



**MAZAGON DOCK SHIPBUILDERS LIMITED**  
(Formerly known as Mazagon Dock Ltd.)  
**CIN: U35100MH1934GOI002079**  
(A Government of India Undertaking)  
Dockyard Road, Mazgaon, Mumbai 400010. India.  
Certified – ISO 9001:2008 for Shipbuilding Division  
Website: [www.mazagondock.in](http://www.mazagondock.in)

**EXPRESSION OF INTEREST (EOI) / REQUEST FOR INFORMATION (RFI)**

**Department** : Design – Ship Building  
**E-mail ID** : [pdhanaraj@mazdock.com](mailto:pdhanaraj@mazdock.com)  
**Phone no.** : 022 – 23738152  
**Fax** : 022 - 23738159  
**EOI /RFI no.** : SB/DESIGN/EOI/RFI-HVAC/2022/02  
**EOI / RFI date** : 24 February 2022  
**EOI / RFI closing date & time** : 31 March 2022 , 15:00 Hrs

**EXPRESSION OF INTEREST / REQUEST FOR INFORMATION INVITED**

**FROM INDIAN FIRMS FOR**

**INDIGENIZATION AND BUSINESS DEVELOPMENT THROUGH**

**COLLABORATION FOR HVAC EQUIPMENT**

**LETTER OF INVITATION**

Mazagon Dock Shipbuilders Limited (MDL) seeks response from firms / consortiums meeting the requirements of this EoI /RFI and are willing to be associated with MDL through a Collaboration on long term basis for Indigenization and Business Development for indigenized HVAC EQUIPMENT, under Make-I program of indigenization.

The participating firm / consortiums should be in a position to design, engineer, manufacture, test and supply. The detailed terms and conditions and other definitive documents of collaboration shall be mutually agreed upon.

Firms / consortiums shall be short listed based on technical, commercial and financial evaluation as depicted in this EoI /RFI & thereafter Limited tenders /RFP will be floated among the shortlisted firms / consortiums, clearly indicating work and cost share for the indigenous development leading to a manufacture of prototype equipment / systems duly tested.

**INDEX**

<b>Sl. No.</b>	<b>DESCRIPTION</b>
1	SECTION - 1: DISCLAIMER
2	SECTION – 2: SCHEDULE OF EoI / RFI PROCESS & CONTACT DETAILS
3	SECTION – 3: DETAILS OF EoI / RFI
4	SECTION – 4: PRE-QUALIFICATION CRITERIA
5	SECTION – 5: DOCUMENTS TO BE SUBMITTED ALONG WITH EoI / RFI

**SECTION-1**  
**DISCLAIMER**

- 1.** MDL, its employees and advisors make no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the EoI / RFI document.
- 2.** MDL may, in its absolute discretion, but without being under any obligation to do so, modify, amend or supplement the information in this EoI / RFI document.
- 3.** The issue of this EoI /RFI does not imply that MDL is bound to select and shortlist any or all the participating firm. Even after selection of suitable participating firm, MDL is not bound to proceed ahead with the participating firm and in no case be responsible or liable for any commercial and consequential liabilities in any manner whatsoever.
- 4.** The participating firm shall bear all costs associated with the preparation, technical discussion/presentation and submission of EoI /RFI. MDL shall in no case be responsible or liable for these costs regardless of the conduct or outcome of the EoI /RFI process.
- 5.** Canvassing in any form by the participating firm or by any other agency on their behalf shall lead to disqualification of their EoI /RFI.

**SECTION-2**

**SCHEDULE OF EoI / RFI PROCESS & CONTACT DETAILS**

**1. SCHEDULE OF EoI / RFI PROCESS**

The schedule of activities during the EoI Process shall be as follows -

Sl. No.	Description	Date
1	Issue of EoI /RFI document	24 February 2022
2	Last date of Submission of EoI / RFI response	31 March 2022; 17:00 Hrs

**2. CONTACT DETAILS:**

**Submission of proposal:**

Proposal (**Original + one soft copy**) super-scribing the enquiry number, enquiry subject, last date for receipt of EOI /RFI and shall be addressed to:

