



निविदा पूछताछ
TENDER ENQUIRY

[सीमित निविदा]
[LIMITED TENDER]

माझगांव डॉक शिपबिल्डर्स लिमिटेड
(भारत सरकार का उपक्रम)
MAZAGON DOCK SHIPBUILDERS LIMITED
(Formerly known as Mazagon Dock Limited)
(A Govt. of India Undertaking)
CIN: L35100MH1934GOI002079
Dockyard Road, Mumbai 400 010
Website- www.mazagondock.in
Certified - ISO 9001: 2008 for Shipbuilding Division
GST ID : 27AAACM8029J1ZA

| | | | |
|-----------------------------|------------|--|----------------------|
| निविदा सं./Tender No | 1700000512 | विभाग/Department | P-17A COMMERCIAL |
| क्रय अधिकारी/Purchase Exec. | A.B.KAWADE | क्रय अधिकारी/Purchase Exec. | A.B.KAWADE |
| सेवा में/To | | दूरभाष सं./Telephone No | 23762732 |
| | | फैक्स सं./Fax No | 23744709 |
| | | ई-मेल/E-Mail | abkawade@mazdock.com |
| दूरभाष सं./Telephone | | निविदा सं./Tender No | 1700000512 |
| फैक्स सं./Fax | | निविदा तिथि/ Tender Date | 31.01.2024 |
| ई-मेल/E-Mail | | निविदा बंद की तिथि/Tender Closing Date | 12.02.2024 |
| | | निविदा बंद होने का समय/Tender Closing Time | 14:00:00 |
| | | आरएफक्यू सं./RFQ No | 2230000012 |

| | | |
|--|-------|------------------------------|
| निविदा शुल्क/Tender Fee | रु/Rs | 0.00 |
| बयाना राशि/EMD Amount | रु/Rs | 0.00 |
| पुर्व बिड बैठक तिथि और समय/Pre Bid Meeting Date & Time | | ,00:00:00 |
| निविदा खोलने की तिथि और समय/Tender Opening Date & Time | | 14.02.2024,14:00:00 |
| प्रस्ताव वैधता तिथि है/Offer should be valid up to | | |
| सुरक्षा जमा/Security Deposit | | 0.00 %आदेश मूल्य का/PO value |
| वरीय बैंक जमानत /Perf. Bank Guarantee | | 0.00 %आदेश मूल्य का/PO value |

(आगे के विवरण हेतु कृपया सम्बंधित नियम शर्तों को पढ़ें। सुनिश्चित करें कि कोटेशन और संबंधित पत्राचार के लिए विभाग का नाम, क्रय अधिकारी का नाम, निविदा संख्या, बंद होने का समय एवं तिथि एवं आरएफक्यू सं. अपने कोटेशनमें लिखें।)

Kindly read and refer relevant terms & conditions for further details. Do ensure to Quote Department Name, Purchase Executive & Name, Tender Number, closing date & time and RFQ Number in your Quotation & related correspondence)

प्रिय महोदय/महोदया
Dear Sir / Madam ,

विषय /SUB:- TENDER FOR SUPPLY OF HATCH COVERS AND GANTRY CRANE FOR PROJECT 7500 DWT.

माझगाँव डॉक शिपबिल्डर्स लिमिटेड प्रतिष्ठित/संभावित आपूर्तिकर्ताओं से निम्न हेतु, प्रतियोगितात्मक दो बोली प्रणाली में (भाग -I तकनीकी - वाणिज्य बोली एवं भाग II मूल्य बोली) बोली आमंत्रित करती है।
Mazagon Dock Shipbuilders Limited (MDL) invites Competitive – Bid from reputed Supplier for the following in TWO BID system (Part - I Techno - Commercial Bid & Part - II Price Bid).

| क्र सं. SL.No. | सामग्री / सेवा विवरण Material / Service Details | मात्रा / इकाई Quantity / unit | आपूर्ति तिथि Delivery Date |
|-------------------|---|----------------------------------|-------------------------------|
| 00100 | सामग्री सं./ Material Number :- 150000000000074555 design and key component of lift away h सामग्री वर्णन/Material Description :design and key component of lift away hatch covers | 1 SET | 31.07.2024 |
| 00200 | सामग्री सं./ Material Number :- 150000000000074556 | 1 SET | 31.07.2024 |

| क्र सं. SL.No. | सामग्री / सेवा विवरण Material / Service Details | मात्रा / इकाई Quantity / unit | आपूर्ति तिथि Delivery Date |
|-------------------|---|----------------------------------|-------------------------------|
| | Design of Tween Deck / Bulkhead सामग्री वर्णन/Material Description :Design of Tween Deck / Bulkhead | | |
| 00300 | सामग्री सं./ Material Number :- 15000000000074557 DOCUMENTS, DRAWINGS, CERTIFICATES FOR सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR HATCH COVERS | 1 SET | 30.04.2025 |
| 00400 | सामग्री सं./ Material Number :- 15000000000074558 OBS FOR HATCH COVER 1 YEAR सामग्री वर्णन/Material Description :OBS FOR HATCH COVER 1 YEAR | 1 SET | 30.04.2025 |
| 00500 | INSTALLATION OF THE HATCH HATCH COVER The Line item 00500 covers the following services | 1 Activity unit | 30.04.2025 |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE HATCH COVERS सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the hatch covers. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | 1 Activity unit | |
| 00600 | सामग्री सं./ Material Number :- 15000000000074559 Gantry Crane for MPV सामग्री वर्णन/Material Description :Gantry Crane for MPV | 1 SET | 30.04.2025 |
| 00700 | सामग्री सं./ Material Number :- 15000000000074565 DOCUMENTS, DRAWINGS, CERTIFICATES FOR GA सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR GANTRY CRANE | 1 SET | 30.04.2025 |
| 00800 | सामग्री सं./ Material Number :- 15000000000074566 OBS For GANTRY CRANE 1 YEAR सामग्री वर्णन/Material Description :OBS For GANTRY CRANE 1 YEAR | 1 SET | 30.04.2025 |
| 00900 | INSTALLATION OF THE GANTRY CRANE The Line item 00900 covers the following services | 1 Activity unit | 30.04.2025 |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE GANTRY CRANE सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the Gantry Crane. Shipyards will carry out installation as | 1 Activity unit | |

| निविदा सं./ Tender No:- 1700000512 | | निविदा तिथि/ Tender Date:- 31.01.2024 | | आरएफक्यू सं./RFQ No:- 2230000012 | |
|--|--|---------------------------------------|-------------------------------|----------------------------------|--|
| क्र सं. SL.No. | सामग्री / सेवा विवरण Material / Service Details | मात्रा / इकाई Quantity / unit | आपूर्ति तिथि Delivery Date | | |
| per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | | | | | |
| 01000 | सामग्री सं./ Material Number :- 150000000000074555 design and key component of lift away h सामग्री वर्णन/Material Description :design and key component of lift away hatch covers | 1 SET | 31.07.2024 | | |
| 01100 | सामग्री सं./ Material Number :- 150000000000074556 Design of Tween Deck / Bulkhead सामग्री वर्णन/Material Description :Design of Tween Deck / Bulkhead | 1 SET | 31.07.2024 | | |
| 01200 | सामग्री सं./ Material Number :- 150000000000074557 DOCUMENTS, DRAWINGS, CERTIFICATES FOR सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR HATCH COVERS | 1 SET | 30.06.2025 | | |
| 01300 | सामग्री सं./ Material Number :- 150000000000074558 OBS FOR HATCH COVER 1 YEAR सामग्री वर्णन/Material Description :OBS FOR HATCH COVER 1 YEAR | 1 SET | 30.06.2025 | | |
| 01400 | INSTALLATION OF THE HATCH COVER The Line item 01400 covers the following services | 1 Activity unit | 30.06.2025 | | |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE HATCH COVER सेवा विवरण/Service Details :- The supplier is required to submit the specifications and technical documentation for installation of the hatch cover. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | 1 Activity unit | | | |
| 01500 | सामग्री सं./ Material Number :- 150000000000074559 Gantry Crane for MPV सामग्री वर्णन/Material Description :Gantry Crane for MPV | 1 SET | 30.06.2025 | | |
| 01600 | सामग्री सं./ Material Number :- 150000000000074565 DOCUMENTS, DRAWINGS, CERTIFICATES FOR GA सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR GANTRY CRANE | 1 SET | 30.06.2025 | | |
| 01700 | सामग्री सं./ Material Number :- 150000000000074566 OBS For GANTRY CRANE 1 YEAR सामग्री वर्णन/Material Description :OBS For GANTRY CRANE 1 YEAR | 1 SET | 30.06.2025 | | |
| 01800 | INSTALLATION OF THE GANTRY CRANE | 1 Activity unit | 30.06.2025 | | |

| क्र सं. SL.No. | सामग्री / सेवा विवरण Material / Service Details | मात्रा / इकाई Quantity / unit | आपूर्ति तिथि Delivery Date |
|--|--|----------------------------------|-------------------------------|
| The Line item 01800 covers the following services | | | |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE GANTRY CRANE सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the Gantry Crane. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | 1 Activity unit | |
| 01900 | सामग्री सं./ Material Number :- 150000000000074555 design and key component of lift away h सामग्री वर्णन/Material Description :design and key component of lift away hatch covers | 1 SET | 31.07.2024 |
| 02000 | सामग्री सं./ Material Number :- 150000000000074556 Design of Tween Deck / Bulkhead सामग्री वर्णन/Material Description :Design of Tween Deck / Bulkhead | 1 SET | 31.07.2024 |
| 02100 | सामग्री सं./ Material Number :- 150000000000074557 DOCUMENTS, DRAWINGS, CERTIFICATES FOR सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR HATCH COVERS | 1 SET | 29.08.2025 |
| 02200 | सामग्री सं./ Material Number :- 150000000000074558 OBS FOR HATCH COVER 1 YEAR सामग्री वर्णन/Material Description :OBS FOR HATCH COVER 1 YEAR | 1 SET | 29.08.2025 |
| 02300 | INSTALLATION OF THE HATCH COVER The Line item 02300 covers the following services | 1 Activity unit | 29.08.2025 |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE HATCH COVER सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the hatch cover. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | 1 Activity unit | |
| 02400 | सामग्री सं./ Material Number :- 150000000000074559 Gantry Crane for MPV सामग्री वर्णन/Material Description :Gantry Crane for MPV | 1 SET | 29.08.2025 |
| 02500 | सामग्री सं./ Material Number :- 150000000000074565 DOCUMENTS, DRAWINGS, CERTIFICATES FOR GA | 1 SET | 29.08.2025 |

| क्र सं. SL.No. | सामग्री / सेवा विवरण Material / Service Details | मात्रा / इकाई Quantity / unit | आपूर्ति तिथि Delivery Date |
|--|---|----------------------------------|-------------------------------|
| सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR GANTRY CRANE | | | |
| 02600 | सामग्री सं./ Material Number :- 150000000000074566 OBS For GANTRY CRANE 1 YEAR | 1 SET | 29.08.2025 |
| सामग्री वर्णन/Material Description :OBS For GANTRY CRANE 1 YEAR | | | |
| 02700 | INSTALLATION OF THE GANTRY CRANE | 1 Activity unit | 29.08.2025 |
| The Line item 02700 covers the following services | | | |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE GANTRY CRANE | 1 Activity unit | |
| सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the Gantry Crane. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | | | |
| 02800 | सामग्री सं./ Material Number :- 150000000000074555 design and key component of lift away h | 1 SET | 31.07.2024 |
| सामग्री वर्णन/Material Description :design and key component of lift away hatch covers | | | |
| 02900 | सामग्री सं./ Material Number :- 150000000000074556 Design of Tween Deck / Bulkhead | 1 SET | 31.07.2024 |
| सामग्री वर्णन/Material Description :Design of Tween Deck / Bulkhead | | | |
| 03000 | सामग्री सं./ Material Number :- 150000000000074557 DOCUMENTS, DRAWINGS, CERTIFICATES FOR | 1 SET | 31.10.2025 |
| सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR HATCH COVERS | | | |
| 03100 | सामग्री सं./ Material Number :- 150000000000074558 OBS FOR HATCH COVER 1 YEAR | 1 SET | 31.10.2025 |
| सामग्री वर्णन/Material Description :OBS FOR HATCH COVER 1 YEAR | | | |
| 03200 | INSTALLATION OF THE HATCH COVER | 1 Activity unit | 31.10.2025 |
| The Line item 03200 covers the following services | | | |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE HATCH COVER | 1 Activity unit | |
| सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the hatch covers. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | | | |

