



Additional Tender Terms & Conditions

GEM Bid no GEM/2025/B/ 6776966

Procurement of Glass Windows Confirming to Class Requirement for 14 FPVs of ICG Y-16501 to Y-16514

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

- (a) **MAIN EQUIPMENT/ITEM/SYSTEM:** Procurement of Glass Windows Confirming to Class Requirement & MDL Approved Drawing for Project 14 FPVs of India Coast Guard. As per TSP nos 2046 rev 02 dt 30.04.2025 section II page nos 13.
- (b) **INSTALLATION MATERIAL:** As per TSP cl nos 17 and 18 page nos 8
- (c) **ON BOARD SPARES (OBS):** OBS for sufficient quantity for exploitation & on-board maintenance up to 2 years from date of completion of " Standard Warranty" (As mentioned in warranty cl no.29 and 30 page nos 11 of TSP) is required to be provided along with the main equipment. Please refer TSP cl nos 19 page nos 8 for more details.
 - (i) OBS will be ordered along with the main equipment.
 - (ii) It is mandatory to quote OBS for 2 year of exploitation period.
 - (iii) For ranking the bids OBS cost will be considered.
- (d) **DOCUMENTATION:** As per TSP cl nos 12 and 31 page nos 6 & 11
- (e) **SERVICES OF ENGINEERS:** NA
- (f) **TRAINING:** NA
- (g) **RE-PRESERVATION CHARGES-NA**
- (h) **EXTENSION OF WARRANTY:** NA
- (i) **EXTRA MAN DAYS CHARGES:** Not applicable
- (j) **BASE & DEPOT (B&D) SPARES:** NA

Note: Bidders shall quote for all line item in the tender, failing of which offer of the firm falls under rejection criteria.

2. **EARNEST MONEY DEPOSIT:** Bidders shall furnish EMD of **Rs. 1,50,000/- only (Rupees One lakh fifty thousand only)** through NEFT / Demand Draft / Pay order / Bank Guarantee / Insurance Security Bond / e-Bank Guarantee drawn in **favour of Mazagon Dock Shipbuilders Limited.**

EMD shall be submitted as per GeM Terms & condition.

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.

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 issued by MDL, for the tendered items (Toughened Glass Window) for which the offer is being submitted. Firms in the process of obtaining MDL registration will not be considered for EMD exemption.

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:

- a) EMD of unsuccessful bidders will be returned after finalization of the tender and shall be interest free.
- b) 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.



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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

Offers with non-submission of EMD shall be categorically rejected other than exempted category.

3. PRE-QUALIFICATION CRITERIA:

Technical PQ Criteria:

Vendor shall have past experience of Manufacture and supply of "Toughened Glass Window" for any ocean going vessel. PO copies & work completion certificate (invoice, delivery challan, WDCs, etc) must be submitted with offer in support of past experience.

Commercial Qualification Criteria for Goods:

The average annual financial turnover of 'The bidder' during the last three years, ending 31st March (or any other year ending followed in relevant country) of the previous financial year excluding the calendar year of tendering should be at **INR 5,00,000** /- as per the annual report (audited balance sheet as applicable and profit and loss account) of the relevant period, duly authenticated by a Chartered Accountant/Cost Accountant in India or equivalent in relevant countries.

4. VALIDITY PERIOD OF OFFER:

- I. Bid / Offer shall have the validity period of **180 days** from the tender closing date.
- II. In case the day up to which the bids are to remain valid falls on/ subsequently declared a holiday or closed day for MDL, the bid validity shall automatically be deemed to be extended upto the next working day.
- III. In exceptional circumstances, before the expiry of the original time limit, MDL may request the bidders to extend the validity period for a specified additional period. The request and the bidders' responses shall be made in writing or electronically. A bidder may agree to or reject the request. A bidder who has agreed to MDL's request for extension of bid validity, in no case, he shall be permitted to modify his bid.

5. 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 after tender closing date and time.
- II. Bids received other than through GEM portal (in case of GEM tender)
- III. Bidders who are debarred under PPP MII order 2017, GeM, CPPP including Tender holiday issued by MDL.
- IV. Bids received without EMD (other than those who are exempted from payment of EMD).



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(b) **Liabe rejection criteria:** Non-compliance/non-acceptance to any of the terms and conditions of the tender.

6. **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:

- (i) Technical & Commercial offer.
- (ii) Pre-qualification documents.
- (iii) Valid MSME Udyam Certificate, MDL Registration Certificate & ISO Accreditation Certificate (If applicable),
- (iv) Taxes and duties certificate for which they are registered.
- (v) Compliance Certificate w.r.t. Land Border Clause
- (vi) Blank rate sheet indicating quoted/not quoted against each line item, tax percentage, type of taxes for each line item in terms of percentage of total quote.
- (vii) PO copies along with Work completion certificate proof for technical pre-qualification criteria.
- (viii) Declaration of "Local Content as specified in the tender.
- (ix) Bidder contact details as per attached enclosure" Contact Details of the bidder
- (x) Bidders are required to provide 02 set hard copies of Techno-Commercial Offer to MDL within 07 days from date of closing of tender addressed as under:
HOS (SB-Design -Outfit)
K.A. – Mr. Kiran Rajput, CM (SB-Design -Outfit)
2nd Floor, West Block
Mazagon Dock Ship Builders Limited
Dockyard Road, Mumbai 10

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.

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

(a) Delivery Period / Contract Period: Delivery/contract period from the date of PO placement shall be as tabulated below:

Details Yard	Glass Windows
16501	PO + 03 months
16502	PO + 05 months
16503	PO + 07 months
16504	PO + 10 months
16505	PO + 13 months
16506	PO + 16 months
16507	PO + 19 months
16508	PO + 22 months
16509	PO + 25 months
16510	PO + 28 months
16511	PO + 31 months
16512	PO + 34 months
16513	PO + 37 months
16514	PO + 40 months

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(b) The delivery dates mentioned against each line item/service in SAP tender are for indicative purpose.

8. Pricing:

(a) Prices of all items/services shall be quoted for delivery of the items/services to the following destination including Charges towards inland transportation, insurance, and other local costs incidental to the delivery of the Goods/Services.

Items/services	Delivery/Work Address
Glass Windows	MDL Anik Chembur bond store

(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

9. WARRANTY/GUARANTEE:

(a) The equipment / item along with associated auxiliaries/components supplied shall be warranted / guaranteed for satisfactory Performance for the period of twelve (12) months from the date of delivery of equipment or 12 months after planned delivery of the ship whichever is later.

The tentative planned delivery of ships are as follows:

Yard	Delivery date of ship
16501	March 2026
16502	June 2026
16503	September 2026
16504	December 2026
16505	March 2027
16506	June 2027
16507	September 2027
16508	December 2027
16509	March 2028
16510	June 2028
16511	September 2028
16512	December 2028
16513	March 2029
16514	June 2029

(b) The Supplier cannot absolve their responsibility for warranty of material even though it is inspected by & approved by the inspection authorities.

(c) 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.

(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.

10. **PERFORMANCE SECURITY (EPBG):** Separate Performance Security for an amount equal to 5% of single order value (Including taxes, duties) payable in Indian Rupees shall be submitted as per Gem portal.

11. **PRESERVATION & PACKING:** NA

12. **TAXES & DUTIES:** To be included in the submitted quote, as per GEM & Govt. guidelines. Custom Duty: Not reimbursable.

13. **CONSIGNEE:-**

(a) Material scheduled for delivery are to be delivered at MDL (Anik bond store located in Mumbai)



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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:
- PO copy & subsequent amendments issued to it, if any.
 - Inspection Release Note (IRN) issued by nominated inspection officer.
 - Delivery Challans clearly indicating MDL Purchase Order No, Inspection Note Details and Packing List co-relating the items in the inspection report.
 - Copy of Warranty Certificate, Preservation Certificate etc.
 - Technical documentation, if applicable.
 - 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.

14. INSPECTION:

Binding Drawing & QAP Approval: As per SOTR cl nos 10 page nos 5.

For Goods: As per TSP cl nos 11 page nos 5 –**ABS**. Inspection Charges to be borne by Vendor.

Receipt Inspection:- MDL & CGPRT (Mbi).

Other general conditions related to inspection of material are as under:

- (a) 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.
- (b) **For Indian Bidders, the Third Party Inspection (TPI) charges shall be borne by Vendor. These charges shall be included from bidder's quote.**
- (c) The testing charges for samples should be borne by the supplier and this should be made clear at the enquiry stage itself to avoid claims at a later date/or effect on his position in comparative statement of offers. Any special testing involving financial implications shall be settled prior to placement of the order and such cost should form part of the evaluation.
- (d) **Receipt Inspection:** MDL & CGPRT(Mbi) shall carry out necessary inspection of the items on receipt in the MDL on the basis of appropriate MDL Inspection system requirements & the Inspection documents submitted by suppliers. Any objection raised by MDL inspection team against quality of material or workmanship shall be satisfactorily corrected by the supplier at his expenses including replacement as may be required within shortest possible time within 30 days. Items damaged during transit shall also be rectified or replaced by the supplier within shortest possible time.
- (e) **Rejection of the material:** Any portion of the equipment found defective/rejected, the supplier shall collect the same at his cost from the MDL Yard, all incidental charges being born by supplier, (inclusive of custom duty, if payable), within 30 days from the date of intimation to the supplier of such rejection. The MDL reserves the rights to dispose-off the rejected item at the end of a total period of 90 days in any manner, to the best advantage to the MDL & recover storage charges & any consequential damages, from sale proceeds of such disposal.