Dhanaraj P  
HoD /GM (Design-SB),  
West Block,  
Mazagon Dock Shipbuilders Limited,  
Dockyard road, Mumbai 400010  
Tel: 022-23738159  
E-Mail: [pdhanaraj@mazdock.com](mailto:pdhanaraj@mazdock.com)

**SECTION – 3**

**DETAILS OF EXPRESSION OF INTEREST (EOI)/REQUEST FOR INFORMATION (RFI)**

**1. ABOUT MDL**

Mazagon Dock Shipbuilders Limited (MDL) is a leading submarine and shipbuilding company in the country with a Miniratna Category-1. The company was taken over by the Government of India and established as a Public Sector Undertaking under the Ministry of Defence in 1960. Over the last six decades, MDL has delivered over 250 warships/submarines/ platforms to various customers in India and abroad. Out of these 30 major warships/submarines have been delivered to the Indian Navy. The diversified platforms delivered to various customers range from Destroyers, Stealth Frigates, Submarines, Missile Boats, Corvettes, Offshore Patrol Vessels, Multipurpose Support Vessels, Offshore Supply Vessels, Dredgers, Tugs and Cargo-Cum-Passenger Vessels.

The demand for the equipment / system under consideration is vast in Indian Navy / Coast guard, since there are several new projects lined up and in line with GoI Atmanirbhar/ Make in India initiatives to substitute the obsolete / defective imported equipment with domestically developed products during ship refits. Hence development of these systems domestically has great potential. MDL being frontline warship manufacturer may be able to spearhead these projects. The induction of indigenised system will open up an opportunity for supporting these systems with spares sand services for the life of the Ship/Submarine.

MDL intends to identify competent firms who can become potential indigenization /technology demonstration through newly developed product partners to supply required HVAC Equipment.

**2. TECHNICAL REQUIREMENTS:**

**A. GENERAL REQUIREMENTS:**

(a) The HVAC Equipment shall consists of following list of items :

- (i) **Air Treatment Unit (ATU)**
- (ii) **Fan Coil Unit (FCU)**
- (iii) **Air Filtration Unit (AFU)**
- (iv) **Fan for Smoke Extraction (withstanding 400 deg C for 1 Hr)**

<b>Equipment</b>	<b>Design Parameter</b>		<b>Material</b>
<b>ATU</b>	Air Flow – 7384 m <sup>3</sup> / hr Air Inlet Temp – 29 <sup>0</sup> C	Cooling Coil Capacity – 59.3 KW Water flow – 8.5 m <sup>3</sup> /hr	Casing – Aluminium

	Air Outlet Temp – 15 <sup>0</sup> C Air Static Pressure – 70 daPa Air Velocity – 2 m/s Length – 2000 mm (max) Width – 1150 mm (max) Height – 1400 mm (max)	Water Pressure drop – 36 kPa Chilled water inlet – 7 <sup>0</sup> C Chilled water outlet – 13 <sup>0</sup> C	Tube/Fin - Cu
<b>FCU</b>	Air Flow – 11730 m <sup>3</sup> /hr Air Inlet Temp – 35 <sup>0</sup> C Air Outlet Temp – 18 <sup>0</sup> C Air Velocity – 2.2 m/s Length – 1475 mm (max) Width – 490 mm (max) Height – 1220 mm (max)	Cooling Coil Capacity – 172.6 KW Water flow – 20.3 m <sup>3</sup> /hr Water Pressure drop – 21.6 kPa Chilled water inlet – 7 <sup>0</sup> C Chilled water outlet – 13.6 <sup>0</sup> C	Frame – SS 316  Tube/Fin - Copper
<b>AFU</b>	<ul style="list-style-type: none"> <li>• It should consist of Air Intake Unit (AIU) with blast protection valve &amp; pre filter.</li> <li>• Electrical heater is also to be provided for humidity control.</li> <li>• The NBC filters are used for filtering the chemical, biological &amp; nuclear agents in closed down condition.</li> <li>• Capacity – 1800 m<sup>3</sup>/hr</li> </ul>		For AIU – AISI 316  For NBC unit – Stainless steel/carbon steel
<b>Smoke Extraction Fan</b>	<ul style="list-style-type: none"> <li>• Air flow rate – 9908 m<sup>3</sup>/hr</li> <li>• Static pressure (at Rho = 1.2 Kg/m<sup>3</sup>) – 1196 Pa</li> <li>• It should withstand 400<sup>0</sup> C for 1 hr</li> </ul>		Casing – Mild Steel