| निविदा सं./ Tender No:- 1700000512 | | निविदा तिथि/ Tender Date:- 31.01.2024 | | आरएफक्यू सं./RFQ No:- 2230000012 | |
|------------------------------------|---|---------------------------------------|-------------------------------|----------------------------------|--|
| क्र सं. SL.No. | सामग्री / सेवा विवरण Material / Service Details | मात्रा / इकाई Quantity / unit | आपूर्ति तिथि Delivery Date | | |
| 03300 | सामग्री सं./ Material Number :- 150000000000074559 Gantry Crane for MPV सामग्री वर्णन/Material Description :Gantry Crane for MPV | 1 SET | 31.10.2025 | | |
| 03400 | सामग्री सं./ Material Number :- 150000000000074565 DOCUMENTS, DRAWINGS, CERTIFICATES FOR GA सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR GANTRY CRANE | 1 SET | 31.10.2025 | | |
| 03500 | सामग्री सं./ Material Number :- 150000000000074566 OBS For GANTRY CRANE 1 YEAR सामग्री वर्णन/Material Description :OBS For GANTRY CRANE 1 YEAR | 1 SET | 31.10.2025 | | |
| 03600 | INSTALLATION OF THE GANTRY CRANE The Line item 03600 covers the following services | 1 Activity unit | 31.10.2025 | | |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE GANTRY CRANE सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the Gantry Crane. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | 1 Activity unit | | | |
| 03700 | सामग्री सं./ Material Number :- 150000000000074555 design and key component of lift away h सामग्री वर्णन/Material Description :design and key component of lift away hatch covers | 1 SET | 31.07.2024 | | |
| 03800 | सामग्री सं./ Material Number :- 150000000000074556 Design of Tween Deck / Bulkhead सामग्री वर्णन/Material Description :Design of Tween Deck / Bulkhead | 1 SET | 31.07.2024 | | |
| 03900 | सामग्री सं./ Material Number :- 150000000000074557 DOCUMENTS, DRAWINGS, CERTIFICATES FOR सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR HATCH COVERS | 1 SET | 31.12.2025 | | |
| 04000 | सामग्री सं./ Material Number :- 150000000000074558 OBS FOR HATCH COVER 1 YEAR सामग्री वर्णन/Material Description :OBS FOR HATCH COVER 1 YEAR | 1 SET | 31.12.2025 | | |
| 04100 | INSTALLATION OF THE HATCH COVER Additional item details:- Material - A4-70/80 The Line item 04100 covers the following services | 1 Activity unit | 31.12.2025 | | |

| क्र सं. SL.No. | सामग्री / सेवा विवरण Material / Service Details | मात्रा / इकाई Quantity / unit | आपूर्ति तिथि Delivery Date |
|-------------------|--|----------------------------------|-------------------------------|
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE HATCH COVER सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the hatch covers. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | 1 Activity unit | |
| 04200 | सामग्री सं./ Material Number :- 150000000000074559 Gantry Crane for MPV सामग्री वर्णन/Material Description :Gantry Crane for MPV | 1 SET | 31.12.2025 |
| 04300 | सामग्री सं./ Material Number :- 150000000000074565 DOCUMENTS, DRAWINGS, CERTIFICATES FOR GA सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR GANTRY CRANE | 1 SET | 31.12.2025 |
| 04400 | सामग्री सं./ Material Number :- 150000000000074566 OBS For GANTRY CRANE 1 YEAR सामग्री वर्णन/Material Description :OBS For GANTRY CRANE 1 YEAR | 1 SET | 31.12.2025 |
| 04500 | INSTALLATION OF THE GANTRY CRANE The Line item 04500 covers the following services | 1 Activity unit | 31.12.2025 |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE GANTRY CRANE सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the Gantry Crane. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | 1 Activity unit | |
| 04600 | सामग्री सं./ Material Number :- 150000000000074555 design and key component of lift away h सामग्री वर्णन/Material Description :design and key component of lift away hatch covers | 1 SET | 31.07.2024 |
| 04700 | सामग्री सं./ Material Number :- 150000000000074556 Design of Tween Deck / Bulkhead सामग्री वर्णन/Material Description :Design of Tween Deck / Bulkhead | 1 SET | 31.07.2024 |
| 04800 | सामग्री सं./ Material Number :- 150000000000074557 DOCUMENTS, DRAWINGS, CERTIFICATES FOR सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR HATCH | 1 SET | 27.02.2026 |

| क्र सं. SL.No. | सामग्री / सेवा विवरण Material / Service Details | मात्रा / इकाई Quantity / unit | आपूर्ति तिथि Delivery Date |
|-------------------|---|----------------------------------|-------------------------------|
| COVERS | | | |
| 04900 | सामग्री सं./ Material Number :- 150000000000074558 OBS FOR HATCH COVER 1 YEAR सामग्री वर्णन/Material Description :OBS FOR HATCH COVER 1 YEAR | 1 SET | 27.02.2026 |
| 05000 | INSTALLATION OF THE HATCH COVER The Line item 05000 covers the following services | 1 Activity unit | 27.02.2026 |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE HATCH COVER सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the hatch covers. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | 1 Activity unit | |
| 05100 | सामग्री सं./ Material Number :- 150000000000074559 Gantry Crane for MPV सामग्री वर्णन/Material Description :Gantry Crane for MPV | 1 SET | 27.02.2026 |
| 05200 | सामग्री सं./ Material Number :- 150000000000074565 DOCUMENTS, DRAWINGS, CERTIFICATES FOR GA सामग्री वर्णन/Material Description :DOCUMENTS, DRAWINGS, CERTIFICATES FOR GANTRY CRANE | 1 SET | 27.02.2026 |
| 05300 | सामग्री सं./ Material Number :- 150000000000074566 OBS For GANTRY CRANE 1 YEAR सामग्री वर्णन/Material Description :OBS For GANTRY CRANE 1 YEAR | 1 SET | 27.02.2026 |
| 05400 | INSTALLATION OF THE GANTRY CRANE The Line item 05400 covers the following services | 1 Activity unit | 27.02.2026 |
| 000000001 0 | सेवा सं./Service Number :- संक्षिप्त वर्णन/Short Description :- INSTALLATION OF THE GANTRY CRANE सेवा विवरण/Service Details :- As per TSP supplier is required to submit the specifications and technical documentation for installation of the Gantry Crane. Shipyards will carry out installation as per this document. The supplier must depute technical experts to supervise and guide the shipyards to carry out the initial test and trails,HATs and SATs. | 1 Activity unit | |

नियम और शर्तें : भाग ए मे लिखी हुई और इतर संलग्नपत्रे इस निविदा एक अभिन्न अंग हैं। हमें आशा है की, हमें प्रतियोगित्मिक और उचित प्रस्ताव इस निविदा के लिए प्राप्त होगा।
Terms & Conditions as indicated in Part A of this tender and other enclosures / annexures form an integral part of this tender document. We look forward to receive your most competitive and reasonable offer against this Tender.

माझगाँव डॉक शिपबिल्डर्स लिमिटेड के लिए /For Mazagon Dock Shipbuilders Ltd

Tender No. 170000512 (Nominated Limited Global Tender Enquiry)



Tender Enquiry

Enclosure to Tender Enquiry: Terms and Conditions (Section I & II)
Item: Tender For Supply Of Hatch Covers And Gantry Crane For Project
7500 DWT.

Project: Multi-Purpose Dry Cargo Vessel(MPV)

Section I - Notice Inviting Tender (NIT)

- (i) Notice Inviting Tender (NIT): Mazagon Dock Shipbuilders Limited (MDL), Mumbai is India's leading Shipbuilding Company with ISO 9001:2015 accreditation. Mazagon Dock Shipbuilders Limited, invites offers in two bid system i.e. Part-I (Techno Commercial Bid) and Part-II (Price Bid) from Indian/Foreign bidders through online bidding via MDL e-procurement portal (<https://eprocuremdl.nic.in>) for Item /Services.
- (ii) **The Tender Document:**
- (i) **Bidders must read the complete 'Tender Document'**. Kindly visit MDL website Link : <https://mazagondock.in/English/pages/Tenders> under tab Ship Building(SB)/MPV Project for formats as detailed in enclosure.
- (ii) Bids must be uploaded till the deadline for submission of bids. Request for extension, if at all to be made, shall be forwarded at least 3 working days in advance to the tender closing date / time (excluding tender closing date) with proper reasoning. **However, the extension would be granted by MDL on merit of the case at MDL discretion and would be binding on all bidders.**
- (iii) **Eligibility Criteria for Participation in this Tender:** Subject to provisions in the Tender Document, participation in this Tender Process is limited to nominated bidders who fulfil the 'Eligibility' and Pre-Qualification criteria. Bidder shall be required to declare fulfilment of Eligibility Criteria.
- (iv) **Submission of Bids:** No manual Bids shall be made available or accepted for submission (except for originals of scanned copies as mentioned in tender). Bidder must comply with the conditions of the eProcurement portal, including registration, compatible Digital Signature Certificate (DSC) etc. In the case of downloaded documents, Bidder must not make any changes to the contents of the documents while uploading, except for filling in the required information.
- (v) **Disclaimers and Rights of MDL:** The issue of the Tender Document does not imply that MDL is bound to select bid(s), and it reserves the right without assigning any reason to
- reject any or all of the Bids, or
 - cancel the tender process; or
 - abandon the procurement of the Goods/Services in partial or full; or
 - issue another tender for identical or similar Goods/Services.

Note: Please refer to appended complete Tender Document for further details.

Tender Inviting Authority

Tender No. 170000512 (Nominated Limited Global Tender Enquiry)

Section II - Tender Enquiry Form (TEF)

1. **Description & Scope of Supply / Work:** As per Tender & TSP NO – SB/D-F/MPV/2029 and SB/D-F/MPV/2030

Note:

- i. In case MDL intends to buy 04 more ship sets of this scope, bidders shall quote their price for additional shipsets (04 nos) with price validity for 1st, 2nd, 3rd, 4th & 5th Year in the price sheet attached with the tender. These prices shall be valid from date of tender closing and till respective year of the quote. Bidder should note that these charges will not be considered for ranking purpose. Bidders shall not claim for this requirement in case this clause is not being exercised.

2. **Validity Period of Offer:**

- (a) Bid / Offer shall have the validity period of **180 days** from the tender closing date.
- (b) MDL may request the bidders to extend the validity period for a specified additional period. 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. In case techno-commercially accepted bidder/s does not agree to extend the offer validity, the offers of all techno-commercially accepted bidder/s including the bidder who has not agreed to extend their offer validity shall be opened and proceed further with valid bids. However, offer of the bidder(s) who have not agreed to extend their offer validity shall not be considered for L1 evaluation purpose.

3. **Delivery Period:**

The delivery dates mentioned in RFQ against each line item are for indicative purpose. The delivery/contract schedule given this para shall be considered for all purposes (loading/ranking.)

| Yard No. | Equipment delivery date |
|-----------------|--------------------------------|
| 21001 | PO date + 08 months |
| 21002 | PO date + 08 months |
| 21003 | PO date + 08 months |
| 21004 | PO date + 10 months |
| 21005 | PO date + 10 months |
| 21006 | PO date + 10 months |

For services, delivery date will be as mentioned in RFQ of tender.

4. **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 submission of techno-commercial offer as per tender terms.

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 strictly in the prescribed format provided in the e-procurement portal. Bids received other than this given format will be **rejected**.

Note:

- If, in the price structure quoted for the required goods, there is discrepancy between the unit price and total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly;
- If there is a discrepancy between words and figures, the amount in words shall prevail.
- Bidder must quote for all line items being inseparable line items.

5. **Bid Rejection Criteria:**

- (a) **Categorical rejection criteria:** Any Bids received other than through e-portal (in case of e-tender) shall be summarily rejected.

