



Additional Tender Terms & Conditions

GEM Bid no GEM/2026/B/7425175

Procurement of EDUCTORS for 01 TS, 06 NGOPV and 14 FPV of ICG - Indian Coast Guard

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

MAIN EQUIPMENT/ITEM/SYSTEM: Procurement of Eductors for 01 TS, 06 NGOPV and 14 FPV of ICG of Indian Coast Guard.

2. **EARNEST MONEY DEPOSIT:** Bidders shall furnish EMD of **Rs. 3,00,000/- only (Rupees Three Lakhs 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 Eductors (E003001) 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.

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: NA

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 45,00,000 /-** 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.



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- 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).

- (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 Planning dept-CGP
K.A. – Mr. Pruthviraj Rathod, M (Planning-CGP)
5th Floor, Service 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 for each group 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:



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Yard	Details	Fire Fighting items
16101		PO + 03 months
16401-16406		PO + 03 months
16501-16514		PO + 03 months

(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
Eductors	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 minimum Twelve (12) months post contractual delivery of Ship.

Yard	Delivery date of ship
16101	Dec 2026
16401	Jul 2027
16402	Dec 2027
16403	May 2028
16404	Oct 2028
16405	Mar 2029
16406	Aug 2029
16501	Sep 2026
16502	Dec 2026
16503	Dec 2026
16504	Jan 2027
16505	Mar 2027
16506	Jun 2027
16507	Sep 2027
16508	Dec 2027
16509	Mar 2028
16510	Jun 2028
16511	Sep 2028
16512	Dec 2028
16513	Mar 2029
16514	Jun 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.



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(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 (MDL Anik Chembur (AIND) bond store located in Mumbai)

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

(b) Following document should be submitted along with material:

- 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**:

INSPECTION AGENCY: MDL APPOINTED TPI (NON-IACS)

GEM Contract GEMC-511687755480489 dated 04 Aug 2025 (MDL PO No. 3100003091 dated 05 Aug 2025)

- Supplier Name: M/s Certification Engineers INT Ltd, Navi Mumbai
- Address:
Certification Engineers International Limited
(A Govt. of India Undertaking, Subsidiary of EIL)
Engineers India Bhawan , Plot No – 85, Sector – 11,
Kharghar, Navi Mumbai – 410210.
- Contact Details of Project Coordinator for execution part:
 - a) Project Manager:
Name: Mr. Mandar Deshpande
Email: mdeshpande@ceil.co.in
Mobile: +91 9769018481
 - b) Project Co-ordinator:
Name: Mr. Pravin Thorat
Email: pravinthorat@ceil.co.in

Mobile: +91 9892754724

Receipt Inspection: - MDL Inspection dept



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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) 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.
- (c) **Receipt Inspection:** MDL 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.

15. 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.

16. PAYMENT TERMS:

- (a) On receipt of Invoice, 100 % of Payment shall be made within 15 days from generation of Consignee Receipt & Acceptance Certificate (CRAC) of material, submission & confirmation of PSBG and as reduced by any deductibles and / or the amount leviable towards liquidated damages, if any plus 100% taxes, duties etc. as applicable.
- (b) 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.

17. INTEGRITY PACT (IP): NA

18. EXCHANGE RATE VARIATION: NA

19. 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.

Planning Dept.	Mr. Rajeev K Rathod, AGM/ PE(P-CGP)	+91 9869249812	krajeev@mazdock.com
	Mr. Pruthviraj Rathod, M (P-CGP)	+91 22 2376 3392	pvrathod@mazdock.com
Commercial Dept.	Mr. D S Chavan, DGM /PE(C-CGP)	+91 22 2376 2782	dschavan@mazdock.com
	Ms Shipon Sarkar, M(C-CGP)	+91 22 2376 2765	sssarkar@mazdock.com

20. 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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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	Name:	
	Designation	
	Direct Landline Number:	
	Mobile Number:	
	Email id:	
2	Name:	
	Designation	
	Direct Landline Number:	
	Mobile Number:	
	Email id:	
3	Name:	
	Designation	
	Direct Landline Number:	
	Mobile Number:	
	Email id:	



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ANNEXURE-C-1

ACTUAL LOCAL CONTENT CERTIFICATE
(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	<input style="width: 100px; height: 25px;" type="text"/>
2) PPP MII 2017	<input style="width: 100px; height: 25px;" type="text"/>