**B. SHOCK GRADE REQUIREMENT- NSS-II Shock II Gr II**

**C. POWER SUPPLY is to be considered as 415 V/ 3 Ph / 50Hz**

**Design Conditions:** The system should be designed and tested to operate satisfactorily in the following marine environment:

- (i) Ambient air tempt range (-10) to +55 deg C
- (ii) Relative humidity of ambient air at 38<sup>0</sup> C up to 100%
- (iii) Roll Motion
  - a. Amplitude: Max +/- 30 deg
  - b. Period: 10 sec
- (iv) Pitch Motion
  - a. Max Amplitude: +/- 10 deg

Period: 20 sec.

**D. STANDARDS TO BE USED:**

i.	Defence Standard 02-102	HVAC, Chilled Water & Smoke clearance system &
----	-------------------------	--

		equipment
ii.	BR 3021	For NSS II Shock Gr II
iii.	STANG 4447	Performance Specification for a Ships NBC Air Filter
iv.	EED-Q-071(R4)	Specification of Motors & Starters for Naval Ships

**E. SCOPE OF WORK OF THE DEVELOPMENT OF THE PRODUCT:**

(a) The tasks required for completion of the scope of work shall be carried out in two phases as follows:

Phase	Product Description
I	Developing a prototype of each HVAC Equipment and its validation
II	Phase II Prototype Development (At respective OEM facility)
III	Phase Iil Type testing of the prototype (Designated labs)

(b) The details of the tasks to be carried out in the two phases are as follows:

Task#	TASK DESCRIPTION	COVERAGE AREAS
<b><u>PHASE I Developing a proto type of CPP SHAFTING and its validation</u></b>		
1	Design of HVAC Equipment. (Assist MDL in the design task)	<ul style="list-style-type: none"> <li>• Basic design of Equipment</li> <li>• Bill of Material (BOM),</li> <li>• Finalization of sub parts like shock mount, filter etc.</li> </ul>
<b><u>PHASE II PROTOTYPE DEVELOPMENT (AT RESPECTIVE OEM FACILITY)</u></b>		
2	ATU	Developing a prototype by OEM
	FCU	Developing a prototype by OEM
	AFU	Developing a prototype by OEM
	Smoke Extraction Fan	Developing a prototype by OEM
	Electric Control Panel	Developing a prototype by OEM
<b><u>PHASE III Type testing of the prototype (Designated labs)</u></b>		



Task#	TASK DESCRIPTION	COVERAGE AREAS
3	Type Test of prototype	As per approved type test procedure
4	Final Prototype	All deficiencies to be made good in the type tested equipment & the product in workable condition to be handed over to MDL by respective OEM.

**F. TASK LIST AND RESPONSIBILITY MATRIX**

The details of the tasks with responsibility assigned are given below:

Task No.#	TASK DESCRIPTION	RESPONSIBILITY		DELIVERABLE FORMAT
		Firm	MDL	
<b>PHASE-I</b>				
1	Design of HVAC Equipment	Execute	Review & comment	Document
<b>PHASE-II</b>				
2	Building of a Prototype	Execute	Review, comment & accept	Product Completion Report
<b>PHASE-III</b>				
3	Type Test of prototype	Execute	Assist	Trial Documents & Reports
4	Final Prototype	Execute	Review & Accept	Product

**G. DOCUMENTATION**

- (a) The Documentation to be provided shall include the Technical Manuals, Drawings, Instruction Manuals, Operation and Exploitation Documents, etc.

- (b) The Documents shall also include recommendations for optimal exploitation of all Equipment fitted on-board ship.
- (c) The maintenance related Documentation is to be provided in accordance with the Maintenance Philosophy.