15. PAYMENT TERMS:

(a) **Main Equipment, OBS, Installation material, Spares, Documentation**

- (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.



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(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.

(b) **Services/Training:** NA

(c) **Warranty Extension (If applicable):** NA

16. Exchange Rate Variation:

- (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.
- (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 and 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.
- (i) 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

17. INTEGRITY PACT (IP): NA

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

Design Dept.	Mr. Vinit Wagh, DGM/PE(D-CGP)	+91 22 2376 3017	vswagh@mazdock.com
	Mr. Kiran Rajput, CM (SB-Design - Outfit)	+91 22 2376 3368	krajput@mazdock.com
Commercial Dept.	Mr. D S Chavan, DGM /PE(C-CGP)	+91 22 2376 2782	dschavan@mazdock.com

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	Ms Shipon Sarkar, M(C-CGP)	+91 22 2376 2765	sssarkar@mazdock.com
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19. We look forward to receive your most competitive and reasonable offer against this tender.

Yours faithfully,

For MAZAGON DOCK SHIPBUILDERS LIMITED

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Section I - Annexure / Format

RTGS Format- Annexure I

(ILLUSTRATIVE FORMAT)

1. Supplier's / Vendor's Name:

[illegible]

2. Supplier's / Vendor's Name as per Bank Records:

[illegible]

3A. Supplier's Code

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3B. Supplier's PAN Number: #

[illegible]

Quoting PAN No. in all the e-returns has become 100% mandatory w.e.f. 14-02-2008 hence, ensure to fill- up this and also send a photocopy of PAN duly self-attested. If there is any difference between the name given in the supplier's name and name given in the PAN card, then a note to explain the reason for the difference and the correlation between both.

4. Supplier's / Vendor's Complete Postal Address:

Door No.							Street:										
Location :							District :										
City:							State						PIN				

5. Supplier's / Vendor's E-mail ID:

[illegible]

6. Supplier's / Vendor's Telephone Number & Mobile Phone Number:

[illegible]

7. Name of the Bank:

[illegible]

8. Bank (Branch) Postal Address:

[illegible]

9. RTGS*/NEFT - Code of the Branch:**

[illegible]

RTGS* - "Real Time Gross Settlement", NEFT** - "National Electronic Fund Transfer".

These “IFSC” Codes are unique numbers of each Branch – “Indian Financial Services Code”. For some Branches both the codes are the same and some Banks, may maintain one Code No. for RTGS and another Code No. for NEFT. Hence, please fill-up both the rows, even if it is the same.

10. Nature of the Account: (Tick whichever is applicable & put 'x' mark for the balance two accounts)

Saving Bank Account:		Cash Credit Account:		Current Account:	
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11. Bank Account Number of the Supplier: ©

[illegible]

© Fill up from the 1st column. For the balance left out blank columns, please mention 'x' mark.

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We hereby declare that the particulars given above are correct and complete. If the transaction is delayed for reasons of incomplete or incorrect information, we would not hold MDL responsible.

Date: **Supplier's Seal:** **Authorized Signature of the Supplier:**

Certified that the particulars as per Serial Numbers 2, 7 to 11 are correct as per our records.

Date: **Bank's Stamp** **Authorized Signature of the Officer of
the Bank.**

Note: Based on the Illustrative Format as above, the concerned Dealing Officer / HOD(C) may formulate / design the required forms / documents / tender enquiries / registers / STACS / proformas to suit to the requirements on case to case basis in line with the corresponding articles in Purchase Manual Volume-I.



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Format for Contact Details- Annexure II

ENCLOSURE TO MDL Tender No:											
Name of Bidder:											
Address:											
Contact Number:											
email id:											
Details of Authorised Representatives; (Three Levels)											
1	<table border="1"><tr><td>Name:</td><td></td></tr><tr><td>Designation</td><td></td></tr><tr><td>Direct Landline Number:</td><td></td></tr><tr><td>Mobile Number:</td><td></td></tr><tr><td>Email id:</td><td></td></tr></table>	Name:		Designation		Direct Landline Number:		Mobile Number:		Email id:	
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(Tender value Less than Rs 10 Crores)**

Note 1: This certificate shall be submitted by the successful bidder post execution of the contract.

**LOCAL CONTENT DECLARATION (post execution of contract / PO) BY CHIEF FINANCIAL OFFICER
OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE
OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CORPORATION,
PARTNERSHIP OR INDIVIDUAL)****IN RESPECT OF CONTRACT No./ PO 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),
that:

- (a) The facts contained herein are within my own personal knowledge.
- (b) My/our company had declared the local content at the time of tender as under

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

- (c) My / our company has completed the above referred contract and the actual local content of the delivered item/s calculated using the definition in the declaration given at the time of Bid is as under:

Tender Item Sr No	Declared minimum Local content at the time of bidding (%)	Achieved Local content of delivered items (%)

NB: Local content percentage shall strictly be declared item wise or tender wise as was declared at the time of bid / tender.

- (d) 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 16.09.2020 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. I undertake to retain the relevant documents for 7 years from date of execution.

- (e) 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 16.09.2020.

SIGNATURE: _____**DATE: _____****Stamp / Seal of the company**



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Annexure-B-1

**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 only:

1) PPP MSE Order 2012

2) PPP MII 2017



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(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

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BLANK RATE SHEET FOR GEM/2025/B/6776966 (PROCUREMENT OF Glass Windows for 14 FPV SHIPS- ICG)

Note:

1) Bidders are requested to indicate "Quoted/ Not Quoted" as applicable against each line item & upload this blank rate sheet along with Part1 of their offer. The actual prices are to be quoted in the online BOQ (price bid) only.

2) For details of Delivery Schedule, Please refer the Tender Enquiry form attached with the Tender.

book contains two sheet. Bidders are requested to fill and submit blank rate sheet as per format provided only

3) This Excel work

Bidder Name													
ITEM NO	Line item No as Per PR	MATERIAL DESCRIPTION	Total Qty	UNIT	Yard No	Currency in which prices are quoted	Basic Unit Rates	Type of GST e.g.IGST/CGST and SGSTetc.	GST (in %)	HSN Code	FE content in % (Excluding taxes and duties)	Currency for which FE % is quoted.	
1	10	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16501								
2	20	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16501								
3	30	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16501								
4	40	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16501								
5	50	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16501								
6	60	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16501								
7	70	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16501								

8	80	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16501							
9	90	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16501							
10	100	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16501							
11	110	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16501							
12	120	DOCUMENTATION FOR GLASS WINDOW	1	SET	16501							
13	130	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16501							
14	131	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16501							
15	132	ALUMINIUM TEMPLATE FOR EACH SIZE OF WINDOW(6 NOS.) FOR CUTTING AND MARKING ON SHIPS HULL	1	SET	16501							
16	140	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16502							
17	150	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16502							
18	160	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16502							
19	170	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16502							
20	180	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16502							

21	190	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16502							
22	200	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16502							
23	210	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16502							
24	220	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16502							
25	230	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16502							
26	240	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16502							
27	250	DOCUMENTATION FOR GLASS WINDOW	1	SET	16502							
28	260	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16502							
29	261	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16502							
30	270	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16503							
31	280	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16503							
32	290	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16503							

33	300	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16503							
34	310	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16503							
35	320	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16503							
36	330	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16503							
37	340	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16503							
38	350	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16503							
39	360	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16503							
40	370	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16503							
41	380	DOCUMENTATION FOR GLASS WINDOW	1	SET	16503							
42	390	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16503							
43	391	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16503							
44	400	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16504							

45	410	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16504							
46	420	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16504							
47	430	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16504							
48	440	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16504							
49	450	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16504							
50	460	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16504							
51	470	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16504							
52	480	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16504							
53	490	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16504							
54	500	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16504							

55	510	DOCUMENTATION FOR GLASS WINDOW	1	SET	16504							
56	520	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16504							
57	521	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16504							
58	530	WATER TIGHT TOUGHNED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16505							
59	540	WATER TIGHT TOUGHNED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16505							
60	550	WATER TIGHT TOUGHNED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16505							
61	560	WATER TIGHT TOUGHNED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16505							
62	570	WATER TIGHT TOUGHNED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16505							
63	580	WATER TIGHT TOUGHNED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16505							
64	590	WATER TIGHT TOUGHNED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16505							
65	600	WATER TIGHT TOUGHNED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16505							
66	610	WATER TIGHT TOUGHNED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16505							

67	620	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16505							
68	630	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW/ FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16505							
69	640	DOCUMENTATION FOR GLASS WINDOW	1	SET	16505							
70	650	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16505							
71	651	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16505							
72	652	ALUMINIUM TEMPLATE FOR EACH SIZE OF WINDOW(6 NOS.) FOR CUTTING AND MARKING ON SHIPS HULL	1	SET	16505							
73	660	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16506							
74	670	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16506							
75	680	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16506							
76	690	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16506							
77	700	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16506							
78	710	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16506							
79	720	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16506							

