____
(b) _____

2. PAST PERFORMANCE:

We have NOT Supplied / have SUPPLIED (*) identical / similar (*) ITEM to MDL in the past. The relevant Order references are given below :

- (a) _____
(b) _____

3. REQUISITION / DRAWINGS / SPECIFICATIONS / SOR:

We ARE NOT / ARE (*) fully aware of the relevant Drawings / Specifications / TSP etc. indicated in the REQUISITION and the related Documents.

4. DEVIATION:

The OFFER is fully in compliance with the Requisition WITHOUT any deviation / EXCEPT for the deviations listed in the attached format (*).

5. BINDING DATA:

OUR Drawings with necessary BINDING DATA such as Overall Dimensions, SEATING Details / Bolting Plan, Connection / Interface Details, Face to Face Dimensions is ENCLOSED / NOT Enclosed (*) with the offer. We have noted that any change in Binding Data shall require specific approval from MDL/IHQ of MoD (N).

6. DOCUMENTS / DATA:

The following Technical Documents / DATA SHEETS are enclosed herewith

- (a) (To be specified if applicable)

For M/s. _____

Signature: _____

Date : _____

Stamp: _____

(*) Strike out which is **NOT APPLICABLE**.



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DEVIATION LIST

The Supplier shall fill in this form for the deviations of their bid from the requirements as stated in the Material Requisition. If no deviation is required Supplier shall fill in "NIL" in the 'Deviation column. Supplier shall sign/date and affix their company seal.

[illegible]


SUPPLIER'S COMPANY SEAL
DATE

SUPPLIER'S SIGNATURE &

**A-ACCEPTED
ATTACHED SHEET)**

N-NOT ACCEPTED

C-CONDITIONAL ACCEPTANCE (SEE

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Annexure - 3

COMPLIANCE MATRIX					
EQUIPMENT DESCRIPTION:				EQUIPMENT NO. :	
The form shall be completed by Supplier & shall be supplied along with the equipment.					
SUPPLIER'S NAME				Ref. Drg. No.	
ADDRESS				Part No.	
TELEPHONE NO.					
ORDER NO.				EQPT. NO.	
S No.	Tender Specifications Para reference	Brief Description as per Relevant Tender Specifications	Compliance to Tender Specifications	Deviations if any, with Reasons	Remarks if any
SUPPLIER'S COMPANY SEAL				SUPPLIER'S SIGNATURE & DATE	



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Annexure - 4

WEIGHT CONTROL DATA SHEET

EQUIPMENT DESCRIPTION		EQUIPMENT NO.	
COMPARTMENT		LOCATION	

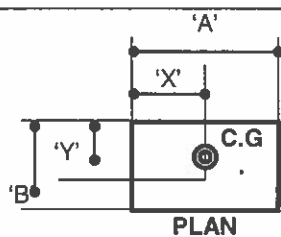
SWBD :

☐ **TOLERANCE CODE** ☐ **PRELIMINARY EST.** ☐ **DESIGN EST.** ☐ **M.T.O (CALC)** ☐ **WEIGHED** ☐ **TOLERANCE ± %**

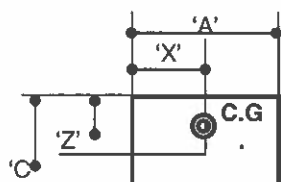
1. WEIGHT (Kg.)

(a)	DRY	Kg ±	%
(b)	FLUID	Kg ±	%
(c)	OPERATING	Kg ±	%
(d)	TEST	Kg ±	%
(e)	TOTAL	Kg ±	%

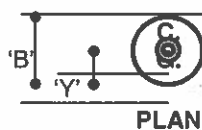
2. EQUIPMENT DIMENSIONAL DATA (mm) & Co-ordinates of CoG



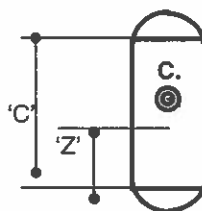
PLAN



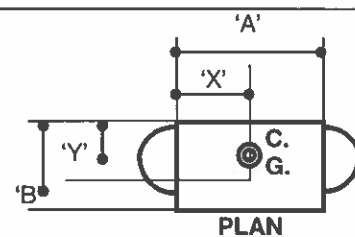
ELEVATION



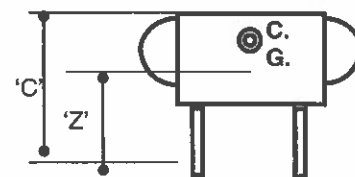
PLAN



ELEVATION



PLAN



ELEVATION

OVERALL SIZE		CENTRE OF GRAVITY	
'A'		'X'	
'B'		'Y'	
'C'		'Z'	