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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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Sr. No.	Material / Service Details	Qty	Unit	Yard	Total Qty
1.	40 TPH BILGE EDUCTOR SCOPE OF SUPPLY: AS PER TECHNICAL REQUIREMENT SHEET ATTACHED.	4	NOS	16101	4
2.	40 TPH BILGE EDUCTOR SCOPE OF SUPPLY: AS PER TECHNICAL REQUIREMENT SHEET ATTACHED.	5	NOS	16401	30
		5	NOS	16402	
		5	NOS	16403	
		5	NOS	16404	
		5	NOS	16405	
		5	NOS	16406	
3.	10 TPH Eductor for AVCAT System SCOPE OF SUPPLY: AS PER TECHNICAL REQUIREMENT SHEET ATTACHED	1	NOS	16101	7
		1	NOS	16401	
		1	NOS	16402	
		1	NOS	16403	
		1	NOS	16404	
		1	NOS	16405	
		1	NOS	16406	
4.	10 TPH Eductor for Hangar Fire Sprinkling system SCOPE OF SUPPLY: AS PER TECHNICAL REQUIREMENT SHEET ATTACHED	1	NOS	16101	7
		1	NOS	16401	
		1	NOS	16402	
		1	NOS	16403	
		1	NOS	16404	
		1	NOS	16405	
		1	NOS	16406	
5.	40 TPH BILGE EDUCTOR FOR FPV SCOPE OF SUPPLY: AS PER TECHNICAL REQUIREMENT SHEET ATTACHED	3	NOS	16501	42
		3	NOS	16502	
		3	NOS	16503	
		3	NOS	16504	



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		3	NOS	16505	
		3	NOS	16506	
		3	NOS	16507	
		3	NOS	16508	
		3	NOS	16509	
		3	NOS	16510	
		3	NOS	16511	
		3	NOS	16512	
		3	NOS	16513	
		3	NOS	16514	

BLANK RATE SHEET FOR GEM/2026/B/7425175 (PROCUREMENT OF EDUCTORS FOR 01 TS, 06NGOPV & 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.

3) This Excel work book contains one sheet.

Bidders are requested to fill and submit blank rate sheet as per format provided only


Bidder Name													
ITEM NO	Line item No as Per PR	MATERIAL DESCRIPTION	Total Qty	UNIT	Yard No	Currency in which prices are quoted	Delivery	Basic Unit Rates	Type of GST e.g.IGST/CGST and SGTetc.	GST (in %)	HSN Code	FE content in % (Excluding taxes and duties)	Currency for which FE % is quoted.
1	100	40 TPH BILGE EDUCTOR WITH SUCTION HEAD 7.5 MWC	4	NOS	16101		PO+3 Months						
2	200	40 TPH BILGE EDUCTOR WITH SUCTION HEAD 7.5 MWC	30	NOS	16401-16406		PO+3 Months						
3	300	10 TPH EDUCTOR FOR AVCAT SYSTEM	7	NOS	16101,16401-16406		PO+3 Months						
4	400	10 TPH EDUCTOR FOR HANGAR FIRE SPRINKLING SYSTEM	7	NOS	16101,16401-16406		PO+3 Months						
5	500	40 TPH BILGE EDUCTOR WITH SUCTION HEAD 2 MWC FOR FPV	42	NOS	16501-16514		PO+3 Months						

TECHNICAL REQUIREMENT			
Sl. No.	Description		Compliance
1.	GENERAL DESIGN REQUIREMENTS FOR EDUCTORS		
1.1	Scope of supply will cover Design, Manufacture, Inspection, Testing, Commissioning, Packaging, Forwarding & Satisfactory Operation on board ship during ship trials of Eductors listed in this specification.		
1.2	The supplied item shall be of proven design; Prototypes new designs or extensive modifications of standard designs are unacceptable.		
1.3	Shelf-life of all items is to be indicated.		
1.4	All Eductors shall be field serviceable.		
1.5	All raw material used for the manufacture of Eductors shall be new clean & free from rust, pits & obvious defects.		
1.6	All flanges to be drilled off centers.		
1.7	Material of construction G.M. to BS 1400 LG 4C		
2.	DESIGN REQUIREMENTS		
2.1	The Eductors are to be designed such that cavitation is not to occur at the design duty of the Eductor and is to be avoided to the greatest possible extent of specified output.		
2.2	The Eductor is required to successfully pump out/remove seawater from Bilges / AVCAT fuel from Helicopter and supply Sea water to Fire sprinklers. Eductors consists of jet nozzle, venture nozzle box and nozzle box to be supplied complete in all respect		
2.3	01 TRAINING SHIP		
2.4	S. No.	PARAMETER	40 TPH BILGE EDUCTOR
	1.	QUANTITY	4 NOS PER SHIP
	2.	CAPACITY	40 TPH (Sea Water at Suction)
	3.	PURPOSE	Successfully pump out Bilge Water
	4.	FLUID HANDLED	Sea Water
	5.	DRIVING FLUID	Available ship's Fire Main pressure is 70 MWC at 100 TPH
	6.	SUCTION HEAD	7.5 MWC
	7.	DISCHARGE HEAD	7 MWC
	8.	TEST PRESSURE	20 Bar
	9.	MATERIAL	G.M. to BS 1400 LG 4C
	10.	END CONNECTIONS	
	10.1	DRIVING CONNECTION	65 NB
10.2	SUCTION CONNECTION	80 NB	
10.3	DISCHARGE CONNECTION	80 NB	
11.	FLANGE CONNECTION	Flange connections to match BS EN 1092-1 for pressure rating PN 10	
2.5	S. No.	PARAMETER	10 TPH AVCAT EDUCTOR
	1.	QUANTITY	1 NOS PER SHIP
	2.	CAPACITY	10 TPH (Suction)
	3.	PURPOSE	Successfully pump out AVCAT fuel from Helicopter
	4.	FLUID HANDLED	AVCAT
	5.	DRIVING FLUID	Available ship's AVCAT is 30 MWC at 15 TPH
	6.	SUCTION HEAD	3 MWC
	7.	DISCHARGE HEAD	6 MWC