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

6. Performance Security Bank Guarantee(PSBG):

- (i) Separate Performance Security(PS) for an amount equal to 5% of each order value (excluding taxes, duties) payable in currency of purchase order shall be submitted within 25 days after notification of the award of contract and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the supplier, including warranty obligations.
- (ii) Performance security may be furnished in the form of NEFT /Online(MDL website) Demand Draft / Pay order / Bank Guarantee / Insurance Security Bond / e-Bank Guarantee in favour of Mazagon Dock Shipbuilders Limited, Mumbai from the list of Banks approved by SBI / Canara Bank published on MDL website.
- (iii) Non submission of PS with in stipulated time period may lead to cancellation of order by MDL at risk and cost of seller. In case cancellation of order is not opted by the buyer and seller has already commenced supply / services, MDL shall withhold 5% of order value from his bills in lieu of PS. In such case, interest is to be recovered for the period starting from 26th day of transmission / notification of order/contract by any mode and amount involved at the relevant rate of interest. For foreign supplier, the interest will be EUROBOR/LIBOR plus 2%. For Indian suppliers, the interest will be SBI BPLR plus 2%.
- (iv) In case of foreign bidders, the performance security must conform to Uniform Rules for Demand Guarantees (URDG 758) - an international convention regulating international securities.
- (v) The performance security will be forfeited and credited to MDL's account in the event of a breach of contract by the contractor. It will be refunded to the contractor without interest, after he duly performs and completes the contract in all respects including the warranty under the contract.
- (vi) Where the duration of contract is very long and banks are unwilling to issue BGs for long duration, rolling bank guarantee towards performance security can be submitted where it will be valid for at least one year with claim period of three months within which the same can be extended for further period by amendment.
- (vii) Performance security on reducing balance can be accepted when the contract period extends beyond one year. This will be effective on completion of one year and thereafter on six monthly / yearly basis.
- (viii) In the event of defects due to poor workmanship leading to non-performance of the Equipment/Item and bidder failure to attend the defects within a reasonable period of time, the PSBG will be encashed by MDL. MDL's decision in this regard shall be final and binding on the supplier / contractor.
- (ix) In the event of postponing of delivery of deliverables/services or extension of guarantee desired & sought by MDL, the Performance Security (for 5% of order value) has to be extended and its amendment charges shall be borne by supplier.

7. Warranty/Guarantee: As per clause 23 of section I of TSP.

Note: Bidders have to quote for warranty /guarantee extension charges for one year beyond warranty clause mention in TSP for each yard in the price sheet attached with the tender. Bidder should note that these charges will not be considered for ranking purpose. Bidders shall not claim for warranty extension in case this clause is not being exercised.

8. Currency of Bidding:

- (a) Indian Bidders shall quote in Indian Rupees only.
- (b) Foreign Bidders are allowed to quote price (and get paid) in RBI's notified basket of foreign currencies - US Dollar or Euro or GBP etc.

9. Pricing:

- (a) **For Indian Bidders:** Prices of all items/services shall be quoted for delivery of the items/services to the following destination including charges towards inland transportation, inspection charges, insurance, custom duty & cess, and other local costs incidental to the delivery of the Goods/Services.

| Items/services | Delivery Location at MDL / MDL Stores, Mumbai |
|----------------|---|
|----------------|---|

- (b) **For Foreign Bidders:** Bidder shall quote the prices for the delivery on **Incoterm CIF, Mumbai basis** for delivery at MDL. Order will be placed on **CIF basis** only.

Tender No. 170000512 (Nominated Limited Global Tender Enquiry)

- (c) The prices quoted shall remain firm and fixed during the currency of the order / contract unless agreed otherwise by MDL.

10. Taxes & Duties:

- (i) Bidders must clearly mention the applicable Taxes in the rate sheet enclosed in the tender. The item-wise rates (i.e. Basic + Duties & Cess + Packing, Forwarding, inspection charges, Freight & Insurance) quoted in the Rate sheet should exclude Taxes. Bidder should indicate GST rates as applicable separately under each of the head in the same rate sheet, which will be paid extra based on tax invoice to the extent applicable.
- (ii) Foreign bidder shall submit Tax Residency Certificate (TRC) in Part-I offer. In case of remittances to Foreign Companies for services, as per the Income tax act and DTAA provisions, TDS shall be carried out from the amount payable towards services. As per the extant applicability and existing rates, following cases pertaining to TDS are presented for clarity:
- a) Case 1 (TRC is made available by foreign bidders): Tax Deduction at Source (TDS) @ 15% of total service payment is applicable or as per applicable TDS rate stipulated by Government of India. If this is not agreed to by the bidder in the bid or during TNC / CNC, then this shall be appropriately loaded as per applicable rates on the price for the purpose of ranking. However, bidders to note that TDS rates / DTAA rates differ from country to country. It varies from 10% to 25%.
- b) Case 2 (TRC is not made available by foreign bidders): Tax Deduction at Source (TDS) at the rates as mentioned in the table below is applicable. If this is not agreed to by the bidder in the bid or during TNC / CNC, then this shall be appropriately loaded as per applicable rates stipulated by Government of India on the price for the purpose of ranking. These rates are tentatively as under:

| Service Payment slabs (converted in INR) | Rate of TDS applicable on total service payment |
|--|--|
| Up to Value of INR 1 Cr. | 25.75% |
| Above INR 1 Cr upto INR 10 Cr. | 26.26% |
| Above INR 10 Cr. | 27.0375% |

- (iii) Foreign Bidders shall quote their price on **Incoterm CIF, Mumbai** Basis. Taxes & duties as applicable to be borne by buyer & seller in their own country i.e MDL will bear the taxes & duties applicable within India and for outside India same will be borne by seller/bidder.

(iv) Goods and Services Tax (GST) – Applicable for Indian Bidder:

- a) The prevailing rate of GST is to be indicated in your blank rate sheet in Part-I.
- b) MDL's GST Number is **27AAACM8029J1ZA**.
- c) Bidder/supplier shall comply as per GST act of India and responsible for the financial and non-financial consequences in case of non-compliance of GST provisions/requirements/timelines on their part.
- (v) End User Certificate if applicable. Format to be provided by vendor immediately after placement of order.

11. Payment Terms:

- (i) On receipt of Invoice, 100 % of Payment shall be made within 15 days of receipt and acceptance of material and as reduced by any deductibles and / or the amount leviable towards liquidated damages, if any plus 100% taxes, duties etc. as applicable.
- (ii) **Part Payment:** Part Supply, Part Payment shall be applicable.
- (iii) **Extended Warranty (if applicable):** 100% payment for warranty wherever included in the same order will be admissible for payment will be made within 15 days from date of start of extended warranty period.
- (iv) **Services:** 100% payment for all kinds of services wherever included in the same order will be admissible for payment **within 15 days** against certification by the designated acceptance authority after satisfactory completion of the respective activities/services and on receipt of invoice.

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12. Payment Mode & Documents:

- (a) All the payments to indigenous bidders due shall be made through Real Time Gross Settlement (RTGS) / National Electronic Fund Transfer (NEFT) by MDL.
- (b) All the payments to foreign bidders shall be through Letter of Credit/Direct Remittance through Bank.
- (c) MDL may opt to make due payment for items having shelf life, services or any miscellaneous payment required as per contract through Direct Remittance from Bank post-delivery & acceptance or completion of services.

Note: Invoices should be submitted at "Receipt Section" adjacent to the ARS Punching Section, South Yard MDL.

(d) Documents for LC Payments for Goods(Foreign Bidders):

- (i) Set of Original + 2 Copies of signed Invoice showing item-wise prices as per the order.
- (ii) Set of Original + 2 Copies of signed packing List clearly showing list of items packed.
- (iii) Set of Original + 2 Copies Clean on Board Bill of Lading OR Air Way Bill Made in the name of MDL's Bank and Marked as freight paid.
- (iv) Set of Original + 2 Copies Certificate of approval OR Release Note from Inspection agency.
- (v) Certificate of country of origin in Original + 2 Copies by chamber of commerce.
- (vi) Original + 2 Copies of Warranty/Guarantee Certificate as per contract/order.
- (vii) Original + 2 Copies of all Manufacturer's Test Certificates (MTCs) / Reports, Drawings, Manuals, Procedures etc. as relevant to the ordered item.
- (viii) Certificate Confirming that supplier has couriered / dispatched _____ sets of Non Negotiable Documents comprising of all Test reports / MTCs, Technical Documents, Drawings, Manuals, Procedures etc. and of Signed Invoices, Packing Lists, Bill of Lading/AWB marked as Freight Paid, Insurance Policy/Document, Freight Paid Certificate, MDL nominated Inspection Agency's Certificate of approval, Country of Origin Certificate, Guarantee/Warranty Certificate, directly to MDL.
- (ix) Original + 2 Copies of the Certificate issued by the classified society confirming seaworthiness of the vessel and that the shipment is made on vessels of not more than 15 years vintage. (Applicable in case of CIF contracts / orders)
- (x) Certificate issued by MDL confirming that the delivery is made in time and no liquidated damages / penalty is applicable OR in case of delays, admissible amount of liquidated damages/ penalty will be specified by MDL in this certificate for reduction of equal amount from supplier's invoice and/or deduction of interest applicable towards non submission/delayed submission of PSBG and/or withholding the PSBG amount till guarantee/warranty period as applicable. (MDL will issue this certificate generally by E-Mail/FAX immediately on arrival of consignment at port of destination, receipt of signed copy of invoice, packing list, approval certificate of the nominated inspection agency, copies of B/L or AWB marked as Freight Paid, Insurance Policy/Document, Freight Paid Certificate or any other acceptable documents confirming dispatch on CIF basis).
- (xi) Certificate confirming that the shipping instructions (inclusive of packing)/Sea/Air worthiness packing have been followed while packing / shipment and forwarding of details for Freight and insurance to MDL.
- (xii) All the documents should clearly indicate the Purchaser's Order number, Import License Number, Airway Bill / Bill of Lading Number, Insurance Policy number/ Insurance Document reference number.

13. Consignee:

- (a) Material scheduled for delivery are to be delivered at MDL Anik 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.
 - 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 as applicable.
 - Technical documentation, if applicable.

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- (c) Unloading of the equipment/ items will be arranged by MDL. Supplier is required to give 4 day's advance intimation to MDL clearly indicating approx. dimensions and weight of consignments for arranging fork lift/crane for unloading.

Inspection & Testing: It shall be as per clause 11 of section I of TSP. Before dispatch of equipment/item, successful bidder should carry out the in-house inspection by TPI (Third Party Inspection, IACS) agency. Charges towards the TPI inspection shall be borne by supplier.

- (a) **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. In case joint receipt inspection (JRI) is required to be carry out, same may be carried out along supplier's rep. 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.
- (b) **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.

14. Loading Criteria:

Deviations sought by the bidder shall be loaded on the bidder/s quoted prices during price evaluation by MDL for ranking of bids to judge L1, as under.

- (a) Varied payment terms quoted by indigenous bidders as compared to the terms stated in the Tender document shall be normalized by adopting the Benchmark Prime Lending Rate of State Bank of India plus 2% thereon on the amount (s) at variation and / or for the period (in no. of days) at variation. For foreign bidders, LIBOR / EURIBOR rates plus 2 % or 6% whichever is higher would be applicable.
- (b) If Service Component exists in an offer from a foreign vendor, then Tax Residency certificate (TRC) should be submitted with Part I offer. If no TRC is submitted, then the enhanced Income Tax rate and GST thereon will be considered while determining L-1.
- (c) For the additional delivery period sought by the bidder over the stipulated date of delivery as per Tender, 0.50% per completed week will be loaded to the quoted price.

15. Ranking of Bids: Tender line items are inseparable and non-divisible in nature.

- (a) Ranking of bids shall be done on total value wise by considering following factors:
- The comparison of the responsive tenders shall be on total outgo on Least Cost Net of Credit Basis (LCNC), for the procurement to be paid to the supplier or service provider, including all elements of costs, duties, levies, freight, insurance etc. excluding GST (where ITC is available). Therefore, it should normally be on the basis of CIF/ FOR destination basis, duly delivered, commissioned, as the case may be.
 - The applicable loading towards deviations shall be loaded for ranking purpose.
- (b) For financial evaluation(Ranking), all bids shall be converted to Indian Rupees based on the "Bill for Collection (BC) selling "exchange rate on the last deadline for bid submission (Techno-commercial offer). If the last deadline for bid submission happens to be holiday or non-transaction day, the exchange rate on immediate previous working day will be adopted. The rate could be obtained from RBI/SBI rates as available on Internet.
- (c) Discount given, if any, by the bidders, after the last date for submission of the bids but before opening of the price bids, will not be considered for determining the ranking of bids but will be considered after the said bidder is adjudged as L1.
- (d) On-line ranking visible to the bidders after opening Part-II price bid is without loading parameters. However, the L1 bidder will be evaluated offline by applying all applicable loading parameters as per tender and clarifications during techno-commercial scrutiny / TNC meeting.
- (e) Loading/Ranking will be done on original submitted bid at the time of closing of tender. However, in case MDL invites supplementary price bid from technically qualified bidders, then same will also be considered while ranking of bids.

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16. Integrity Pact (IP): The Integrity pact essentially envisages the agreement between prospective vendors / bidders & buyers committing the person/officials of both the parties not to exercise any corrupt influence on any aspects of the contract. Only those vendors/bidders who enter into such an integrity pact with the buyer would be competent to participate in the bid. The format of integrity Pact is available on MDL's website, details are at enclosure. IP shall be submitted on plain paper.

The 'Integrity pact' dully filled as per enclosed format to be submitted along with the offer. Bidders to ensure that each page of Integrity pact shall be duly signed by the bidder. **Non-submission of Integrity Pact by the bidders duly signed on each page along with Part-I bid is under liable for rejection.** Bidders shall send original IP immediately to MDL post submission of bid.