80	730	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16506							
81	740	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16506							
82	750	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16506							
83	760	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16506							
84	770	DOCUMENTATION FOR GLASS WINDOW	1	SET	16506							
85	780	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16506							
86	781	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16506							
87	790	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16507							
88	800	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16507							
89	810	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16507							
90	820	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16507							
91	830	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16507							

92	840	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16507							
93	850	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16507							
94	860	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16507							
95	870	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16507							
96	880	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16507							
97	890	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16507							
98	900	DOCUMENTATION FOR GLASS WINDOW	1	SET	16507							
99	910	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16507							
100	911	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16507							
101	920	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16508							
102	930	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16508							
103	940	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16508							

104	950	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16508							
105	960	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16508							
106	970	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16508							
107	980	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16508							
108	990	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16508							
109	1000	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16508							
110	1010	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16508							
111	1020	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16508							
112	1030	DOCUMENTATION FOR GLASS WINDOW	1	SET	16508							
113	1040	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16508							
114	1041	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16508							
115	1050	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16509							

116	1060	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16509							
117	1070	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16509							
118	1080	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16509							
119	1090	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16509							
120	1100	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16509							
121	1110	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16509							
122	1120	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16509							
123	1130	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16509							
124	1140	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16509							
125	1150	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16509							

126	1160	DOCUMENTATION FOR GLASS WINDOW	1	SET	16509							
127	1170	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16509							
128	1171	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16509							
129	1172	ALUMINIUM TEMPLATE FOR EACH SIZE OF WINDOW(6 NOS.) FOR CUTTING AND MARKING ON SHIPS HULL	1	SET	16509							
130	1180	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16510							
131	1190	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16510							
132	1200	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16510							
133	1210	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16510							
134	1220	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16510							
135	1230	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16510							
136	1240	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16510							
137	1250	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16510							
138	1260	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16510							

139	1270	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16510							
140	1280	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW/ FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16510							
141	1290	DOCUMENTATION FOR GLASS WINDOW	1	SET	16510							
142	1300	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16510							
143	1301	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16510							
144	1310	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16511							
145	1320	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16511							
146	1330	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16511							
147	1340	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16511							
148	1350	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16511							
149	1360	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16511							
150	1370	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16511							

151	1380	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16511							
152	1390	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16511							
153	1400	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16511							
154	1410	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16511							
155	1420	DOCUMENTATION FOR GLASS WINDOW	1	SET	16511							
156	1430	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16511							
157	1431	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16511							
158	1440	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16512							
159	1450	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16512							
160	1460	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16512							
161	1470	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16512							
162	1480	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16512							

163	1490	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16512							
164	1500	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16512							
165	1510	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16512							
166	1520	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16512							
167	1530	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16512							
168	1540	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16512							
169	1550	DOCUMENTATION FOR GLASS WINDOW	1	SET	16512							
170	1560	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16512							
171	1561	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16512							
172	1570	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16513							
173	1580	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16513							
174	1590	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16513							

175	1600	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16513							
176	1610	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16513							
177	1620	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16513							
178	1630	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16513							
179	1640	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16513							
180	1650	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16513							
181	1660	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16513							
182	1670	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16513							
183	1680	DOCUMENTATION FOR GLASS WINDOW	1	SET	16513							
184	1690	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16513							
185	1691	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16513							
186	1700	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W1	1	Nos	16514							

187	1710	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W2	1	Nos	16514							
188	1720	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W3	1	Nos	16514							
189	1730	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W4	1	Nos	16514							
190	1740	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W5	1	Nos	16514							
191	1750	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE FRONT SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=800mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W6	1	Nos	16514							
192	1760	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - SB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=950mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W7	1	Nos	16514							
193	1770	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=910/715mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W8	1	Nos	16514							
194	1780	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=850mmX800mmXR100mm GLASS THICKNESS-14mm LEGEND-W9	1	Nos	16514							
195	1790	WATER TIGHT TOUGHNEED GLASS WINDOW FOR WHEEL HOUSE - PB SIDE TYPE-FIXED-BOLTED FRAME MATERIAL-ALUMINIUM CLEAR SIZE-(LxWxR)=560mmX800mmXR100mm GLASS THICKNESS-10mm LEGEND-W10	1	Nos	16514							
196	1800	A60 FIRE CLASS WATER TIGHT TOUGHNEED GLASS WINDOW FOR MCR-AB TYPE-FIXED-BOLTED FRAME MATERIAL-SS-316 CLEAR SIZE-(LxWxR)=1000mmX1000mmXR100mm GLASS THICKNESS-50mm LEGEND-W11	1	Nos	16514							

197	1810	DOCUMENTATION FOR GLASS WINDOW	1	SET	16514							
198	1820	ON BOARD SPARES FOR GLASS WINDOW	1	SET	16514							
199	1830	INSTALLATION MATERIAL (SEALING COMPOUND,NUT,BOLTS FOR GLASS WINDOW GASKETS ETC	1	SET	16514							

(PROCUREMENT OF OBS for Glass Windows for 14 FPV SHIPS- ICG)

Note:
1) Bidders are requested to indicate total value of each spare in percentage of total value quoted for OBS Spares. E.g. If total value quoted for total OBS Spare is 100 and this contains spare A & B. Spare A cost 60 & Spare B cost 40. Then 60% to be indicated in the last column
2) Prices are not to be indicated in this sheet

[illegible]



MAZAGON DOCK SHIPBUILDERS LIMITED

(A Govt. Of India Undertaking)

SHIPBUILDING DESIGN OUTFIT
DOCKYARD ROAD, MUMBAI - 400 010

STATEMENT OF TECHNICAL REQUIREMENTS
FOR
TOUGHENED GLASS WINDOW

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	:	2046
ICG HQ REFERENCE / APPROVAL	:	CGHQ letter SA/0160/14 FPVs/Hull SOTR dated 10 Feb '25.
CLASSIFICATION NOTATION	:	+ A1 HSC (Special Government Service) +AMS or equivalent.

02	Size of Windows no. W2, W3, W4, W5, W6, W7, W8, W9 updated in Annexure-5	30 April 2025	MDL/CGHQ
01	SOTR updated as per comments received from CGHQ vide letter SA/0160/14 FPVs/Hull SOTR dated 10 Feb '25.	10 Feb '25.	MDL/CGHQ
REV	DESCRIPTION	DATE	AUTHORISED BY
<i>Abhishek</i>	<i>[Signature]</i>	<i>[Signature]</i>	
ABHISHEK DM (D-F)	KIRAN RAJPUT CM (D-F)	CH G K RAO DGM/ HOS (D-F)	
Prepared By	Checked By	Approved By	



MAZAGON DOCK SHIPBUILDERS LTD.
(A Govt. Of India Undertaking)
Dockyard Road, Mumbai -400 010.

DESIGN OUTFIT

YARD-16501-16514

TOUGHENED GLASS WINDOW

SOTR No.	2046
REV. NO.	02
DATE	30/04/2025
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SECTION - I

A.		INTRODUCTION	
1.	This General Specifications relate to Design, approval of the equipment by the classification society, Manufacture and Supply of 14 (fourteen) ships 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 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 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)		
B.		GENERAL CONDITIONS AND 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:		
	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.)
	Expected ship's life		20 Years at 1500 hrs of annual exploitation
	Operating profile	Continuous slow speed	8 – 14 knot
		Cruising	14 knots



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		Maximum	33 knots at 92% MCR power at full load displacement
	Unrestricted continuous rating of Diesel engine, at 45 degree 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.		
3.2	The equipment is to be designed for continuous operation & survival under the environmental conditions specified for ambient conditions as specified table below:-		
	Sr. No	Design Parameter	Value
	(a)	Air Temperature	Minimum of 5 °C and Maximum of 45 °C
	(b)	Sea water temperature	32 °C
	(c)	Relative humidity	90% at 35 °C
	(d)	Atmospheric pressure	750 mm of Hg column (1000 mbar)
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:-		
	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	
3.4	Complement:		
	(a)	Officers	07
	(b)	Subordinate Officers	08
	(c)	Others	27
		Total	42
3.5	Propulsion Plant Operating Profile / Modes: The ship is to be available for exploitation for minimum of 2500 hrs. annual exploitation.		
3.6	Service life of ship: The expected service life of ship is 20 years @ 2500 hrs. annual exploitation		
4.	Ship's Support Systems Supplies: For electrical supplies, in case of different requirements (voltage/frequency, etc.), the equipment supplier shall provide suitable provision (transformer/converter/UPS, etc.).		
	S.No.	SYSTEM	SUPPLIES
	(a)	Electrical	415 V AC @ 50 Hz, 3 phase
			230 V AC @ 50 Hz, 1 phase
			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		