	8.	TEST PRESSURE	10 Bar
	9.	MATERIAL	G.M. to BS 1400 LG 4C
	10.	END CONNECTIONS	
	10.1	DRIVING CONNECTION	50 NB
	10.2	SUCTION CONNECTION	50 NB
	10.3	DISCHARGE CONNECTION	65 NB
	11.	FLANGE CONNECTION	Flange connections to match BS EN 1092-1 for pressure rating PN 10
2.6	S. No.	PARAMETER	10 TPH FIRE SPRINKLER EDUCTOR
	1.	QUANTITY	1 NOS PER SHIP
	2.	CAPACITY	10 TPH (Foam Solution at Suction)
	3.	PURPOSE	Sea water mixed with soap solution for fire extinguishing purpose
	4.	FLUID HANDLED	Sea Water
	5.	DRIVING FLUID	Available ship's Fire Main pressure is 60 MWC at 100 TPH
	6.	SUCTION HEAD	5 MWC
	7.	DISCHARGE HEAD	35 MWC AT Sprinkler Nozzle
	8.	TEST PRESSURE	20 Bar
	9.	MATERIAL	G.M. to BS 1400 LG 4C
	10.	END CONNECTIONS	
	10.1	DRIVING CONNECTION	125 NB
	10.2	SUCTION CONNECTION	65 NB
	10.3	DISCHARGE CONNECTION	125 NB
	11.	FLANGE CONNECTION	Flange connections to match BS EN 1092-3 for pressure rating PN 10
	12.	NOTE	Taking into consideration the available driving fluid, the maximum suction should be limited to 10 TPH only as specified. The eductor to be designed accordingly.
2.7	06 NGOPV		
2.8	S. No.	PARAMETER	40 TPH BILGE EDUCTOR
	1.	QUANTITY	5 NOS PER SHIP
	2.	CAPACITY	40 TPH (Sea Water at Suction)
	3.	PURPOSE	Successfully pump out Bilge Water
	4.	FLUID HANDLED	Sea Water
	5.	DRIVING FLUID	Available ship's Fire Main pressure is 70 MWC at 100 TPH
	6.	SUCTION HEAD	7.5 MWC
	7.	DISCHARGE HEAD	7 MWC
	8.	TEST PRESSURE	20 Bar
	9.	MATERIAL	G.M. to BS 1400 LG 4C
	10.	END CONNECTIONS	
	10.1	DRIVING CONNECTION	65 NB
	10.2	SUCTION CONNECTION	80 NB
	10.3	DISCHARGE CONNECTION	80 NB
	11.	FLANGE CONNECTION	Flange connections to match BS EN 1092-1 for pressure rating PN 10
2.9	S. No.	PARAMETER	10 TPH AVCAT EDUCTOR
	1.	QUANTITY	1 NOS PER SHIP
	2.	CAPACITY	10 TPH (Suction)
	3.	PURPOSE	Successfully pump out AVCAT fuel from Helicopter