Independent External Monitors (IEM): The following Independent External Monitors (IEMs) will have the power to access the entire project document and examine any complaints received by him. In case of any change in IEMs it will be informed accordingly.

For any administrative enquires and clarification on tender, bidders shall contact Commercial Dealing Executive. In case of issues related to Integrity Pact (IP) please contact Independent External Monitor (IEM) whose details are as below:

Mr. P V Rao
Email id: pasupuletirao@yahoo.co.in

17. Public Procurement Policy (Preference to Make In India) Order 2017: This is applicable for this tender and details are available on MDL Website. Kindly visit MDL website Link : <https://mazagondock.in/English/pages/Tenders> under tab Ship Building(SB)/MPV Project. Class I, Class II and Non-Local bidders are eligible to bid against this tender.

18. Option Clause: MDL the right to increase/decrease the ordered quantity by up to 50 % at any time, till final delivery date (or the extended delivery date of the contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of the delivery period (or the extended delivery period)

19. Book Examination Clause: In case it is found to the satisfaction of the BUYER that the seller has engaged an Agent or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents/Agency commission and penalty for use of undue influence, the seller, on a specific request of the buyer shall provide necessary information/Break-up data/ inspection of the relevant financial documents/information.

20. Public Grievance Cell: A public grievance cell headed by Shri R. R. Kumar, ED (EY) has been set up in the company. Members of public having complaints or grievances are advised to contact above Authorities on Wednesday between 10.00 hours and 12.30 hours in his office at 3rd Floor, West Block, Mazagon Dock Shipbuilders Ltd or send their complaints / grievances to him in writing for redressal. Telephone No. is 23762106(MDL).

21. Breach of Obligation: In case of breach of any obligation mentioned under, the bidder shall be disqualified / debarred from the bidding process for a period of one year from the date of notification;

- i) Bidder has withdrawn / modified / amended / impaired / derogated from the tender during the period of bid validity.
- ii) Bidder fails or refuses to execute the contract upon notification of acceptance of bid by MDL during the period of bid validity.

22. Land Border: This is applicable for this tender and details are available on MDL Website. Kindly visit MDL website Link : <https://mazagondock.in/English/pages/Tenders> under tab Ship Building(SB)/MPV Project.

23. Right to Reject any or all Bids: MDL reserves its right to accept or reject any or all Bids, abandon/ cancel the Tender process, and issue another tender for the same or similar Goods/Services at any time before the award of the contract. It would have no liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for such action(s).

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24. Additional Instructions:

- (a) Bidder shall abide to all tender terms & conditions including General Conditions of Contract (GCC).
- (b) In case of improper on-line filling or non-submission of Acceptance formats for Tender Enquiry Form (TEF), GCC, it shall be presumed that all our tender terms & conditions are acceptable to the bidder. For GCC, kindly visit MDL website Link : <https://mazaqondock.in/English/pages/Tenders> under tab Ship Building(SB)/MPV Project.

25. E-Portal and E-Tender Guidance:

- a) **Submission of bids against e-Tenders:** The bidder is required to quote online on the *e-Procurement* website www.eprocuremdl.nic.in by the deadline, by submitting the Techno-commercial Bid & Price Bid in Electronic format only. The prices/quotes & a few declarations shall have to be entered/uploaded by the bidder online in the Tender's entry forms & other bid documents' scanned/soft copies shall have to be uploaded as part of the bid. All bids should be digitally signed using DSC (as explained below).
- b) To participate in e-Tender (s), every bidder must register themselves on the ASP's website (*registration is free of cost*) & must possess a legally valid Class-IIB or above Digital Signature Certificate (DSC) as per IT Act-2000, using which they can sign their electronic bids. The DSC can be procured from any Certifying Authority (CA) authorized by Controller of Certifying Authorities (CCA) of Govt. of India.
- c) National Informatics Centre (NIC) have been appointed by MDL as the Application Service Provider (ASP).
- d) Online User Manual is available on the website for the guidance of users & for participating in the e-Procurement/ e-Tendering, the bidder must ensure having the requisite (IT) infrastructure at their office premises.
- e) For any further details of e tendering & digital signatures, please contact 0120- 4200462, 0120-4001002, 8826246593, eproc-support@gov.in.
- f) Problems in hardware/software, internet connectivity, system configurations, Browser setting etc., for whatsoever reason shall not be considered for extension of tender closing date and time.
- g) MDL will not be responsible for an error in downloading of tender documents from web by the bidders. The version appearing on MDL website will be considered final and authentic.

- 26. Contact Details for Queries: All bidders are requested to get their queries, if any, clarified in advance (i.e. 7 days in advance to tender closing date) to avoid last minute delay.** In case of any clarifications regarding tender, bidders are requested to contact the following executives.

| Department | Name of Executives | Contact No | Email |
|------------|--|------------------|-----------------------|
| Technical | Mr. Santosh Sitaraman DGM (SB-Design) | 022 2376 3025 | ssitaram@mazdock.com |
| | Mr. Adesh Kushwah CM(D-F) | 022 2376 3369 | akkushwah@mazdock.com |
| Commercial | Mr. Satish Chandra CM/PE(C-P17A) | 022 2376 2747 | schandra@mazdock.com |
| | Mr. Anup Kawade M (C-P17A) | 022 2376 2736 | abkawade@mazdock.com |

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

Yours faithfully,

For MAZAGON DOCK SHIPBUILDERS LIMITED

Tender No. 1700000512 (Nominated Limited Global Tender Enquiry)

Enclosure:

| | |
|----------------|---|
| Enclosure-1 | General Conditions of Contract (GCC) for Goods and Services |
| Enclosure-2 | Integrity Pact(IP)Format |
| Enclosure-3 | Performance Security (PS) Bank Guarantee Format |
| Enclosure-4 | RTGS format |
| Enclosure-5 | Details for remittance towards Performance Security (PS) Bank Guarantee Format |
| Enclosure-6 | Contact Details of the bidder |
| Enclosure-7 | Format for Compliance Certificate w.r.t. Land Border Clause |
| Enclosure-13-A | Format for declaration of Local Content & Purchase Preference as per PPP Order 2017. (Applicable for procurement below 10 Cr) |
| Enclosure-13-B | Format for declaration of Local Content & Purchase Preference as per PPP Order 2017. (Applicable for procurement above 10 Cr) |
| Enclosure-14-A | Format for declaration of Actual Local Content (Applicable for procurement below 10 Cr) |
| Enclosure-14-B | Format for declaration of Actual Local Content (Applicable for procurement above 10 Cr) |

Note: All above enclosures are available on MDL Website. Kindly visit MDL website Link : <https://mazagondock.in/English/pages/Tenders> under tab Ship Building(SB)/MPV Project.



MAZAGON DOCK SHIPBUILDERS LIMITED

(A Govt. Of India Undertaking)

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

TECHNICAL SPECIFICATION FOR PROCUREMENT


OF

GANTRY CRANE

(QUANTITY: AS PER PR)


| | | |
|--------------------|----------|--|
| PROJECT | : | 7500 DWT Multi-Purpose Dry Cargo Vessel |
| YARD NO | : | MDL YD No.21001/21002/21003/21004/21005/21006 |
| CLIENT | : | NAVI MERCHANTS |
| DOCUMENT NO | : | SB/D- F / MPV / 2030 |

| | | | |
|--------------------|---------------------------|--------------------|-------------|
| 0 | First Issue for tendering | 02/11/2023 | |
| REV | DESCRIPTION | DATE | SIGN |
| | | | |
| AKK | PSB | CGK Rao | |
| Prepared By | Checked By | Approved By | |

| | | | | | |
|--|--|--|--|--------------|------------------|
|  | MAZAGON DOCK SHIPBUILDERS LTD., (A Govt. of India Undertaking) | DESIGN OUTFIT | | TSP. NO. | SB/D-F/ MPV/2030 |
| | | TECHNICAL REQUIREMENTS FOR GANTRY CRANE | | REV. NO. | 0 |
| | DATE | | | 02/11/2023 | |
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| Dockyard Road, Mumbai - 400 010. | | | | | |

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Section I

GENERAL CONDITIONS AND REQUIREMENTS

- 1 **Subject:** The general conditions and requirements specified in this Section are intended to meet the functional requirements of the Equipment/ System elaborated in Section II and its associated auxiliaries/support systems; for meeting the overall requirements of the Vessel.
The Present requirement is for 06 shipsets. There could be further similar requirements. Hence, Vendors are to submit escalation rates on the 6th shipset for further 05 years.

2 **Endurance:**

The endurance of the Vessel, at service speed of 11 knots, shall be about 5500 nautical miles.

3 **Class, Rules, Regulations & Flag:**

The Vessel will be registered under Danish flag and built under survey and in accordance with the rules of Classification Society of DNV or equivalent notation of LR or ABS, according to Buyer approval.

Classification Notations : ✕1A

Ship Type Notation : Multi-purpose Dry Cargo Ship

Additional Class Notations:

Structural strength and integrity : GRAB (2-20): Hold designed for loading/discharging by grabs.

Strengthened (IB) : Inner bottom strengthened for heavy cargo

Propulsion, Power Generation and auxiliary systems

E0 : Unattended Machinery Space

Battery (Safety) : EES installation in one EES space has a rated capacity of 20kWh or above not having the Battery (Power) notation

Navigation notations : NAUT (AW)

Cargo operations notations:

LCS : Loading computer system

Equipment and design features notations:


DG (B) : Carriage of dangerous goods in bulk acc. SOLAS Reg. II-2/19

DG (P) : Carriage of dangerous goods in packaged form acc. SOLAS Reg. II-2/19

DBC : Carriage of solid dangerous goods in bulk acc. IMSBC Code

Container : Equipped for carriage of Containers

Cold climate notations : Ice 1B

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Environmental and pollution notations:

BWM (T) : Ballast Water Treatment
 Clean : Controlling and limiting operational emissions and discharges ER (SCR) Installation of SCR System in exhaust main engine
 Recyclable : Inventory of hazardous materials

Survey arrangement notations:


BIS : In water survey
 TMON (Oil lubricated) : Tail shaft monitoring (oil lubricated system)

Note: Final Class notations to be confirmed by Classification society.

3.1 RULES AND REGULATIONS


The Vessel, including its hull, machinery and equipment shall be constructed in accordance with rules and regulations listed below and which are in force on the date of signing the contract.

1. Classification Society Rules for Multi-purpose vessel
2. Marin
3. - International Convention for the Safety of Life at Sea 1974, or it's protocol of 1988 and up to amendments 2023 January.
4. ILLC - International Load Line convention, 1966/1988 and amendments up to 2014
5. International Regulations for Tonnage Measurement of Ship, 1969
6. COLREG - Convention on International Regulations for Prevention of Collision at Sea, 1972 and amendments up to 2013.
7. MARPOL - International convention for the Prevention of Pollution from ships, 1973 and protocol of 1978, amendments up to 2022 January.
8. FSS Code - International Code for Fire Safety Systems
9. FTP Code - International Code for Application of Fire Test Procedures
10. LSA Code - International Life-saving Appliance Code
11. ISPS Code - International Code for the Security of Ships and of Port Facilities.
12. IS Code - International code on Intact Stability, 2008
13. Grain Code - International Code of Safe Carriage of Grain in Bulk
14. Maritime Labor Convention of 2006 (MLC 2006) except swimming pool & separation of deck & engine office
15. Noise Code - Code on noise levels on board ships, Resolution MSC.337(91)
16. ISO 6954-2000(E) "Mechanical vibration - Guidelines for the measurement, and evaluation of vibration with regard to habitability on passenger and merchant ships"
17. IACS Rec 47 — Shipbuilding and Repair Quality Standard —

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rev.8 Oct.2017 and latest amendments