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	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		
	Sr. No.	Compartments	DB(A)
	I.	Machinery spaces	110
	II.	MCR	75
	III.	Work places	85
	IV.	Non Specific workshops	90
	V.	Bridge and Chartroom	65
	VI.	Radio Rooms	65
	VII.	Cabins	60
	VIII.	Dining Hall/Offices	65
	IX.	Service spaces (galley, pantry)	75
	X.	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. Vibration measurements are to be carried out as per ISO 4868(XII)/latest amendment.		
8	Electrical Equipment Requirements:		
8.1	Requirements for electrical equipment (including Motors & Starters) shall confirm its latest revision / equivalent International Standards.		
8.2	IP Rating for Electrical Equipment: IP rating for associated electrical equipment enclosure is IP 44. Specific IP rating to be as per Technical specification requirement.		
9.	Availability/ Reliability/ Redundancy/ Self Sufficiency:		
9.1	Equipment should be robust in design for ensuring high reliability, ease of operation and minimum maintenance.		
10	Binding Drawing & QAP approval:		
10.1	Vendor shall submit the drawings & QAP for approval to ABS within 4 weeks of placement of order. 1 set of drawing & QAP to be submitted to MDL as well for review & comments. MDL shall submit the comments on drawings & QAP if any within 1 week. Vendor shall be completely responsible to get drawings & QAP approved from ABS within stipulated time. Cost for the drawing & QAP approval by designated classification society shall be borne by vendor. Vendor shall also submit 3-D model of equipment in ".stp" format compatible with Aveva Marine to MDL.		
11	Inspection:		
11.1	All equipment/items to be inspected tested & certified by ABS as per latest rules & regulations. Cost for the inspection shall be borne by Vendor. All inspection report to be		



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	submitted along with main equipment.			
11.2	Equipment should be manufactured to the highest quality and equipment should confirm to class requirement.			
11.3	Receipt inspection shall be done by MDL & CGPRT (Mbi) on receipt of material in stores 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.			
12	Documentation:			
12.1	Following documentation/certificates duly signed by surveyors of designated classification society in hard as well as in soft copy to be submitted by vendor along with equipment.			
	S. No	Type of Documents / Drawings	Quantity / Yard 16501	Qty/ Remaining Yards
	1.	As Fitted Drawings with part list /Catalogue/ Class approved final GA & manufacturing Drgs with BOM/Installation drawings	7	3
	2.	Technical, Operating, Installation, Testing & Maintenance manual	7	3
	3.	Inspection Certificates, inspection reports of inspection agency, certified test reports, FATS reports, material test reports, load test certificates, certificate for dimensional accuracy, Weight Certificates with position of C.G etc	7	3
	4.	Soft copy of all above documents in CD or Pen drive	7	3
12.2	All documents must be in English language only.			
12.3	All drawings & documents shall contain dimensions & other parameters in S.I. units only.			
12.4	Documentation is to be forwarded to the consignee in a separate enclosure, along with supplies.			
12.5	Material/Test/Inspection Certificate is to carry a reference number or any other details so as to relate the certificates with the relevant material.			
12.6	Delivery of main equipment shall be considered completed only on receipt of all approved Manuals & Documentations as detailed in Table -5 above.			
13	Design Standards: Following rules and regulations as applicable shall be met:			
13.1	Nominated Classification Society Class Rules.			
13.2	International load line reg. 1966 as amended by Protocol of 1988 and any other subsequent amendments.			
13.3	IMO/MARPOL-73/78 reg and any further / latest amendments including MS Act 58 and their rules.			
13.4	COLREG 72 and any further/ latest amendments.			
13.5	IMO /Anti Fouling System.			
13.6	International tonnage 1969 and any further/ latest amendments.			
13.7	SOLAS 1992 as amended in 2002 and any further / latest amendments.			
13.8	Stability standard as per NES 109.			
13.9	Naval Magazine Explosive Regulations (NMER).			
13.10	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.			



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13.11	Superior/higher specifications of standard are acceptable subject to proving and satisfactory trial by Yard.
14	Quality Standard:
14.1	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.
14.2	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.
14.3	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.
15	Factory Acceptance Trials (FATs):
15.1	In order to verify its correct assembly and operation, each equipment, shall be subjected to Factory Acceptance Trials as per established proven engineering practice. A detailed FATs program and post-test inspections to demonstrate performance characteristics and guaranteed parameters of the equipment shall be prepared and submitted by the supplier for approval.
15.2	All the parameters/performance required to be checked during HATs/SATs must be included in the FATs & duly noted.
15.3	During Factory Acceptance Trials, the supplied equipment is to be installed on the test bed and operated in the same way as it will be on board the vessel. Any correction applied for different environmental and installation conditions shall be duly notified to Coastguard/shipyard seeking their approval.
15.4	The testing installation shall provide for a mounting arrangement of equal stiffness as expected one for the ship structure where the unit will be seating.
15.5	The schedule for inspection, test & trials should be drawn up in such a way that all inspections including component level inspection, trials of subassemblies, etc., should be, as far as practicable performed at the corresponding stage of manufacture. Detailed measurements should be carried out at the appropriate stage of manufacture.
15.6	Factory Acceptance Trials shall be offered to, witnessed & accepted by ICG reps / Classification Society as indicated in the Purchase order. The FATs shall also be witnessed by shipyard representative.
15.7	The supplier shall provide a detailed program of workshop and shipboard tests and post-test inspection to demonstrate the performance characteristics and the guaranteed parameters of the equipment for approval by the shipyard/ Indian Coastguard, in the technical offer
15.8	All defects observed or developed during the inspection/ testing are to be rectified free of cost before dispatch to shipyard.
15.9	Documentation on equipment FATs procedure is to be submitted by equipment supplier in time bound manner, well in advance for approval by the designated classification society. For conducting equipment official FATs, around 12 weeks advance notice shall be given by equipment supplier to designated classification society/Shipyard/ICG, for participation in FATs. On successful completion of factory acceptances tests, complete FATs report duly certified by the designated classification society, shall be submitted to Shipyard/Indian Coast Guard within 02 weeks' time.
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



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	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	Spares:
17.1	Installation & Commissioning Consumable, On-Board Spares, special tools, test equipment, etc., are to be recommended by equipment supplier, taking into account operational and maintenance requirements of the equipment. Equipment supplier shall submit comprehensive list of all types of spares & tools under appropriate category along with the technical offer. Different categories of spares & tools shall be supplied, in consultation with Shipyard/ICG, based upon ranging and scaling by ICG.
17.2	Documentation for equipment spares shall include Comprehensive Part List (CPL) & Part Identification List (PIL), for meeting ICG's Logistics Management System (LMS)/Ship's Logistics Management System (SLMS) requirements. All details on spares are to be submitted by equipment supplier in compatible format in electronic media.
18	Installation Tools and Commissioning Consumables:
18.1	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
18.2	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
18.3	An itemised list with cost for the same is also to be indicated in the offer to facilitate their procurement in future, if required.
18.4	One set of standard tools adequate for undertaking the maintenance onboard should be supplied along with the offer.
19	On Board Spares (OBS):
19.1	The manufacturer's recommended list of On-Board Spares (MRL-OBS) required for servicing and maintenance, including breakdown maintenance for two years of operation after completion of the warranty period, should be included in the scope of supply. A list of On-Board Spares along with the maintenance schedule is to be submitted. The On-Board Spares and special tools shall cater to all on-board maintenance routines and possible repair requirements. Preservation requirements of On-Board Spares, if any, shall be indicated in the offer. The list of On-Board Spares required for auxiliary equipment/system shall also be indicated in the offer.
19.2	An item-wise list with cost (in LMS format to be submitted in soft copy in Excel) of On-Board Spares, special tools, and test equipment should be as per Annexure 3 .
19.3	In case of any defect or deficiency observed in OBS while handing over to ship crew, the same may be made good by the vendor without any cost implication.
19.4	The Manufacturer's Recommended List of On-Board Spares has to be recommended based on the likely consumption rate of the spares and on the exploitation pattern of the equipment.
19.5	Firms quoting lesser Manufacturer's Recommended List of On-Board Spares in terms of range and depth will have to make good deficiencies at their cost without any



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	financial responsibility or liability to ICG/MDL within 30 days of intimation to render equipment operational.
19.6	A certificate of sufficiency of Manufacturer's Recommended List of On-Board Spares is to be submitted by the firm for 03 years of operation of the ship.
19.7	The Manufacturer's Recommended List of On-Board Spares should also include the spare conforming to Classification Society rule requirements for the vessel.
19.8	The ICG would have the option to amend the list of OBS proposed by the firm during the TNC of the equipment within the quoted price to ensure its sufficiency, based on its past experience of the exploitation of the same or similar equipment.
20	Indigenisation/Local Support: (Applicable to equipment with import content)
20.1	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.
20.2	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 program 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.
21	Product Support:
21.1	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.
21.2	The firm/OEM to submit undertaking to provide product support for minimum period of 20 years from date of delivery of the vessel.
21.3	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 Vessel, the same to be upgraded without any additional cost.
21.4	Firm to indicate after sales and product support facilities in India with response time for attending defect and providing spares.
21.5	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.
21.6	Firm should agree to enter into the rate contract / All-inclusive Annual maintenance contract (AIAMC) with ICG for maintenance and supply of spares.
22	Operational Cycle: The operating refit cycle of ship is as follows:
22.1	1st and 2nd Ops refit cycle – Operation cycle of 24 months followed by a refit.
22.2	3rd and 4th Ops refit cycle – Operation cycle of 18 month followed by a refit.
22.3	Balance Ops and refit cycle – Operation cycle of 15 month followed by a refit.
22.4	First three refits are short refit (SR) followed by a normal refit (NR). Second NR will be medium repair (MR).
22.5	Short refit is for duration of 04 months. Normal refit is for duration of 05 months and medium refit for duration of 12 months.
23	Materials:
23.1	A component wise material list (with specifications) is to be provided by the equipment supplier. Standard materials for use on-board ocean-going ships are only to be used. Various materials used shall be in accordance with the stipulated requirements as per international Standard, as stated in the equipment technical specifications. Any deviation from specified materials is to be informed to Shipyard/Indian coast Guard in the Deviation List placed at