NOTE :

- ALL OFFERS SHALL INCLUDE THIS DATA SHEET DULY FILLED IN BY THE SUPPLIER (SIGNED, DATED & SEAL AFFIXED).
- ALL FINISHED ITEMS SHALL BE WEIGHED & A CERTIFICATE SHALL BE PROVIDED AS PER ATTACHED SHEET.
- SEPARATE SHEETS SHALL BE COMPLETED FOR EACH INSTALLED EQUIPMENT.
- ORIGIN OF 'X', 'Y' AND 'Z' TO BE INDICIATED.

SUPPLIER'S SEAL


SUPPLIER'S SIGNATURE & DATE

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Annexure - 6

TABLE OF CABLE CONNECTION SCHEDULE FORMAT


SR NO	CABLE NO	CABLE TYPE	NO: OF CORES	FROM DEVICE	CONN REF	TERMINAL / PIN NO	TO DEVICE	CONN REF	TERMINAL / PIN NO	SIGNAL	REMARKS
1	CAB-1	XXX 3 CORE CABLE	1	DEV-A	P1	1	DEV-B	J1	1		
			2			2			2		
			3			3			3		

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Annexure - 7

CABLE PATTERN LIST

SR NO	CABLE NO	CABLE PATTERN NO	CABLE SPEC DESCRIPTION	FROM UNIT	TO UNIT	OD	LENGTH	ANY SPECIFIC INSTRUCTIONS FOR CABLE LAYING

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DECLARATION CERTIFICATE FOR LOCAL CONTENT
(Tender value Less than Rs 10 Crores)

This declaration must form part of all tenders & it contains general information and serves as a declaration form for all bidders. (Before completing this declaration, bidders must study the General Conditions, Definitions, Govt. Directives applicable in respect of Local Content & prescribed tender conditions).

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID/ TENDER No:

ISSUED BY (Name of Firm):

NB: The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

I, the undersigned, (full names),
 do hereby declare, in my capacity as of
(name of bidder entity),
 the following:

(a) The facts contained herein are within my own personal knowledge.

(b) I have read and understood the requirement of local content (LC) and same is specified as percentage calculated in accordance with the definition provided at clause 2 of revised Public Procurement (preference to Make in India) Order 2017.

“Local content” as per above order means the amount of value added in India which shall be the total value of items procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value in percent.”

(c) I have satisfied myself that the goods/services/works to be delivered in terms of the above specified bid comply with the local content requirements as specified in the tender for ‘Class-I Local Supplier’ / ‘Class-II Local Supplier’, and as above.

(d)

i) I seek benefits against the following policy:

1) PPP MSE Order 2012

2) PPP MII 2017

(e) The local content calculated using the definition given above are as under:

Tender Item Sr. No.	Local content calculated as above %	Location of local value addition

Attach separate sheet duly signed if the space not sufficient.

NB: Local content percentage shall be declared item wise or tender wise strictly as per the terms of the tender.

(f) I accept that the Procurement Authority / Institution / MDL / Nodal Ministry has the right to request that the local content be verified in terms of the requirements of revised Public Procurement (preference to Make in India) Order 2017 dated 19.07.2024 and I shall furnish the document / information on demand. Failure on my part to furnish the data will be treated as false declaration as per PPP MII Order 2017. In case of contract being awarded, I undertake to retain the relevant documents for 7 years from date of execution.

(g) I understand that the submission of incorrect data, or data that are not verifiable as described in revised Public Procurement (preference to Make in India) Order 2017, may result in the Procurement Authority / Nodal Ministry / MDL imposing any or all of the remedies as provided for in Clause 9 of the Revised Public Procurement (preference to Make in India) Order 2017 dated 19.07.2024.

SIGNATURE: _____

DATE: _____

Seal / Stamp of Bidders