18. EEDI according Ch 4 of MARRPOL Annex VI, including verification according IMO resolution MEPC.254(67). as amended
19. ISO 8468 international standard of bridge layout and associated equipment.
20. PSPC Performance Standard for Protective Coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers, MSC.21 5(82)
21. AFS, "International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001";
22. BWM "International Convention for the Control and Management of Ships Ballast Water and Sediments, 2004" and IMO Res. A.868(20) and USCG regulations, "Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Organisms and Pathogens"
23. IMO Resolution A.962(23) - IMO Guidelines on Ship Recycling as amended by IMO Resolution A.980(24), or Ship Recycling Convention 2009, including complete inventory of hazardous materials (IHM) as per MEPC.269(68)
24. IMO MSC.277(85): ships which occasionally carry dry cargoes in bulk
25. IMSBC Code – International Maritime Solid Bulk Cargoes Code – Resolution MSC.268(85) (Italy bulk certificate)
26. International Telecommunications & Radio Conference Regulations 2012 (WCIT 12) and 2019 (WRC 19) with annexes and revisions.
27. IEC requirements for electrical installation for ships TC 18/2022 with amendments.
28. Resolution MSC.137(76) - Standards for Ship Manoeuvrability - (adopted on 4 December 2002)
29. IMO MSC/Circ. 1053 – "Explanatory Notes to the Standards for Ship Manoeuvrability"
30. Resolution A.714(17) CSS Code - Code of Safe Practice for Cargo Stowage and Securing (as far as practicable).
31. IMO Resolution MSC.1/Circular.1353/Rev.2 (7 December 2020) "Revised guidelines for the preparation of the cargo securing manual"
32. IMO Resolution MEPC.245(66) "2014 Guidelines on the method of calculation of the attained energy efficiency design index (EEDI) for new ships"
33. Resolution MEPC.254(67) – 2014 Guidelines on Survey and Certification of the Energy Efficiency Design Index (EEDI)
34. IMO Resolution MEPC.282(70) "2016 Guidelines for the

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Development of a Ship Energy Efficiency Management Plan (SEEMP)" and Amendments. (to be prepared by the Builder)

35. ISO 7547 – Air conditioning and ventilation of accommodation spaces on board ships
36. ISO 8861 – Engine-room ventilation in diesel-engine ships
37. Kiel Canal Rules
38. Black Sea Rules as far as practicable
39. Panama Canal Navigation Rules including Tonnage Measurement as far as practicable
40. U.S.C.G. Rules and Regulations for foreign flag Vessels operating in navigable waters of the United States
41. Suez Canal Navigation Rules including Tonnage Measurement
42. IMDG Code – International Maritime Dangerous Goods Code

4 **Ship's Basic Particulars:**

Table 1


Dimensions:

| | | |
|-------------------------------|------------------------------|--------------------|
| Length overall | : 116.20 | m |
| Length between perpendiculars | : 113.60 | m |
| Breadth, moulded | : 17.50 | m |
| Depth, moulded | : 9.80 | m |
| Draught, moulded | : 6.50 | m |
| Freeboard | : Type B | |
| Endurance | At service speed of 11 knots | 5500 NM |
| Ship's displacement | Deep displacement | Around 7000 Tonnes |

- 5 **Ship's Support Systems Supplies:** - Following ship's support supplies shall be available for the equipment system. For electrical supplies, in case of different requirements (voltage/frequency, etc.), the equipment supplier shall provide suitable provision (transformer/converter/UPS, etc.).

Table 2

| S.No | SYSTEM | SUPPLIES | REMARKS |
|------|--------------------------|---|--|
| (a) | Compressed air system | For Engine Starting Air at 3.0 MPa at 50 cu m/hr and For Working Air at 0.7 MPa & 80 cu m /hr. | Specific provisions shall be provided by the equipment supplier. |
| (b) | Sea water cooling system | Sea water is available at .25MPa | |

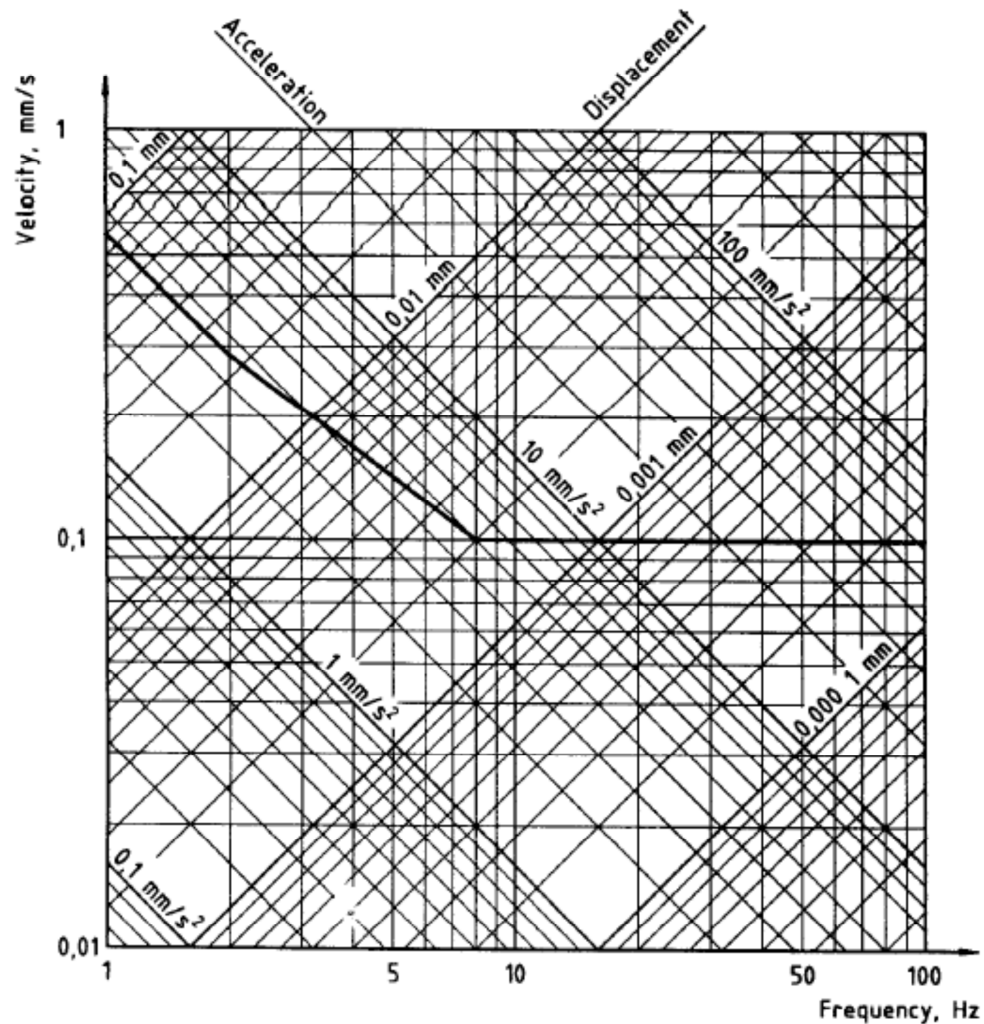
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|-----|--------------------|--|--|
| (c) | Fresh water system | Fresh water for equipment system shall be provided by ship's fresh water system at 0.5MPa. | Specific requirements to be indicated by equipment supplier. |
| (d) | Electrical | 400 V AC @ 50 Hz, 3 phase | Specific provisions shall be provided by the equipment supplier. |
| | | 230 V AC @ 50 Hz, 3 or 1 phase. | |

6 **Vibration:**

Special attention is to be paid in design and manufacture of the equipment to prevent undue vibration. Vibration limits, evaluation and measurement shall follow the provisions of ISO 6954:2000, Mechanical Vibration – Guidelines for the measurement, reporting and evaluation of vibration with regard to habitability on passenger and merchant ships. The values are expressed in terms of the overall frequency-weighted RMS acceleration (mm/s^2) and overall frequency weighted RMS velocity (mm/s) in the range 1 Hz to 80Hz. The overall frequency weighted RMS value of vibration velocity levels in the crew accommodation areas and service/working areas shall not exceed 6 mm/s and 8mm/s respectively. Vibration velocity limits are not applicable near equipment seatings.

The vibration measurement is to be made at sea trial condition and when the Vessel is running ahead steadily at the continuous service output of the main engine.



Human sensitivity curve


If Vibration level exceeds the limit of the above defined criteria, vendor to make necessary improvement to a practical extent. Vendor shall submit the vibration analysis (prediction) report for MDL's reference.

7 Noise Level:

Vendor shall ensure that the noise level for equipment in the accommodation space and engine room is to be within the limits specified in IMO.MSC 337(91), Code on Noise Level on board ships. In addition, vendor shall endeavour to achieve a noise level of max. 65dB for the equipment in the ECR.

Noise level measurement, is to be carried out in the following conditions:

- i. During the sea trial when running ahead steadily continuous service output of the main engine with shaft generator at normal operating condition and all fans running.

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- ii. During the sea trial when running ahead steadily continuous service output of the main engine and 1 generator running at normal operating condition and all fans running.
- iii. Harbour mode with 1 generator running
- iv. Harbour mode with emergency generator running

Measuring methods and points, measurement devices and reporting shall be in accordance with the Noise Code.

In case the measured noise level exceeds the above values, necessary improvements shall be made to a practical extent.

All engine room alarms shall be clearly audible above the noise of the running engine room machinery.

8 **Manning Policy:**


- i. The machinery spaces are envisaged for unmanned continuous operation. The spaces will be attended for starting/shutdown procedures and for routine checks.
- ii. Controls and surveillance on board the ship will be through Remote controls.
- iii. Each vital machinery shall be capable of control at the equipment level and from each specified remote control station.

9 **Documentation:** -

Various documents will be submitted by the equipment supplier as per the scope of supply and responsibility. Quality documentation is to be submitted in comprehensive and time bound manner for meeting ship's detailed design and production targets as well as equipment production and delivery schedule. Documentation to be submitted by the equipment supplier are broadly indicated below:-

Table 3

| SN o. | Documentation | Remarks | Timeline (In Weeks) |
|-------|---|---|---------------------|
| (a) | i) Binding design documentation and ii) (QAP) Quality Assurance Plan | For progressing with detailed design . Equipment quality assurance during production | PO + 02 |
| (b) | (ii) FATs procedure. | Equipment quality assurance during FATs. | PO + 06 |
| (c) | Equipment STW/HATs/SATs documentation | For preparing installation inspection/Test and Trials documentation | PO + 12 |

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| (d) | Technical Manuals for equipment operation, maintenance, logistics, etc. | For ship's crew, training and repair organizations. | PO + 14 |
|-----|---|---|---------|

All documentation (including documents, drawings, data, reports, manuals, etc.) should be in English language. Dimensional details in the drawings should be as per scale. Technical data and parameters should be in metric units (SI Units). Orthographic drawings & 3D model of equipment (associated components), in soft copies are to be submitted. Following file/formats would be acceptable:-

- a. Documents, data & reports in MS-WORD / EXCEL/ PDF, as applicable
- b. ACCESS for data base files
- c. Orthographic drawings (2D) in .DXF / .DWG format.
- d. 3D model of equipment (associated components) in .STP/ .IGES format.

Note: Above drawings/data are to be submitted in soft copies in latest software version.

Overall documentation must be of high quality in terms of contents, clarity and completeness; for meeting the requirements of detailed design, integration, manufacturing, quality assurance, installation, trials and operation/maintenance of the equipment.

All documents shall be sent electronically in PDF format without encryption and password. Printing of PDF provided by vendor shall be possible.

Vendor shall supply electronic copies (2 sets) of all finished plans and manuals to the MDL including Class approved drawings duly stamped together with associated Class approval letter without delay. All finished plans and manuals shall be in printable PDF format without password or encryption. All instruction books shall be provided in printable electronic format.


Vendor shall supply electronic copies (2 sets) and two (2) hard copy of drawings, manuals and instruction books for main and auxiliary machinery and all other major components such as motors, pumps, navigation & communication equipment, etc. to MDL. The instruction books from suppliers shall be provided only for the first Vessel if there are no change for the Vessel series.

One (1) hard copy of instruction books from suppliers to be provided in advance to Buyers site office.

The drawings and documents which need approval by the Classification society are to be submitted to the society directly by the Builder or Designer. In the event of any discrepancy between MDL and the Classification society or relevant authorities for approval drawings, the Classification society's or relevant authority's approval comments are to be in force and be adopted.

Approval by the Classification society and / or other regulatory authorities shall in no way be interpreted as approved by MDL, and MDL shall be entitled to make further requests provided they do not conflict with the requirements of specification of the PO.

Two (2) sets of instruction books and manuals of all equipment and systems to be furnished to MDL in electronic format (USB type storage device) in PDF or other

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agreed format; one each to the Vessels and to MDL. USB type storage device shall contain finished manuals and instruction booklets of all equipment as far as practical. Vendor is to supply two (2) hard copies of the finished drawings (as built) to MDL.

The Plans approved for the first Vessel shall be deemed to be approved for the subsequent Vessels of the series, except for any changes / modifications which shall be approved by the Buyers and the Classification society.

10 **Quality Assurance And Testing :**

As per class requirement.

11 **Test, Trial and Inspection :**

Tests and trials shall be carried out, in general, according to the Builder's usual standard practice and normal international shipbuilding practice in the presence of the surveyor of the Classification Society and the Buyer's and the Builder's representatives.