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	Annexure- '1' with suitable reasons and justifications, subject to the condition that the material meets the requirements for envisaged marine application. A separate declaration stating that no asbestos materials are used in the product is to be submitted along with offer and also post manufacturing during equipment delivery.	
24	Interchangeability:	
24.1	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.	
25	Lifting Arrangement:	
25.1	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	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 is 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.	
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:	
	(i)	Deliverables related to Main Equipment (to be marked in green colour).
	(ii)	Deliverables related to Installation material and Tools related to Main & Auxiliary Equipment (to be marked in green colour).
	(iii)	Commissioning consumables and Tools (to be marked in green colour).
	(iv)	On Board spares and Tools (to be marked in red colour).
	(vi)	Documentation (to be marked in blue colour).
27.5	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.	
27.6	Packing list should give further breakup of items, wherever particular item is quantified by set.	



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28 Security of Information:

28.1

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.

29 Warranty:

29.1

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 (D) (mentioned in succeeding Para) of the ship by shipyard MDL to the Indian Coast Guard, whichever is later. This is to be referred as 'Standard Warranty'.

29.2

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.

29.3

Extension of Warranty: NA

30

Planned Delivery date(D): The planned date for delivery of the Ships to the Indian Coastguard by MDL are tabulated below:

Ship no.	Yard No.	Planned Delivery Date
1.	16501	March-2026
2.	16502	June-2026
3.	16503	Sept-2026
4.	16504	Dec-2026
5.	16505	March-2027
6.	16506	June-2027
7.	16507	Sept-2027
8.	16508	Dec-2027
9.	16509	March-2028
10.	16510	June-2028
11.	16511	Sept-2028
12.	16512	Dec-2028
13.	16513	Mar-2029
14.	16514	Jun-2029

31

Weight Recording / Weight Certificate:

31.1

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 '2' of this document. 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



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MDL for their consideration and further necessary action.

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Maintenance Management Software:

32.1

A Maintenance Management software package for Ship Maintenance, Planned Preventive Maintenance (PPM), Defect Record & Tracking and Maintenance Forecast & Planning as per CG requirements shall be installed and commissioned by MDL.

32.2

The software package shall be capable of indicating Maintenance Routines falling due on various equipment fitted on-board and spares requirement, as per OEM promulgated schedule.

32.3

The software will be capable of interlinking on-board spares with actual spares requirement and indicate future requirement to meet Minimum stock level.

32.4

OEM is required to submit the inputs such as routine schedule, spare requirement etc. in the format enclosed at Annexure-4.

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:

- 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. Harbour 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.

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

Compliance Matrix:

34.1

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-1 (preferably in excel sheet). The technical offer received without Compliance Matrix shall be liable for rejection.

35

Check List of Documents to be submitted with Offer:

35.1

Compliance matrix as per Annexure 1

35.2

Preliminary drawings for Glass windows with dimensions & weight data.

35.3

Recommended list of OBS & Installation material

35.4

Lead time for delivery of Material post placement of order.

35.5

Documents in support of Technical prequalification criteria specified in tender document.



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SECTION – II

TECHNICAL REQUIREMENT

1.	Equipment: Glass windows conforming to BSMA -25 as per list enclosed at Appendix-5
2.	Scope of Supply:
2.1	11 Nos. of bolted glass windows conforming to BSMA -25. Windows frames for 10 windows shall be of anodized Aluminium (IS: 733) & for one window shall be of Stainless steel.
2.2	Quantity :11 Nos as per Annexure-5
2.3	Aluminium Template for each size of window
2.4	Installation Material (sealing compound, nut, bolts, gaskets, etc)
2.5	On Board Spares as per Para 18.4 of Section-I
2.6	Documentation as per Par 12 of Section-I
3.	Technical Specification:
3.1	Items to be supplied complete in all respects to the entire satisfaction of Inspecting Authority.
3.2	All windows should conform to BSMA25.
3.3	Windows frame are to be of anodized Aluminum (IS: 733) suitable for bolting on to Aluminium superstructure for 10 no of windows as specified in Appendix-5. Window frame of one window for MCR compartment shall be Stainless Steel (SS 304) suitable for bolting on steel bhd.
3.4	A rigid Aluminium template shall be supplied with each window to facilitate the cut out marking and drilling on the ships structure to ensure an effective installation is achieved.
3.5	The windows should be supplied in matt anodized natural colour by Electro chemical process.
3.6	All glass shall be marked 'TOUGHENED' indelibly on the top clear of window glass frame.
3.7	Toughened Glass generally conform to IS 6640 and to be free from PARALAX ERROR. Toughened glass should have FLEXUAL STRENGTH: 199 MPa & FLEXUAL MODULUS: 73000 MPa.
3.8	Design and testing shall be generally conforming to IS 8886.
3.9	2mm thick EPDM rubber gaskets of hardness (Shore A°) 50±5 are to be cut properly to the shape of window main frame plating flange with holes and supplied in order to provide the same between window flange and shell.
3.10	Stainless steel securing bolt conforming to AISI 316 & nylon washer (with 10% extra quantity) for windows are to be supplied along with windows.
3.11	Hose testing will be done by MDL as per ABS rules on the windows after fitment onboard the ship. The supplier should rectify/replace if any window is found not meeting water tight or faulty by any other means.
3.12	All window frames shall be permanently marked with the following details:- a) Manufacturers name (or trade mark) and serial number. b) Thickness of the glass fitted. c) Stamp of the inspection/approval authority. d) The nominal dimension (size) of the window e) Orientation of the windows to be marked with paint.
3.13	The window supplier should indicate the size of cut in bulkhead required for each window in the technical offer.
3.14	Pressures testing of the windows are to be done as per BSMA 25 at manufacturer's premises and certificates duly signed by ABS are to be supplied with windows.
3.15	Strom covers are to be supplied for windows as per list enclosed at Annexure. Strom covers should meet the class requirements and strength of cover should be equivalent to the strength of bulkhead thickness.
3.16	All material required for installation of Glass windows shall be in supplier's scope. Sealing material required to maintain watertight integrity also shall be in supplier scope.
3.17	All class and manufacturer test certificate to be submitted during delivery of items.
3.18	All windows and scuttles to be water pressure tested at 3 bar.



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ANNEXURE – 1

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

COMPLIANCE MATRIX

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

TSP Para No	Complied / Not Complied	Offer Reference (Page & Para No.)	Deviations with reasons (if any)
1			
2			
3			
4			
5			
6			
7			
8			

The Bidder should fill in this form for the deviations of his bid from the requirements as stated in the TSP. If no deviation is required, bidder should fill in "NIL" in the deviation column. Deviation listed other than deviation form shall not be considered.

BIDDER'S COMPANY SEAL

BIDDER'S SIGNATURE & DATE



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Annexure – 2

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:			
		SPECIFIED ACCURACY REQUIREMENT	
		NOTE :-	
RESULT OF WEIGHING TOTAL EQUIPMENT DRY WEIGHT (Excluding packing, temporary protection etc.)		<input type="text"/>	
ALLOCATED WEIGHT (Weight estimate agreed by purchaser and supplier based on order specs).		<input 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 - 3

MANUFACTURER'S RECOMMENDED LIST OF ON BOARD SPARES (MRL-OBS)

VESSEL/EQUIPMENT: 14 FPV

Sr No	Eqpt Part No./ Model no./SI No.	Eqpt Description	OEM Name	Vendor Name	Illustrated Spare Part List (ISPL) Reference/ Part No. of	Desc of Spare	Country of Origin	Unit Price	Seller Order No. & Date	Currency Code	Total Qty	VED* Category	Recommended scale for 01 Training Ship	Remarks

*VED- VITAL / ESSENTIAL/ DESIRABLE analysis of spares to be carried out by OEM prior to submission to the Buyer.

Original Equipment Manufacturer (OEM): _____ (Complete Address)

- Data regarding maintenance spares/stores like lubricants, sealing compound, gases should be given separately giving source of supply.
- Data furnished as OBD should also include software backups, as applicable
- In "Remarks" column following information (if applicable) be given:-
 - If an item has a shelf/operational life it will be marked as 'G' and life be indicated
 - Matching set of components be indicated.
 - Item which can be locally manufactured in India should be marked 'LM'.
 - Items which cannot be manufactured in India due to sophisticated design/ technology may be marked as 'SI' (Special Item).
 - If a component/assembly is common to other similar equipment offered by the OEM earlier, these should be marked 'CM' and Name of the equipment be indicated.
- OBS list should be drawn out of the 'Part List' of the equipment, which should be separately given as part of Technical Manuals.
- If the main equipment consists of other equipment, then OBS list should be prepared for them under proper heads. OBS list is to be prepared as per the maintenance concept of the customer.
- Items provided along with the equipment as spares should also be included in OBS list
- Modules/ Shop Replaceable Unit (SRU) / assemblies should be listed and their components should be included under them so as to relate each item of spare to their module / SRO / assembly.
- OBS list for test equipment should also be provided on the similar format. Cost to be indicated in Price bid.'