**3. SCOPE OF ASSOCIATION :**

- a) MDL is seeking response from Indian companies / consortiums led by Indian companies, duly registered, (under Indian Companies Act-2013), willing for Indigenisation and Business development through collaboration for indigenised HVAC Equipment for usage on Ships along with MDL, under Make-I program. The participating firm must possess necessary knowledge of the field of collaboration.
- b) The technology if any possessed by participating firm must be non-infringing while delivering the desired performance and it must be clear from third-party IP infringement claims.
- c) The participating firm must show willingness on its letter head to achieve more than 50% local content in above mentioned projects in line with GoI policies amended from time to time.
- d) Interested companies / consortiums meeting the Pre-Qualification Requirements (PQR) as given in Section-4 and ready to associate with MDL as per broad scope/ expectations given above are invited to **submit their offer in response to this EoI /RFI.**

**4. EVALUATION AND SHORTLISTING**

- a) Upon receipt of responses against this EoI /RFI, MDL will review the responses to ascertain suitability and shortlist participating firm based on prequalification (technical, commercial and financial) documents submitted by firm & this will be binding on bidders.
- b) Individual Firms will be called for a Technical negotiation meeting at MDL by the concerned team. In the discussion, firm may be required to present the way ahead of the project leading development of prototype. The funding of the project and other details also may be discussed during this meeting.
- c) Based on the scrutiny of responses and the technical meetings, firms will be short listed for further course of action. The shortlisted firms may be required to sign a Non-Disclosure Agreement (NDA) regarding the confidentiality of Techno Commercial Aspects.
- d) Once shortlisted, either of the following routes may be followed as per the approval from MDL management.

- i) Signing of MOU and definitive agreements with the firm if only one firm / consortium is shortlisted for the indigenous development leading to a manufacture of prototype equipment / systems duly tested.
- ii) If more than one firm is short listed then Limited Tender may be floated for inviting Technical & Price bids as applicable for the project, clearly indicating the work and cost share. For the indigenous development leading to a manufacture of prototype equipment / systems duly tested.

**5. INSTRUCTIONS**

- a) Language: All correspondences and documents related to the EoI / RFI response shall be in English language only.
- b) The participating firm shall abide by the terms & conditions, as applicable, of the EoI /RFI .
- c) All pages of the EoI/RFI shall be duly signed by the authorised signatory.
- d) Multiple proposals from the same participating firm should not be submitted.
- e) MDL at their discretion shall inspect the participating firm works/office/reference site premises for the purpose of evaluation, as deemed necessary before selection of partner. MDL decision in this regard shall be final.
- f) Any participating firm which has been debarred/blacklisted or given tender holiday by Central/State Governments or by any entity controlled by Central/State Governments from participating in any of their project, as on date of submission of EoI/RFI , shall not be eligible to submit the EoI /RFI .

**6. PROCESS TO BE CONFIDENTIAL:**

Information relating to the examination, clarification, evaluation and comparison of EoI /RFI and recommendations shall not be disclosed to participating firm. Any effort by participating firm to influence MDL processing of EoI /RFI or selection decisions may result in the rejection of the EoI / RFI .

**7. MISCELLANEOUS:**

Right to accept or reject any or all Applications:

- a) Notwithstanding anything contained in this EoI/ RFI , MDL reserves the right to accept or reject any application and to annul the EoI /RFI process and reject all applications, at any time without any liability or any obligation for such acceptance, rejection or annulment and without assigning any reasons, thereof. In the event that MDL rejects or annuls all the applications, it may at its discretion, invite all eligible participating firms to submit fresh applications.

- b) MDL reserves the right to disqualify any applicant during or after completion of EoI/RFI process, if it is found there was a material misrepresentation by any such applicant or the applicant fails to provide within the specified time, supplemental information sought by MDL.
- c) MDL reserves the right to verify all statements, information and documents submitted by the applicant in response to the EoI/RFI. Any such verification or lack of such verification by MDL shall not relieve the applicant of his obligations or liabilities hereunder nor will it affect any rights of MDL.

**8. GOVERNING LAWS & JURISDICTION:**

The EoI/ RFI process shall be governed by, and construed in accordance with, the laws of India and the Courts at Mumbai (India) shall have exclusive jurisdiction over all disputes arising under, pursuant to and / or in connection with the EoI/ RFI process.