The Supplier shall submit the procedure and schedule of test and trial for the Buyer's approval. All results to be recorded and presented to the Buyer.

Following notice to be given for tests and inspections in shipyard and outside shipyard:

- Two (2) working day for shipyard test and inspections in general
- Four (4) working days for outside shipyard tests and inspections in country of shipyard
- Twenty five (25) days for outside shipyard tests and inspections in country other than the one of shipyard.
- Four (4) weeks for Factory Acceptance Tests

a. **Shop Test and Inspection**

Shop tests and / or inspection of machinery and equipment shall be carried out in accordance with the Builder's and / or Manufacturer's standard practice, except specially mentioned in Section II of this Specification.


Detailed description of shop tests except for minor equipment shall be referred to respective clauses of the Specification.

b. **FATs-(Factory Acceptance Trials) (Acceptance Test Procedure) ATP(QAP document)**

Documentation on equipment FATs procedure is to be submitted by equipment supplier in time bound manner, well in advance for approval by the designated inspection organization.

c. **Harbour Acceptance Trials/Sea Acceptance Trials: -**

During equipment setting to work and HATs/SATs, equipment suppliers shall assist and offer the respective equipment trials for successful completion of trials phase. Equipment testing, tuning and any defect rectification during on-board

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trials shall be undertaken by the equipment supplier in efficient and effective manner.

The HATs/SATs document is to be submitted by the supplier. HATs/SATs shall be carried out to the satisfaction of Inspection agencies.

12 **Spares:** - Spares, 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 along with the technical offer. The list of spares to be supplied should comply with class requirements and those listed in Section II of this document.

13 **Installation & Commissioning Consumables:** -

a. **Installation Tool:** Special tools, jigs and fixtures & test equipment required for Installation, flushing, setting to work, testing & tuning, on-board trials (HATs/SATs) and post Sea Trials inspection of critical internal parts and reassembly of the equipment and its auxiliary systems shall be supplied.

b. **Commissioning Consumable:** 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.

14 **Space Constraints:** - While designing the equipment and its associated auxiliaries/components the supplier is required to take into consideration the space availability in the respective compartments of the ship, ease of operation/maintenance of the equipment on-board the ship, ergonomics aspects and safety. Maintenance envelopes for equipment and its auxiliaries/components shall be provided by the equipment supplier and assessed in consultation with the Shipyard/ owner for finalizing the layout of respective ship compartments. Optimisation in design is to be ensured while meeting the functional, maintainability and ergonomic requirements.


Limiting dimensions & weight of the equipment are to be indicated by the OEM.

Table – 4

| ≤ | Section 1.01 Lengt h | Section 1.02 B readth | Height | Mass |
|---|----------------------------|-----------------------------|--------|------|
| | | | | |

15 **Interchangeability:** - Equipment design is to ensure that components and parts having same dimensions and characteristics should be inter-changeable between different units of similar kind, without affecting the specified equipment performance.

16 **Tally and Diagram Plates:** - All major components, including fittings such as valves, cocks, levers, gauges, switches, etc., should be provided with suitable identification tallies for appropriate identification. Tally plates shall be in English language and in SI units. All tallies and diagrammatic plates shall be of anodised aluminium alloy. Tallies for safety, caution & warning considerations should be in bold black letters on a fluorescent

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orange background. Diagrammatic plates indicating details of connections are to be provided / affixed near the terminal box of the motor.

17 **Instruction Plates:** - Instruction plates listing the starting/shut-down procedure and precautions in brief are to be prominently displayed on the equipment. The Instruction plates are to be anodized (anodised aluminium alloy). Equipment is to be supplied with a set of instruction plates duly mounted on equipment or supplied loose.

18 **Painting:** - Standard painting procedure shall be applicable for suitability for marine environment. Colour scheme for painting the equipment shall be indicated subsequently/during TNC meeting.

19 **Lifting Arrangement:** - Equipment components weighing more than 40 kilograms are to be provided with eyebolts, 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 lifting gear shall be supplied to MDL.

20 **Preservation / Conditioning:**

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.


Equipment shall be supplied with Initial preservation for a period of 24 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 are to be provided on all openings.

For re-preservation requirements, at shipyard or on board ship beyond initial preservation period, suitable provision is to be catered for by equipment supplier. Equipment supplier shall provide re-preservation & upkeep procedure, preservatives/consumables and technical assistance/supervision to the shipyard, as per requirements. (If special equipment/Pumps, hoses, fittings, etc. required shall be brought by the supplier along with them for carrying out the preservation on board the ship.

21 **Packing & Shipping:**

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.

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.

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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:

- a) Deliverables related to Main Equipment (to be marked in green colour).
- b) Deliverables related to Auxiliary Equipment (to be marked in green colour).
- c) Deliverables related to Installation material and Tools related to Main & Auxiliary Equipment (to be marked in green colour).
- d) Commissioning consumables and Tools (to be marked in green colour).
- e) Spares and Tools (to be marked in red colour).
- f) Documentation (to be marked in blue colour).

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.

Packing list should give further breakup of items, wherever particular item is quantified by set.

22 **Security of Information:** - The information contained in this document is not to be divulged to any other firm/third party without the prior permission of MDL. Adequate measures are to be taken to ensure safe custody of this document.

23 **Warranty:**

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 supply of equipment to MDL or twelve (12) months after planned delivery date (D) of the ship by MDL to the Owner, whichever is later.

During the said period, the equipment supplied shall be warranted against any malfunction, defects, material failure, and non-compliance to ordered specifications, sub-optimal performance, design deficiency, poor workmanship and quality. Any expense on account of equipment malfunction, repair or supply of spares against guarantee defects is to be borne by the equipment supplier. In case, warranty extension is required the same is to be catered for by the equipment supplier. If any defective part to be taken back to OEM's factory (i.e. importing and re-exporting from Country of origin), for service purpose the liability of the same shall be borne by the supplier.

Extension to Warranty: Supplier shall mandatorily indicate, in the offer, the annual rate for extended warranty period, along with the commercial terms and conditions if any.

The rates are to be indicated for the equipment in preserved state as well as for the equipment having been de-preserved and in operation.

24 **Planned Ship Delivery Details(D):** The planned dates for delivery of the Ships to the Owner by MDL is tabulated below:


| | | | | | |
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Table 5:

| Ship no. | Yard No. | Planned Delivery date |
|----------|----------|-----------------------|
| 1 | 21001 | Mar 2026 |
| 2 | 21002 | Apr 2026 |
| 3 | 21003 | June 2026 |
| 4 | 21004 | Aug 2026 |
| 5 | 21005 | Oct 2026 |
| 6 | 21006 | Dec 2026 |

- 25 **Weight Recording / Weight Certificate:** - Weights of all components are to be recorded and a suitable certificate shall be submitted, by the equipment supplier. The designated inspection authorities shall countersign such certificates. Format for weight control data sheet, is placed at Annexure 2 of this document.

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 3 of this document.

26 **Technical Assistance:-**


The Supplier shall provide the necessary representative(s) to assist, **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. Setting to Work (including fitment of latest calibrated instrumentation).
- d. Harbour trials.
- e. Assistance in trouble shooting / attending equipment operational problem till warrantee period
- f. Post CST equipment Inspections.

The supplier shall provide Manday rates for each Ship for the above activities. The supplier shall indicate total cost for executing all technical assistance activities mentioned above, in the price bid. Activity-wise cost break up shall also be given in the price bid, to facilitate the payment on satisfactory completion of the activity.

Shipyard has to progress on ship construction activities, simultaneously on ships of the same Class/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.

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.

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27 **Compliance Matrix and Deviation** : - Para-wise compliance matrix, including Para 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 at Annexure 1 (The technical offer received without Compliance Matrix shall be liable for rejection)

28 **Technical Offer as Per Shipyard Tender**: - Technical part of the offer with respect to the equipment and its associated auxiliaries/components/controls, to be submitted by the equipment supplier in comprehensive, systematic and structured manner, as per the requirements mentioned in this document, including the following (but not limited to):-


- i. Equipment description along with specifications.
- ii. Equipment performance data
- iii. Characteristics data, curves, efficiency, etc., related to equipment performance
- iv. Outline general arrangement drawings of equipment with footprint, main dimensions, weights and mounting arrangement.
- v. Associated support systems specifications and drawings.
- vi. Interface requirements.
- vii. Relevant drawings with all views and maintenance envelopes.
- viii. Control and monitoring system along with complete list of sensors and instrumentation (in structured manner).
- ix. Mounting data/details and characteristics along with minimum stiffness required for seating/foundation.
- x. Associated electrical equipment specifications and drawings.
- xi. Recommended list of spares, special tools, test equipment, etc., in systematic manner.
- xii. Preliminary quality assurance and test plan.
- xiii. Compliance matrix (Para-wise compliance to tender specifications).
- xiv. Proposed plan for technical assistance for installation, preservation and commissioning, trials, etc.
- xv. List of items required for auxiliary systems (shipboard systems), which are essentially, be fitted for proper functioning of main equipment. Also indicate any of them, which are not supplied along with main equipment.
- xvi. List of Instrumentation & Diagram.
- xvii. Clear demarcation between the scope of supply of firm and that of the yard.
- xviii. Trial and commissioning time of complete system on board.
- xix. Delivery time from receipt of order.
- xx. List of special tools, instruments, jigs & fixtures & facilities required for lifting, transporting, aligning, installing and commissioning of main equipment and their auxiliaries.
- xxi. Details of all connections to plant, Mounting details with pattern no, seat details, flange details etc

29 **SCOPE OF SUPPLY** :

- i. Main equipment as detailed in Section II of this document.
- ii. Auxiliaries related to the Main equipment and its Electrical and Control Systems viz. Starters, Control Panels, Indicators etc. on Ship's foundation/structure. They shall be delivered along with Main Equipment.
- iii. All flexible hoses/bellows, interface flanges, counter-flanges, couplings, pipe stubs and fasteners, required to connect Main and Auxiliary Equipment to the ship's piping. They shall be delivered along with Main Equipment.
- iv. All mating electrical connectors, plugs and sockets for supplied equipment, for assembly with ship's interconnecting cables. Cable glands should be as per BS 6121/EN 62444-2013 and are to be provided at the bottom of the panel. The body of the gland should be made of mild steel and nut of brass. The terminals used are to be

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- approved type, adequately spaced & clearly marked for ease of connection & inspection. Suitable crimping type connectors of electrolytic copper and terminal clamps of Naval brass must be provided for termination of the permanent cables. They shall be delivered along with Main Equipment.
- v. Deliverables related to Installation material and Tools required carrying out installation, alignment of Main and Auxiliary Equipment (shall be delivered along with Main Equipment).
 - vi. Commissioning Spares and Tools (including special tools / instruments / gadgets required to conduct HATs and SATs) shall be delivered before STW of the Main and Auxiliary Equipment.
 - vii. Spares and Tools shall be made available before STW of the Main and Auxiliary Equipment.
 - viii. First charge of Oils, coolants, and Greases for the equipment and items shall be supplied before STW of the Main and Auxiliary Equipment.
 - ix. Preservatives for all mounts shall be supplied along with the mountings.
 - x. Preservatives required for preservation of the equipment & items (shall be delivered along with Main Equipment).
 - xi. Flushing procedure, required to flush the system on board the ship (shall be delivered along with Main Equipment).
 - xii. Special Tools, items etc. required to carry out preservation of Main and Auxiliary Equipment at Yard or on Board the ship (shall be brought by the supplier for carrying out preservation on board the ship).
 - xiii. Documentation in hard as well as soft copies shall be delivered along with Main Equipment for each ship set as detailed in the Para. 9 above.
 - xiv. Details of pump/motor/starter.