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Annexure - 4

Maintenance Management Software (MMS) format

Maintenance Interval Schedule	Tasks to be performed	Detailed task description with corresponding equipment image in PDF/ jpeg format	Spares required for performing the tasks			Tools required
			Description	Quantity	Dimension/ weight	
Example: Initial 500 Hours	Aux water pump inspect	Check following components for wear and damage 1) Bearings 2) Impeller 3) Seal	Nil	Nil	Nil	1) 1U-7546 chain wrench 2) Engine standard tool kit
	Battery electrolyte level check	1) Remove filler caps 2) Add only distilled water if necessary 3) Keep the battery clean 4) Clean the terminals with fine grade of sandpaper if required.	Distilled Water	Nil	Nil	
	Engine oil filter change	1) Remove oil filter with 1U-7546 chain wrench 2) Clean sealing surface of filter mounting. 3) Apply clean engine oil to new oil filter gasket 4) Install the new oil filter. Tighten the filter until filter gasket contacts the base. Do no overtight the oil filter.	2) Oil filter gasket	1	Nil	



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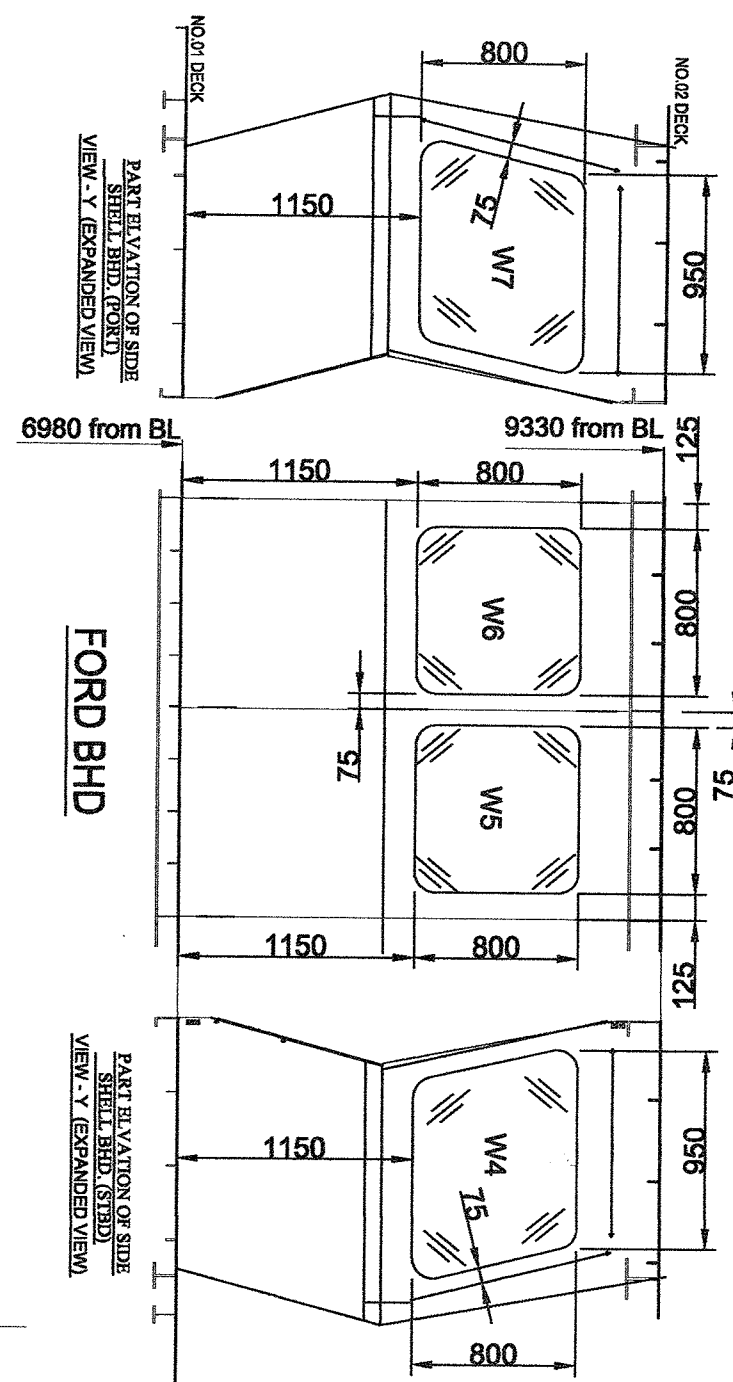
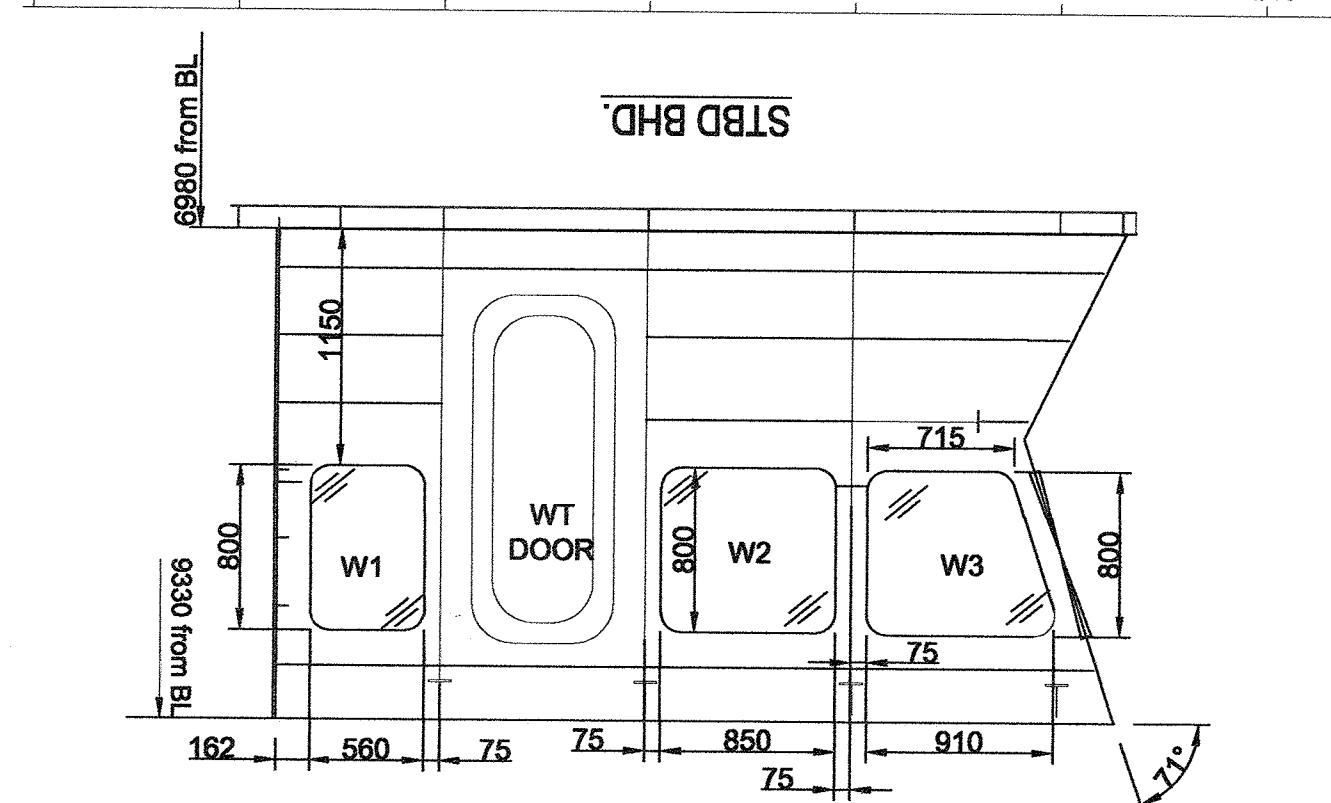
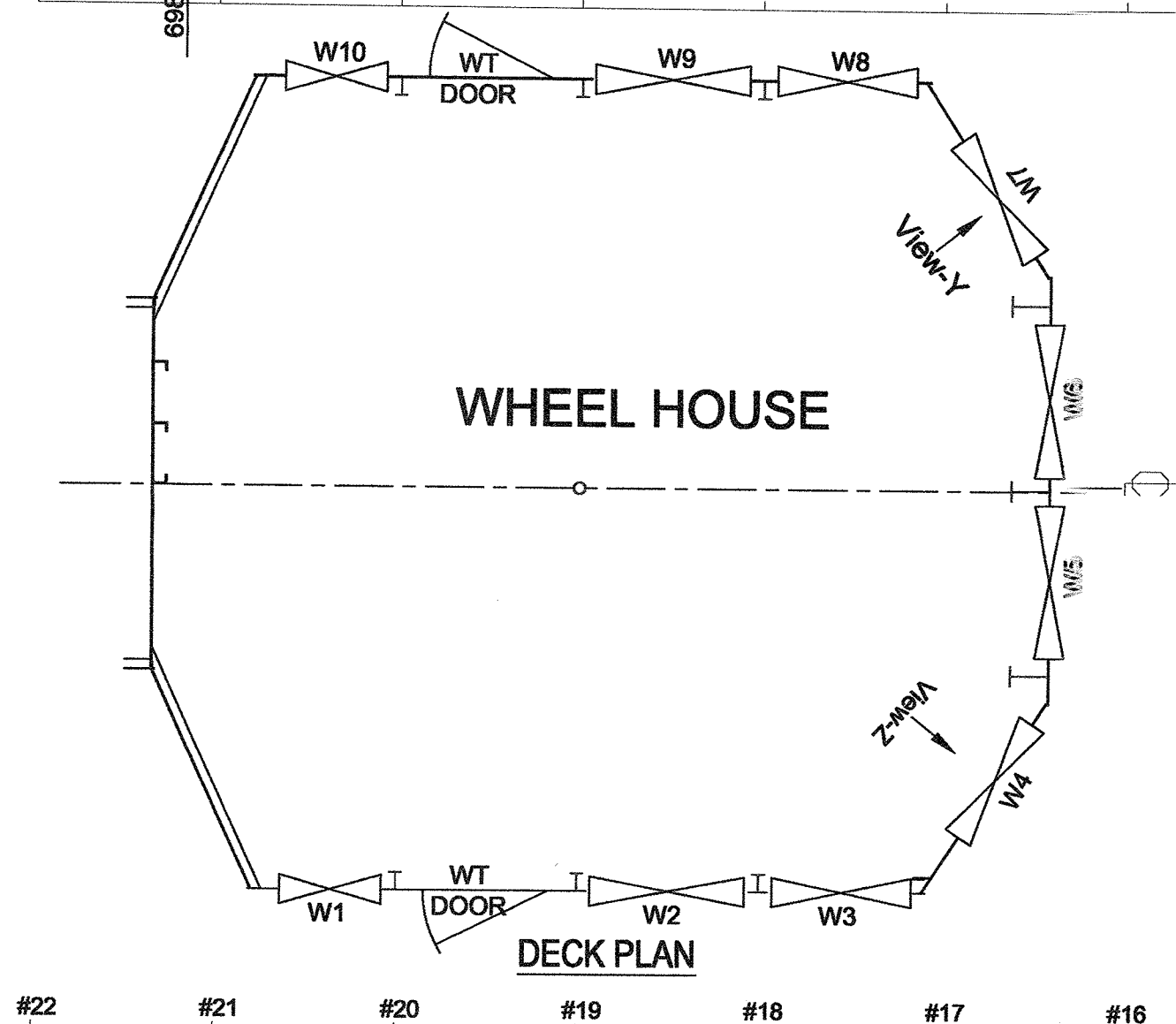
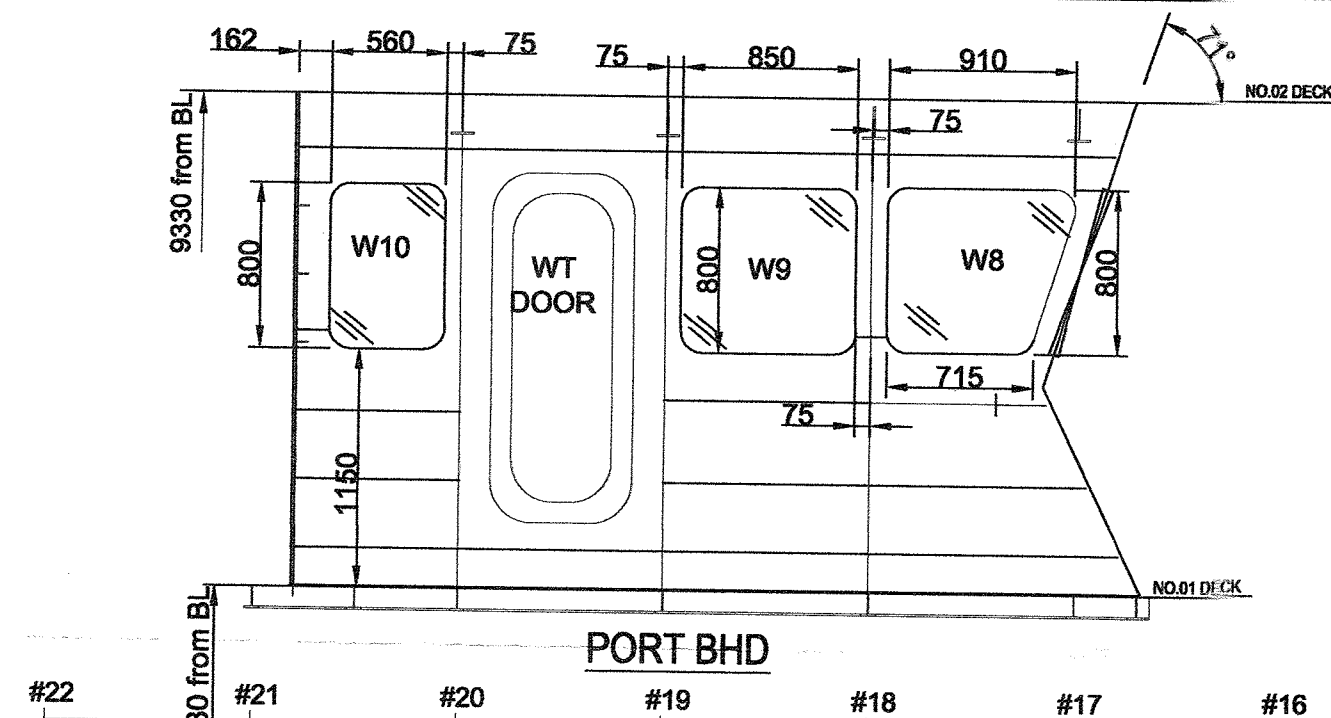
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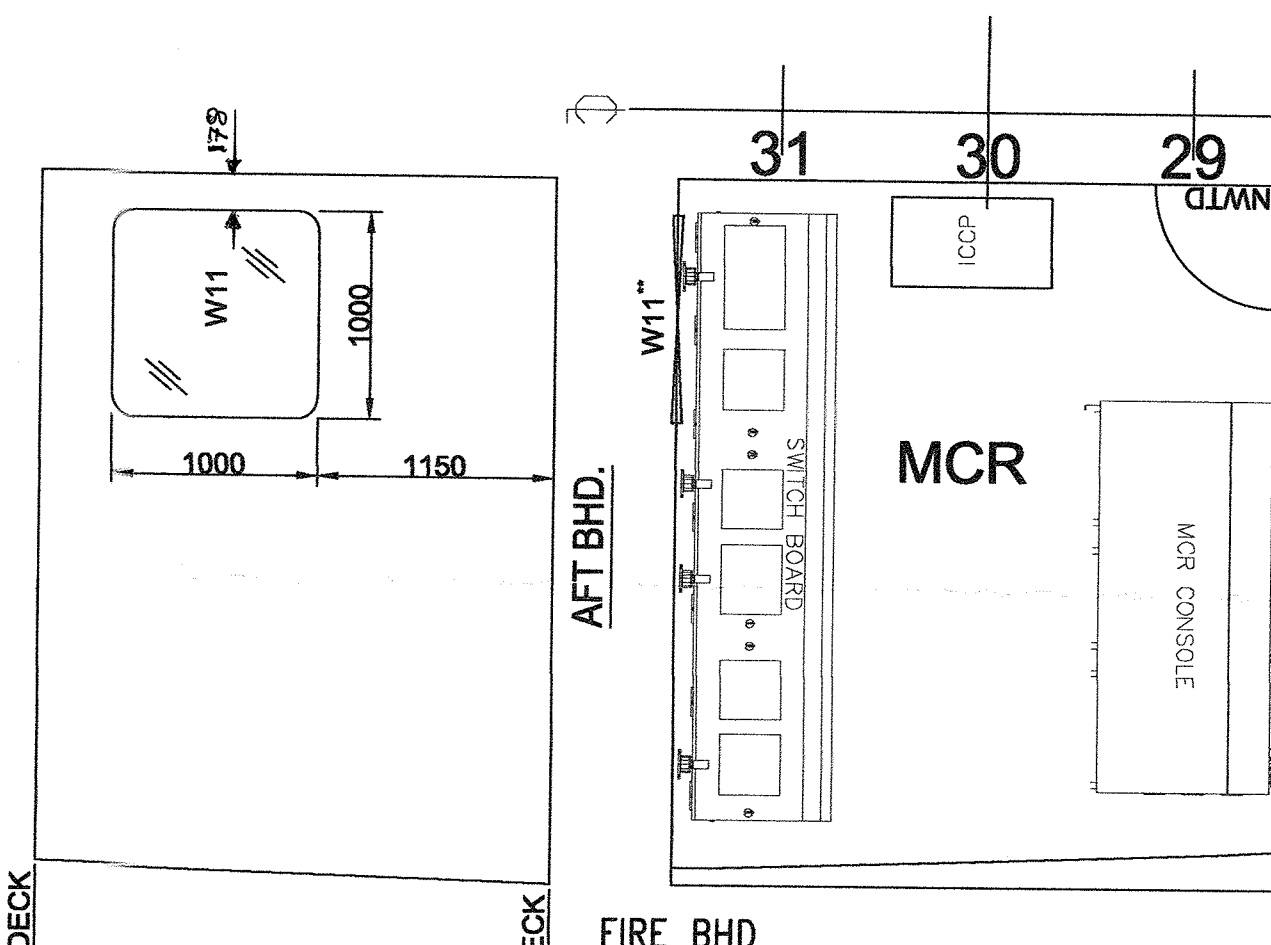
ANNEXURE-5
LIST OF GLASS WINDOW