	4.	FLUID HANDLED	AVCAT	
	5.	DRIVING FLUID	Available ship's AVCAT is 30 MWC at 15 TPH	
	6.	SUCTION HEAD	3 MWC	
	7.	DISCHARGE HEAD	6 MWC	
	8.	TEST PRESSURE	10 Bar	
	9.	MATERIAL	G.M. to BS 1400 LG 4C	
	10.	END CONNECTIONS		
	10.1	DRIVING CONNECTION	50 NB	
	10.2	SUCTION CONNECTION	50 NB	
	10.3	DISCHARGE CONNECTION	65 NB	
	11.	FLANGE CONNECTION	Flange connections to match BS EN 1092-1 for pressure rating PN 10	
2.10	S. No.	PARAMETER	10 TPH FIRE SPRINKLER EDUCTOR	
	1.	QUANTITY	1 NOS PER SHIP	
	2.	CAPACITY	10 TPH (Foam Solution at Suction)	
	3.	PURPOSE	Sea water mixed with soap solution for fire extinguishing purpose	
	4.	FLUID HANDLED	Sea Water	
	5.	DRIVING FLUID	Available ship's Fire Main pressure is 60 MWC at 100 TPH	
	6.	SUCTION HEAD	5 MWC	
	7.	DISCHARGE HEAD	35 MWC AT Sprinkler Nozzle	
	8.	TEST PRESSURE	20 Bar	
	9.	MATERIAL	G.M. to BS 1400 LG 4C	
	10.	END CONNECTIONS		
	10.1	DRIVING CONNECTION	125 NB	
	10.2	SUCTION CONNECTION	65 NB	
	10.3	DISCHARGE CONNECTION	125 NB	
	11.	FLANGE CONNECTION	Flange connections to match BS EN 1092-3 for pressure rating PN 10	
	12.	NOTE	Taking into consideration the available driving fluid, the maximum suction should be limited to 10 TPH only as specified. The eductor to be designed accordingly.	
2.11	14 FPV			
2.12	S. No.	PARAMETER	40 TPH BILGE EDUCTOR	
	1.	QUANTITY	3 NOS PER SHIP	
	2.	CAPACITY	40 TPH (Sea Water at Suction)	
	3.	PURPOSE	Successfully pump out Bilge Water	
	4.	FLUID HANDLED	Sea Water	
	5.	DRIVING FLUID	Available ship's Fire Main pressure is 40 MWC at 40 TPH	
	6.	SUCTION HEAD	2 MWC	
	7.	DISCHARGE HEAD	7 MWC	
	8.	TEST PRESSURE	10 Bar	
	9.	MATERIAL	G.M. to BS 1400 LG 4C	
	10.	END CONNECTIONS		
	10.1	DRIVING CONNECTION	65 NB	
	10.2	SUCTION CONNECTION	50 NB	
	10.3	DISCHARGE CONNECTION	65 NB	
	11.	FLANGE CONNECTION	Flange connections to match BS EN 1092-1 for pressure rating PN 10	


3.	GENERAL NOTES	
3.1	Firm should submit the graphical representation of total head against suction flow rate for the appropriate water suction at each driving head and flow rate along with the supply of documentation to MD	
3.2	All items must be prominently and indelibly marked / tagged prior to supply.	
4.	TESTS	
4.1	Items are to be pressure tested hydraulically to the pressure as mentioned in the technical specification	
4.2	Performance test shall be witnessed by MDL appointed Third Party Inspector (TPI)	
4.3	Final testing & approval made by the owner's representative / inspector shall not relieve the manufacturers from the responsibilities & contractual obligations.	
5.	BODY MARKING / TALLY PLATES	
5.1	Body marking shall be integral with the body. The marks shall be clear & distinct for identification & shall contain the following details:	
5.2	Item description (Eductor type) 1. Nominal Size 2. Nominal Pressure Rating 3. Body Material Designation 4. Manufacturer's Name or Trade Mark 5. Project Name, Order No. 6. Direction Arrow Marking	
6.	BINDING DRAWING & QAP	
6.1	The L1 vendor to submit Binding drawings of Eductors within 2 weeks from the date of placement of order. MDL shall approve the drawings within 1 week from the receipt of the same.	
6.2	Guidance QAP is attached as Annexure-II. OEM to submit final QAP within 2 weeks from the date of placement of order. MDL shall approve the QAP within 1 week. All the tests specified in the QAP are to be performed. If L1 vendor suggests any additional tests, the same to be included in the final QAP and the same shall be approved by MDL.	


 6 Apr '26
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 MAZAGON DOCK SHIPBUILDERS LIMITED

Draft QAP

Part-I Material Inspection								
S.No.	Component	Material Spec.	Characteristic	Type of Check	Quantum of Check	TPI	OEM Scope	Remarks
1	a. Eductor body b. Nozzle	GM to BS:1400 LG 4C	1.Pouring & Casting 2.Sand Blasting	1. Visual inspection 2. Chemical Properties 3. Mechanical properties 4. Dimensional check	100%	R	P	MTC

Part-II In Process & Final Inspection							
S.No.	Component	Material Spec.	Type of Check	Quantum of Check	TPI	OEM Scope	Remarks
1	Assy of Eductor & Nozzle	GM to BS:1400 LG 4C HT Brass Drawing no. 1. 100 TPH Eductor 2. 10 TPH Eductor (AVCAT) 3. 10 TPH Eductor (Fire Sprinkling System)	1. Visual inspection 2. Dimensional inspection 3. Capacity verification 4. Hydrotest 5. Marking /tagging 6. Packing & preservation	100%	R	P	Witnessed. No leakage permitted
2	Packing	Asbestos free material	Standard brought out				


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