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TECHNICAL REQUIREMENTS:

1. GANTRY CRANE

a) General:

- I. One (1) longitudinally travelling electro-hydraulic / electric driven gantry crane for handling of weather deck hatch covers and grain bulkheads (tween deck panels) shall be provided.
- II. The gantry crane to allow stacking of maximum six (6) weather deck hatch covers in height on top of the cargo hold. Also, a total of 6 no of tween deck panels are stacked on the aft part of stepped cargo hold by means of gantry crane. The gantry crane shall be able to reach all the grain bulkhead positions.
- III. Two (2) electric cranes shall be provided and fitted on top of the gantry crane, one on starboard and one on portside for handling provision stores, gangways, engine spare parts and bunkering operation etc. The cranes shall have a capacity of 1.5 ton at an outreach of approx. 6 mtr.
- IV. A spreader frame with four (4) hooks shall be provided for lifting the hatch covers. The hooks to fit in the lifting eyes of the hatch cover. The spreader frame shall be guided by four (4) nylon wheels and stainless-steel guiding plates.
- V. The spreader frame shall be lifted by means of two (2) hot dip galvanized steel cables on hydraulic or electric winches, one(1) at each side. The winches shall be fitted on top of the gantry crane.
- VI. The crane structure shall be guided by four (4) wheels on a steel guiding rail of 60x40 mm, fitted on the coaming at both starboard and portside. The wheels shall be driven by four hydraulic or electric motors. Electrical Motor shall have IP56 ingress protection requirement. Anti-tripping plates shall be provided as to properly fix the gantry crane to the guiding rails. Crane stoppers of rubber material shall be provided at both ends of the guiding rails.
- VII. On top of gantry crane, one (1) electro-hydraulic power pack with separate hydraulic oil tank shall be provided and fitted in case of electro-hydraulic type. Canvas cover shall be fitted on hydraulic power unit for protection when not in use. The oil tank shall be equipped with a dip stick or

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sounding tube and filling cap. All piping related to the hydraulic system of the gantry crane shall be of stainless steel. All exposed pipe/hose fittings shall be SUS316L and wrapped in Denso tape. SUS316 shall be used for all exposed bolts, nuts, washers, etc. Above M20, hot-dip galvanized may as well be selected.

VIII. The gantry crane shall have an electrical supply of 3 x 400 V and 1 x 220 V at 50 Hz. through a CEE socket by means of a cable on self-tensioning cable drum. One (1) spare power cable shall be provided. Additionally, one emergency spare cable for temporary use without cable drum shall be provided. For connection of this cable, a separate emergency socket at the crane close to the cable drum shall be installed.


IX. For power distribution, a power supply box shall be fitted alongside hatchway coaming at approx. half length. On each side of the gantry crane (SB and PS, fore and aft) a LED light of min 500 watt with IP56 rating shall be fitted. The gantry crane shall be operated by means of a covered control station fitted on top of the crane. Levers for forward and aft moving and levers for up and down hoisting shall be provided. Gantry crane shall be fitted with fall arrest on ladder and crane operation platform. Handrail shall be fitted on top of gantry crane for safe passage from one side to other side.

X. The crane shall be provided with an acoustic alarm. Yellow warning flashlights shall be provided on gantry and hoist beam (flashing when moving). Hoisting eyes shall be fitted at the gantry crane as to enable handling by a shore-based crane.

XI. The cranes are to have the following particulars.

| Item | Gantry Crane Specification |
|--------------------------------------|--|
| Hatch/Bulkhead SWL | approx. 30 ton |
| Hoisting speed for hatch/bulkhead | approx. 1.7-0.6/3 m/min |
| Travelling speed | approx. 30 m/min |
| Operation in ambient air temperature | -25°C to +35°C |
| Operational range | Heel ±3° degrees (max), Trim ±2° degrees (max) |

XII. Two (2) working baskets shall be provided for cleaning the hold bulkheads etc. Baskets shall be used to enter the cargo hold when the grain bulkheads are fixed in position.

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- XIII. The gantry crane shall have two store positions; one in front of the deckhouse and one on the forward part of the cargo hold.
- XIV. Walkway outside the gantry crane rail shall be provided for proper and safe access to top of hatch coaming.
- XV. **Special paint systems (Example, C5 in ISO 12944) shall be provided.**

ANNEXURES



MAZAGON DOCK SHIPBUILDERS LTD.,
(A Govt. of India Undertaking)

Dockyard Road, Mumbai - 400 010.

DESIGN OUTFIT

**TECHNICAL REQUIREMENTS FOR
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Annexure No.1

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

COMPLIANCE MATRIX AND DEVIATION

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) |
|----------------|-------------------------|--------------------------------------|-------------------------------------|
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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



MAZAGON DOCK SHIPBUILDERS LTD.,
(A Govt. of India Undertaking)

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DESIGN OUTFIT

**TECHNICAL REQUIREMENTS FOR
GANTRY CRANE**

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ANNEXURE: 2

WEIGHT CONTROL DATA SHEET

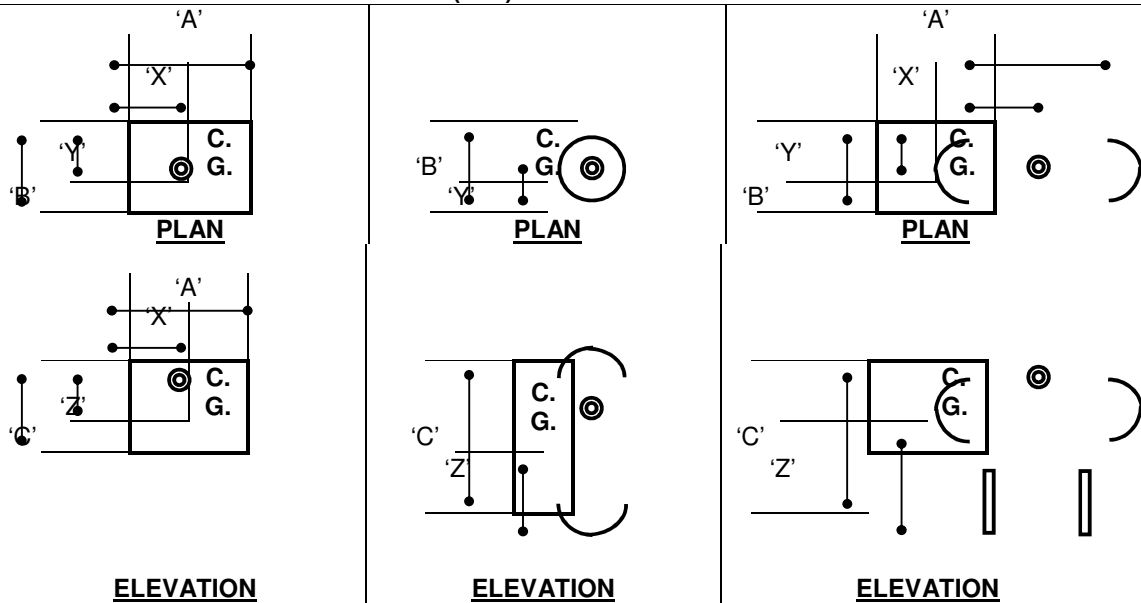
| | |
|------------------------------|----------------------|
| EQUIPMENT DESCRIPTION | EQUIPMENT NO. |
| COMPARTMENT | LOCATION |

TOLERANCE CODE
 PRELIMINARY EST.
 DESIGN EST.
 BOM. (CALC)
 WEIGHED
 TOLERANCE ± %

1. WEIGHT (Kg.)

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

2. EQUIPMENT DIMENSIONAL DATA (mm).



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

NOTE :

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

VENDOR'S SEAL

VENDOR'S SIGNATURE & DATE



MAZAGON DOCK SHIPBUILDERS LTD.,
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DESIGN OUTFIT

TECHNICAL REQUIREMENTS FOR
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ANNEXURE: 3

WEIGHT CERTIFICATE

EQUIPMENT DESCRIPTION :

EQUIPMENT NO. :

The form has to be completed by Supplier & to be supplied along with the equipment.

**SUPPLIER'S
NAME**

ADDRESS

TELEPHONE NO.

ORDER NO.

Ref. Drg. No.

Part No.

EQPT. NO.

METHOD OF WEIGHING :

Supplier to prescribe Method & Equipment Used :

**DATE OF LAST
CALIBRATION**

**SPECIFIED ACCURACY
REQUIREMENT**

NOTE :-

RESULT OF WEIGHING TOTAL EQUIPMENT DRY WEIGHT

(Excluding packing, temporary protection etc.)

ALLOCATED WEIGHT

(Weight estimate agreed by purchaser
and supplier based on order specs).

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



MAZAGON DOCK SHIPBUILDERS LIMITED

(A Govt. Of India Undertaking)

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

TECHNICAL SPECIFICATION FOR PROCUREMENT


OF

HATCH COVERS AND TWEEN DECKS/BULKHEADS

(QUANTITY: AS PER PR)


| | | |
|--------------------|----------|---|
| PROJECT | : | 7500 DWT Multi-Purpose Dry Cargo Vessel |
| YARD NO | : | MDL YD No.21001/21002/21003/21004/ 21005/21006 |
| CLIENT | : | NAVI MERCHANTS |
| DOCUMENT NO | : | SB/D- F / MPV / 2029 |

| | | | |
|--------------------|---------------------------|--------------------|-------------|
| 1 | Build specs updated | 25/12/2023 | |
| 0 | First Issue for tendering | 02/11/2023 | |
| REV | DESCRIPTION | DATE | SIGN |
| | | | |
| AKK | PSB | CGK Rao | |
| Prepared By | Checked By | Approved By | |

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Section I

GENERAL CONDITIONS AND REQUIREMENTS

1 **Subject:** The general conditions and requirements specified in this Section are intended to meet the functional requirements of the Equipment/ System elaborated in Section II and its associated auxiliaries/support systems; for meeting the overall requirements of the Vessel.

The Present requirement is for 06 shipsets. There could be further similar requirements. Hence, Vendors are to submit escalation rates on the 6th shipset for further 05 years.

2 **Endurance:**

The endurance of the Vessel, at service speed of 11 knots, shall be about 5500 nautical miles.

3 **Class, Rules, Regulations & Flag:**

The Vessel will be registered under Danish flag and built under survey and in accordance with the rules of Classification Society of DNV or equivalent notation of LR or ABS, according to Buyer approval.

Classification Notations : ✕1A

Ship Type Notation : Multi-purpose Dry Cargo Ship

Additional Class Notations:

Structural strength and integrity : GRAB (2-20): Hold designed for loading/discharging by grabs.

Strengthened (IB) : Inner bottom strengthened for heavy cargo

Propulsion, Power Generation and auxiliary systems

E0 : Unattended Machinery Space

Battery (Safety) : EES installation in one EES space has a rated capacity of 20kWh or above not having the Battery (Power) notation

Navigation notations : NAUT (AW)

Cargo operations notations:

LCS : Loading computer system

Equipment and design features notations:


DG (B) : Carriage of dangerous goods in bulk acc. SOLAS Reg. II-2/19

DG (P) : Carriage of dangerous goods in packaged form acc. SOLAS Reg. II-2/19

DBC : Carriage of solid dangerous goods in bulk acc. IMSBC Code

Container : Equipped for carriage of Containers

Cold climate notations : Ice 1B

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Environmental and pollution notations:

BWM (T) : Ballast Water Treatment
 Clean : Controlling and limiting operational emissions and discharges ER (SCR) Installation of SCR System in exhaust main engine
 Recyclable : Inventory of hazardous materials

Survey arrangement notations:


BIS : In water survey
 TMON (Oil lubricated) : Tail shaft monitoring (oil lubricated system)

Note: Final Class notations to be confirmed by Classification society.


3.1 RULES AND REGULATIONS

The Vessel, including its hull, machinery and equipment shall be constructed in accordance with rules and regulations listed below and which are in force on the date of signing the contract.