SR NO	DESCRIPTION	LEGEND	TYPE	FRAME MATERIAL	CLEAR SIZE L x W x R	QTY	GLASS THIK	ACCESSORIES	REMARKS
1	WHEEL HOUSE WINDOW-SB	W1	FIXED-BOLTED	ALUMINUM	560 x 800 x R100	1	10 mm	*WITH WIPER	WATER TIGHT
2	WHEEL HOUSE WINDOW-SB	W2	FIXED-BOLTED	ALUMINUM	850 x 800 x R100	1	14 mm	*WITH WIPER	WATER TIGHT
3	WHEEL HOUSE WINDOW-SB	W3	FIXED-BOLTED	ALUMINUM	910/715 x 800 x R100	1	14 mm	*WITH WIPER	WATER TIGHT
4	WHEEL HOUSE FRONT WINDOW	W4	FIXED-BOLTED	ALUMINUM	950 x 800 x R100	1	14 mm	*WITH WIPER	WATER TIGHT
5	WHEEL HOUSE FRONT WINDOW	W5	FIXED-BOLTED	ALUMINUM	800 x 800 x R100	1	14 mm	*WITH WIPER	WATER TIGHT
6	WHEEL HOUSE FRONT WINDOW	W6	FIXED-BOLTED	ALUMINUM	800 x 800 x R100	1	14 mm	*WITH WIPER	WATER TIGHT
7	WHEEL HOUSE FRONT WINDOW	W7	FIXED-BOLTED	ALUMINUM	950 x 800 x R100	1	14 mm	*WITH WIPER	WATER TIGHT
8	WHEEL HOUSE WINDOW-PB	W8	FIXED-BOLTED	ALUMINUM	910/715 x 800 x R100	1	14 mm	*WITH WIPER	WATER TIGHT
9	WHEEL HOUSE WINDOW-PB	W9	FIXED-BOLTED	ALUMINUM	850 x 800 x R100	1	14 mm	*WITH WIPER	WATER TIGHT
10	WHEEL HOUSE WINDOW-PB	W10	FIXED-BOLTED	ALUMINUM	560 x 800 x R100	1	10 mm	*WITH WIPER	WATER TIGHT
11	MCR-AB	W11	FIXED-BOLTED	SS-316	1000 x 1000 x R100	1	50 mm		A60 FIRE CLASS (WATER TIGHT)

*WIPER WILL BE PROCURED SEPARATELY AND NOT TO BE SUPPLIED BY GLASS WINDOW OEM.



SR NO	DESCRIPTION	LEGEND	TYPE	CLEAR SIZE L x W x R	QTY	GLASS THICKNESS	ACCESSORIES	REMARKS
1	WHEEL HOUSE WINDOW-SH	W1	FIXED-BOLTED	560 x 800 x R100	1	10 mm	WITH WIPER	WATER TIGHT
2	WHEEL HOUSE WINDOW-SH	W2	FIXED-BOLTED	850 x 800 x R100	1	14 mm	WITH WIPER	WATER TIGHT
3	WHEEL HOUSE WINDOW-SH	W3	FIXED-BOLTED	910 / 715 x 800 x R100	1	14 mm	WITH WIPER	WATER TIGHT
4	WHEEL HOUSE FRONT WINDOW	W4	FIXED-BOLTED	950 x 800 x R100	1	14 mm	WITH WIPER	WATER TIGHT
5	WHEEL HOUSE FRONT WINDOW	W5	FIXED-BOLTED	800 x 800 x R100	1	14 mm	WITH WIPER	WATER TIGHT
6	WHEEL HOUSE FRONT WINDOW	W6	FIXED-BOLTED	800 x 800 x R100	1	14 mm	WITH WIPER	WATER TIGHT
7	WHEEL HOUSE FRONT WINDOW	W7	FIXED-BOLTED	950 x 800 x R100	1	14 mm	WITH WIPER	WATER TIGHT
8	WHEEL HOUSE WINDOW-PB	W8	FIXED-BOLTED	910 / 715 x 800 x R100	1	14 mm	WITH WIPER	WATER TIGHT
9	WHEEL HOUSE WINDOW-PB	W9	FIXED-BOLTED	850 x 800 x R100	1	14 mm	WITH WIPER	WATER TIGHT
10	WHEEL HOUSE WINDOW-PB	W10	FIXED-BOLTED	560 x 800 x R100	1	10 mm	WITH WIPER	WATER TIGHT
11	MCR-AB	W11	FIXED-BOLTED	1000 x 1000 x R100	1	50 mm	-	A 60 FIRE GLASS (WATER TIGHT)



DECK PLAN
20 DECK


NOTE:-

1. WINDOWS CLEAR RADIUS WILL BE 100mm
2. THICKNESS OF GLASS WILL BE FINALIZED BY VENDOR AS PER NATIONAL/ INTERNATIONAL STANDARDS. DRAWINGS WITH WINDOW THICKNESS DETAILS WILL BE PROVIDED BY THE VENDOR SEPARATELY.
3. WINDOWS FRAMES (EXCEPT MCR WINDOW) SHALL BE OF ANODISED ALUMINUM AND OF BOLTING TYPE & WINDOWS FRAME BOLT PITCH = 8d (d IS BOLT DIAMETER) WINDOW NO.-W11 FOR MCR SHALL BE OF A 60 FIRE CLASS & WINDOW FRAMES SHALL BE OF STAINLESS STEEL SUITABLE FOR BOLTING ON STEEL BULKHEAD.
4. WINDOWS PANEL SHALL BE OF CLEAR TOUGHENED GLASS.
5. DETAILS OF WINDOW, SCUTTLES & STORM COVER WILL BE SUBMITTED BY THE SELECTED VENDOR FOR REVIEW AFTER PLACEMENT OF ORDER.
6. ALL WINDOWS IN WHEEL HOUSE WILL BE PROVIDED WITH WIPERS WITH FRESH WATER SYSTEM AS PER CUSTOMER REQUIREMENT.
7. THE HEIGHT OF THE WINDOWS & SCUTTLES MAY BE MODIFIED TO SUIT IN-SITU REQUIREMENTS.
8. ALL WINDOWS ARE TO BE HOSE TESTED IN POSITION UNDER WATER PRESSURE OF AT LEAST 3 bar.
9. 2MM THICK EPDM RUBBER GASKETS OF HARDNESS (SHORE A*) 50±5 ARE TO BE CUT PROPERLY TO THE SHAPE OF WINDOW MAIN FRAME PLATING FLANGE WITH HOLES AND SUPPLIED IN ORDER TO PROVIDE THE SAME BETWEEN WINDOW FLANGE AND SHELL.

DRAWING APPROVED BY IRS VIDE LETTER NO.E-244293-323991 DATED 23 DEC 2024.

DRAWING APPROVED BY ABS VIDE LETTER NO.W00164265 DATED 05 Feb 2025.

APPLICABLE FOR YARD 16501 TO YARD 16514

03	SIZE OF WINDOW NO.-W2,W3,W4,W5,W6,W7,W8 & W9 UPDATED AS PER HULL STRUCTURE		MDL	24/4/25	KPR
02	DRAWING UPDATED AS PER COHQ COMMENTS RECEIVED VIDE LETTER SA/0160/14 FPV/HULL SOTR DATED 12 Mar 25. NOTES 8 & 9 ADDED.		MDL	15/3/25	KPR
01	DRAWING UPDATED AS PER COHQ COMMENTS RECEIVED VIDE LETTER SA/0160/14 FPV/HULL SOTR DATED 10 Feb 22. WINDOWS GLASS THK. CHANGED & WINDOW NO. 11 ADDED.		MDL	14/2/25	KPR
Rev.	Description		Auth.	Date	Sign
Mazagon Dock Shipbuilders Limited			CLIENT	SHIP	
 Dockyard Road Mumbai 400 010			INDIAN COAST GUARD		FPV
			TITLE		
			LOCATION OF WINDOWS AND SIDE SCUTTLES		
SCALE	DRAWN	CHECKED	SEC. HEAD	YARD NUMBER	DRAWING NUMBER
NTS	NAME	BRUSHAN	K.P.RANJIT	GLKRAO	
	DESIGN.	WANG-F	GLD-F	DMG-F	
	SIGN.				
				DATE 22-11-24	SHEET 01 OF 02