**SECTION- 4**

**PRE-QUALIFICATION CRITERIA**

The determination of eligibility will take into account the technical and experience capabilities and past performance of the participating firm along with financial status; it will be based upon an examination of documentary evidence of the participating firm qualifications submitted by the participating firm as well as such other information, as the MDL deems necessary and appropriate. The participating firm willing to associate with MDL should meet the following Pre-Qualification Criteria. The firm's response could be liable for rejection in case of not meeting the Technical, Commercial and Financial qualification criteria as enumerated in the succeeding paragraphs.

**1. Technical:**

- a) The firm responding to EOI should have domain expertise and experience in design, manufacture & supply of HVAC Equipment to Marine Industry.
- b) They have to submit documentary evidence (PO copies, WDCs, Appreciation letter etc.) proving their experience in similar kind of equipment to establish their domain expertise.
- c) They have to essentially submit the following:
  - i. Technical response to technical requirement projected in this document and readiness to undertake the project. A brief to be submitted as to how the firm will be executing the project
  - ii. Company Profile.
  - iii. List of infrastructure/equipment held by them along with details of their manufacturing facilities.
  - iv. Details of personnel (Project Management Team) with designation, qualification and experience to determine their capabilities.
  - v. ISO 9001:2015 or equivalent certificate
  - vi. Participating firm should submit the compliance matrix in the format as per Annexure – 3. Deviation if any may be indicated with justifiable reason. Acceptance of the same will be at the discretion of MDL. Preference will be given to the firm, who will be ready to invest higher percentage towards prototype development.

**2. Commercial Qualification:** - Firms shall not be under a declaration of ineligibility issued by Govt. of India / State govt. / Public Sector Undertakings etc.

The firms shall submit the following as a part of commercial qualification.

- a) Shop & Establishment registration certificate.
- b) Certificate of Incorporation.
- c) Registration certificate from local bodies for conducting business.

- d) MSME certificate if applicable
- e) GST certificate

**3. Financial Qualification: -**

- a. Firms / consortiums (put together) Shall have Average Annual turnover of Rs.5 Cr (min) during the last three years ending as on 31 Mar 2021 to participate in this EOI.
- b. The firms shall enclose with its Proposal as per **Annexure-2**, certificate issued by Chartered Accountant with their seal and signature, stating the firms net worth & turnover during the past three years. Firm to submit Balance Sheet and Profit and Loss statement for last 3 years.
- c. Bidder shall demonstrate access to unutilised line of credit / overdraft facility / cash credit facility from its consortium of banks. Alternatively or complementarily should demonstrate liquid asset in form of cash / marketable securities in its balance sheet.

**SECTION- 5**

**1. Rejection Criteria:** - MDL may at its sole discretion and at any time during the evaluation of proposal, disqualify any firm, if:

- a) Response received after due date.
- b) Bidder's failure to furnish sufficient or complete details for evaluation of the bids within the given period.
- c) Incomplete / misleading / false / ambiguous in the proof of eligibility requirements.
- d) Failed to produce timely clarifications related thereto, when sought.
- e) Bids not meeting qualification criteria mentioned above at Section-4.
- f) Submitted more than one proposal for single specialisation area.
- g) Declared ineligible by the Government of India / State govt. / Public sector undertaking.
- h) Bids with technical requirements and or terms not acceptable to MDL.
- i) Information relating to the evaluation, clarification and recommendation for pre-qualification shall not be disclosed to bidders or any other persons not officially concerned with such process until the pre-qualification process is completed. Any effort by the bidder to influence MDL prequalification process may result in rejection of his EOI /RFI.

**SECTION- 6**

Documents to be submitted along with EoI/RFI\*

**1. List of documents :**

Participating firm should submit following documents along with their Proposal as part of EoI /RFI.

<b>Sl.</b>	<b>Document Description</b>	<b>Filled in Formats to be Submitted with Proposal</b>	<b>Remarks</b>
1	Covering Letter		As per format attached
2	General information	Annexure-1	
3	Financial Information	Annexure-2	
4	Compliance matrix	Annexure-3	
5	Pre-Qualification Document and detailed Technical response to EOI		As indicated in section-4
6	Documents / Presentation in support of area of collaboration		

\*In case of consortium, same to be provided for constituent companies of consortium indicating the lead firm



**EoI /RFI FORMS**

Format for Covering Letter  
*[On the Letterhead of the Participating firm]*

To,

Mr. Dhanaraj P  
HoD/GM (SB-Design)  
Mazagon Dock Shipbuilders Limited (MDL),  
Mumbai-400010, India.  
Contact No- 022-23763300  
E-Mail: pdhanaraj@mazdock.com

**Ref: Submission of Expression of Interest (EoI) /Request for information (RFI)**

Sir,

Being duly authorized to represent and act on behalf of.....  
(Hereinafter Referred to as “the Applicant”), and having reviewed and fully understood the evaluation criteria and information provided, the undersigned hereby applies in response to the EoI / RFI document.

We would like to associate with MDL for HVAC Equipment for usage on Ships (area of collaboration). We understand that MDL is not bound to accept the EoI /RFI.

We further show our willingness to work towards achieving more than 50% local content in projects mentioned in subject matter of EoI / RFI as per extant GoI guidelines amended from time to time.

I am enclosing the Expression of Interest with the details as per the requirements of the EoI /RFI document, for your evaluation.

I hereby declare that the details furnished in this EoI / RFI proposal are true and correct to the best of my knowledge and belief. In case any of the information is found to be false or untrue or misleading or misrepresenting, I am aware that I will be held liable for it and MDL is free to take any legal / commercial action not limited to barring / blacklisting.

We hereby declare that we are not under a declaration of ineligibility / blacklisting /debaring/ tender holiday from doing business issued by Govt. of India / State govt. / Public Sector Undertakings etc.

Yours faithfully,

\_\_\_\_\_  
(Signature & Seal of Authorised Signatory)

Name:

Designation:

Date:

Address:

**Annexure-1**

**General Information to be submitted by Applicant along with cover letter**

1. Name of the Company/ Companies (if consortium):
2. Legal status of the Company (ies):
3. Brief description of the Company(ies) including details of its business groups / subsidiaries / affiliates:
4. Date of Incorporation:
5. Date of Commencement of Business:
6. Full address including Telephone nos. / Fax nos.:  
Registered Office:  
Head Office:  
Address for communication:  
Contact Details:  
Office Address in India, if any:
7. Documents to be enclosed:  
As per pre-qualification criteria

Signature & Seal  
Authorised Signatory of the Party

**Annexure-2**  
**Financial Information**

Date:

Legal Name: *[insert full name]*

## 1. Financial Data: -

Sl. No.	Last three Financial	Annual Turnover	Annual Net Profit	Net worth as at the end of the financial year
1				
2				
3				

\* Exchange rate for conversion to INR shall be as published by Reserve Bank of India as on date of floating EoI/RFI.

## 2. Financial documents

The participating firm shall provide copies of the financial statements including balance sheets, P&L and related income statements for latest 3 years.

The financial statements shall:

- Reflect the financial situation of the participating firm submitting EoI / RFI.
- Be audited by a certified accountant.
- Be complete, including all notes to the financial statements.
- Correspond to accounting periods already completed and audited (no statements for partial periods shall be accepted).

#In case of consortium, same to be provided for constituent companies of the consortium.

(Signature & Seal)  
Authorized Signatory of the Party

**Certificate from Chartered Accountant**

This is to certify that \_\_\_\_\_ (name of the Applicant) has received the payments shown above against the respective years and that the net worth is as computed.

Name of the Authorized Signatory representing Auditing firm:

Designation:

Name of firm (Chartered Accountant):

Signature of the Authorized Signatory:

**Annexure-3**  
**Compliance Matrix**

<b>Sr. No.</b>	<b>Qualification Criteria</b>	<b>Compliance</b>
1	Willingness to exclusively collaborate with MDL for the project of indigenisation of HVAC Equipment as depicted in thi EoI/RFI	Yes / No
2	Design & manufacturing facility or tie up for HVAC Equipment.	Yes / No.
3	Arrangement and experience to make and supply of HVAC Equipment.	Yes / No.
4	Country of origin for collaborators, should not be from Indian hostile countries.	Agreed / Not agreed
5	Compliance to the Technical particulars provided in the section 2 of this EoI/RFI in case of awarding the contract.	Yes/No

Signature & Seal  
Authorised Signatory of the Party