1. Classification Society Rules for Multi-purpose vessel
2. Marin
3. - International Convention for the Safety of Life at Sea 1974, or it's protocol of 1988 and up to amendments 2023 January.
4. ILLC - International Load Line convention, 1966/1988 and amendments up to 2014
5. International Regulations for Tonnage Measurement of Ship, 1969
6. COLREG - Convention on International Regulations for Prevention of Collision at Sea, 1972 and amendments up to 2013.
7. MARPOL - International convention for the Prevention of Pollution from ships, 1973 and protocol of 1978, amendments up to 2022 January.
8. FSS Code - International Code for Fire Safety Systems
9. FTP Code - International Code for Application of Fire Test Procedures
10. LSA Code - International Life-saving Appliance Code
11. ISPS Code - International Code for the Security of Ships and of Port Facilities.
12. IS Code - International code on Intact Stability, 2008
13. Grain Code - International Code of Safe Carriage of Grain in Bulk
14. Maritime Labor Convention of 2006 (MLC 2006) except swimming pool & separation of deck & engine office
15. Noise Code - Code on noise levels on board ships, Resolution MSC.337(91)
16. ISO 6954-2000(E) "Mechanical vibration - Guidelines for the measurement, and evaluation of vibration with regard to habitability on passenger and merchant ships"

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17. IACS Rec 47 — Shipbuilding and Repair Quality Standard — rev.8 Oct.2017 and latest amendments
18. EEDI according Ch 4 of MARRPOL Annex VI, including verification according IMO resolution MEPC.254(67). as amended
19. ISO 8468 international standard of bridge layout and associated equipment.
20. PSPC Performance Standard for Protective Coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers, MSC.21 5(82)
21. AFS, "International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001";
22. BWM "International Convention for the Control and Management of Ships Ballast Water and Sediments, 2004" and IMO Res. A.868(20) and USCG regulations, "Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Organisms and Pathogens"
23. IMO Resolution A.962(23) - IMO Guidelines on Ship Recycling as amended by IMO Resolution A.980(24), or Ship Recycling Convention 2009, including complete inventory of hazardous materials (IHM) as per MEPC.269(68)
24. IMO MSC.277(85): ships which occasionally carry dry cargoes in bulk
25. IMSBC Code – International Maritime Solid Bulk Cargoes Code – Resolution MSC.268(85) (Italy bulk certificate)
26. International Telecommunications & Radio Conference Regulations 2012 (WCIT 12) and 2019 (WRC 19) with annexes and revisions.
27. IEC requirements for electrical installation for ships TC 18/2022 with amendments.
28. Resolution MSC.137(76) - Standards for Ship Manoeuvrability - (adopted on 4 December 2002)
29. IMO MSC/Circ. 1053 – "Explanatory Notes to the Standards for Ship Manoeuvrability"
30. Resolution A.714(17) CSS Code - Code of Safe Practice for Cargo Stowage and Securing (as far as practicable).
31. IMO Resolution MSC.1/Circular.1353/Rev.2 (7 December 2020) "Revised guidelines for the preparation of the cargo securing manual"
32. IMO Resolution MEPC.245(66) "2014 Guidelines on the method of calculation of the attained energy efficiency design index (EEDI) for new ships"
33. Resolution MEPC.254(67) – 2014 Guidelines on Survey and Certification of the Energy Efficiency Design Index (EEDI)

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34. IMO Resolution MEPC.282(70) "2016 Guidelines for the Development of a Ship Energy Efficiency Management Plan (SEEMP)" and Amendments. (to be prepared by the Builder)
35. ISO 7547 – Air conditioning and ventilation of accommodation spaces on board ships
36. ISO 8861 – Engine-room ventilation in diesel-engine ships
37. Kiel Canal Rules
38. Black Sea Rules as far as practicable
39. Panama Canal Navigation Rules including Tonnage Measurement as far as practicable
40. U.S.C.G. Rules and Regulations for foreign flag Vessels operating in navigable waters of the United States
41. Suez Canal Navigation Rules including Tonnage Measurement
42. IMDG Code – International Maritime Dangerous Goods Code

4 **Ship's Basic Particulars:**

Table 1


Dimensions:

| | | |
|-------------------------------|------------------------------|--------------------|
| Length overall | : 116.20 | m |
| Length between perpendiculars | : 113.60 | m |
| Breadth, moulded | : 17.50 | m |
| Depth, moulded | : 9.80 | m |
| Draught, moulded | : 6.50 | m |
| Freeboard | : Type B | |
| Endurance | At service speed of 11 knots | 5500 NM |
| Ship's displacement | Deep displacement | Around 7000 Tonnes |

- 5 **Ship's Support Systems Supplies:** - Following ship's support supplies shall be available for the equipment system. For electrical supplies, in case of different requirements (voltage/frequency, etc.), the equipment supplier shall provide suitable provision (transformer/converter/UPS, etc.).

Table 2

| S.No | SYSTEM | SUPPLIES | REMARKS |
|------|-----------------------|---|--|
| (a) | Compressed air system | For Engine Starting Air at 3.0 MPa at 50 cu m/hr and For Working Air at 0.7 MPa & 80 cu m /hr. | Specific provisions shall be provided by the equipment supplier. |

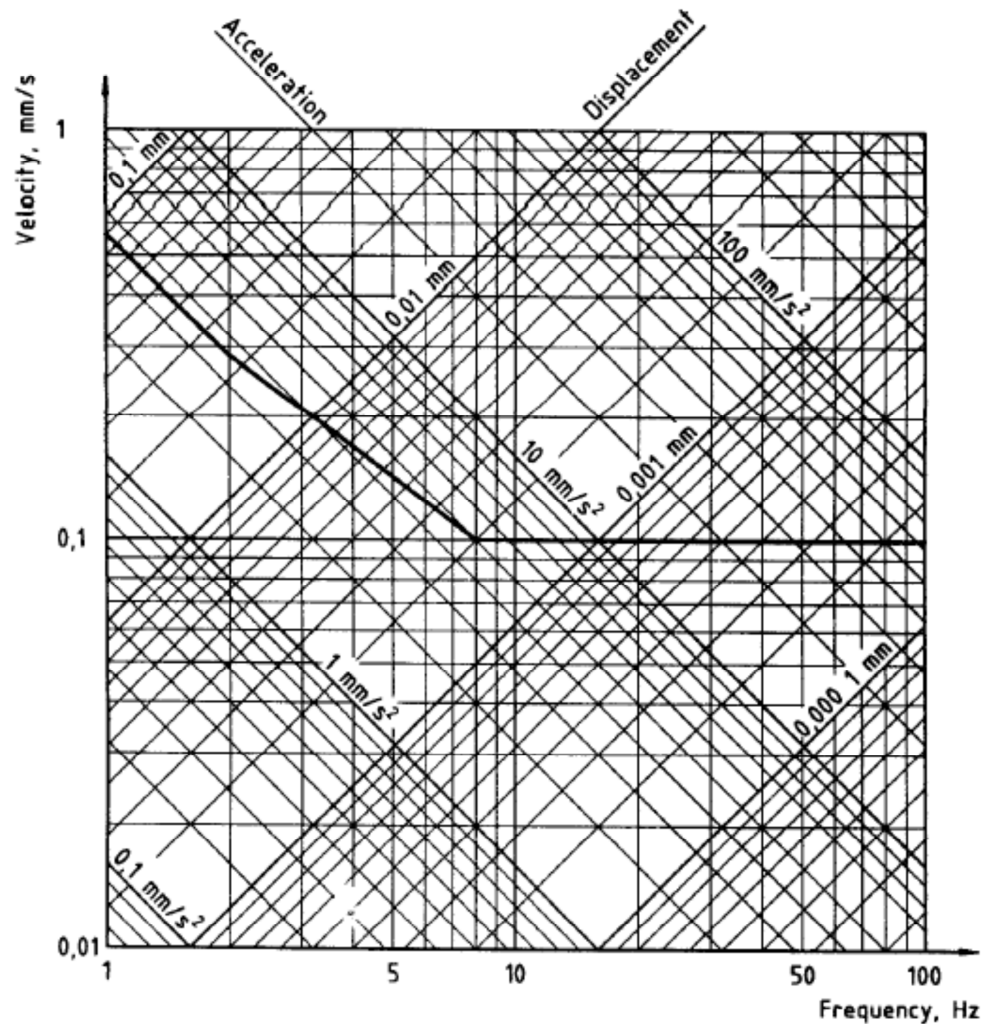
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| | | | |
|-----|--------------------------|--|--|
| (b) | Sea water cooling system | Sea water is available at .25MPa | |
| (c) | Fresh water system | Fresh water for equipment system shall be provided by ship's fresh water system at 0.5MPa. | Specific requirements to be indicated by equipment supplier. |
| (d) | Electrical | 400 V AC @ 50 Hz, 3 phase | Specific provisions shall be provided by the equipment supplier. |
| | | 230 V AC @ 50 Hz, 3 or 1 phase. | |

6 **Vibration:**

Special attention is to be paid in design and manufacture of the equipment to prevent undue vibration. Vibration limits, evaluation and measurement shall follow the provisions of ISO 6954:2000, Mechanical Vibration – Guidelines for the measurement, reporting and evaluation of vibration with regard to habitability on passenger and merchant ships. The values are expressed in terms of the overall frequency-weighted RMS acceleration (mm/s^2) and overall frequency weighted RMS velocity (mm/s) in the range 1 Hz to 80Hz. The overall frequency weighted RMS value of vibration velocity levels in the crew accommodation areas and service/working areas shall not exceed 6 mm/s and 8mm/s respectively. Vibration velocity limits are not applicable near equipment seatings.

The vibration measurement is to be made at sea trial condition and when the Vessel is running ahead steadily at the continuous service output of the main engine.



Human sensitivity curve


If Vibration level exceeds the limit of the above defined criteria, vendor to make necessary improvement to a practical extent. Vendor shall submit the vibration analysis (prediction) report for MDL's reference.

7 **Noise Level:**

Vendor shall ensure that the noise level for equipment in the accommodation space and engine room is to be within the limits specified in IMO.MSC 337(91), Code on Noise Level on board ships. In addition, vendor shall endeavour to achieve a noise level of max. 65dB for the equipment in the ECR.

Noise level measurement, is to be carried out in the following conditions:

- i. During the sea trial when running ahead steadily continuous service output of the main engine with shaft generator at normal operating condition and all fans running.

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- ii. During the sea trial when running ahead steadily continuous service output of the main engine and 1 generator running at normal operating condition and all fans running.
- iii. Harbour mode with 1 generator running
- iv. Harbour mode with emergency generator running

Measuring methods and points, measurement devices and reporting shall be in accordance with the Noise Code.

In case the measured noise level exceeds the above values, necessary improvements shall be made to a practical extent.

All engine room alarms shall be clearly audible above the noise of the running engine room machinery.

8 **Manning Policy:**


- i. The machinery spaces are envisaged for unmanned continuous operation. The spaces will be attended for starting/shutdown procedures and for routine checks.
- ii. Controls and surveillance on board the ship will be through Remote controls.
- iii. Each vital machinery shall be capable of control at the equipment level and from each specified remote control station.

9 **Documentation:** -

Various documents will be submitted by the equipment supplier as per the scope of supply and responsibility. Quality documentation is to be submitted in comprehensive and time bound manner for meeting ship's detailed design and production targets as well as equipment production and delivery schedule. Documentation to be submitted by the equipment supplier are broadly indicated below:-

Table 3

| SN o. | Documentation | Remarks | Timeline (In Weeks) |
|-------|---|---|---------------------|
| (a) | i) Binding design documentation and ii) (QAP) Quality Assurance Plan | For progressing with detailed design . Equipment quality assurance during production | PO + 02 |
| (b) | (ii) FATs procedure. | Equipment quality assurance during FATs. | PO + 06 |
| (c) | Equipment STW/HATs/SATs documentation | For preparing installation inspection/Test and Trials documentation | PO + 12 |

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|-----|---|---|---------|
| (d) | Technical Manuals for equipment operation, maintenance, logistics, etc. | For ship's crew, training and repair organizations. | PO + 14 |
|-----|---|---|---------|

All documentation (including documents, drawings, data, reports, manuals, etc.) should be in English language. Dimensional details in the drawings should be as per scale. Technical data and parameters should be in metric units (SI Units). Orthographic drawings & 3D model of equipment (associated components), in soft copies are to be submitted. Following file/formats would be acceptable:-

- a. Documents, data & reports in MS-WORD / EXCEL/ PDF, as applicable
- b. ACCESS for data base files
- c. Orthographic drawings (2D) in .DXF / .DWG format.
- d. 3D model of equipment (associated components) in .STP/ .IGES format.

Note: Above drawings/data are to be submitted in soft copies in latest software version.

Overall documentation must be of high quality in terms of contents, clarity and completeness; for meeting the requirements of detailed design, integration, manufacturing, quality assurance, installation, trials and operation/maintenance of the equipment.

All documents shall be sent electronically in PDF format without encryption and password. Printing of PDF provided by vendor shall be possible.

Vendor shall supply electronic copies (2 sets) of all finished plans and manuals to the MDL including Class approved drawings duly stamped together with associated Class approval letter without delay. All finished plans and manuals shall be in printable PDF format without password or encryption. All instruction books shall be provided in printable electronic format.


Vendor shall supply electronic copies (2 sets) and two (2) hard copy of drawings, manuals and instruction books for main and auxiliary machinery and all other major components such as motors, pumps, navigation & communication equipment, etc. to MDL. The instruction books from suppliers shall be provided only for the first Vessel if there are no change for the Vessel series.

One (1) hard copy of instruction books from suppliers to be provided in advance to Buyers site office.

The drawings and documents which need approval by the Classification society are to be submitted to the society directly by the Builder or Designer. In the event of any discrepancy between MDL and the Classification society or relevant authorities for approval drawings, the Classification society's or relevant authority's approval comments are to be in force and be adopted.

Approval by the Classification society and / or other regulatory authorities shall in no way be interpreted as approved by MDL, and MDL shall be entitled to make further requests provided they do not conflict with the requirements of specification of the PO.

Two (2) sets of instruction books and manuals of all equipment and systems to be furnished to MDL in electronic format (USB type storage device) in PDF or other agreed format; one each to the Vessels and to MDL. USB type storage device shall

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contain finished manuals and instruction booklets of all equipment as far as practical. Vendor is to supply two (2) hard copies of the finished drawings (as built) to MDL.

The Plans approved for the first Vessel shall be deemed to be approved for the subsequent Vessels of the series, except for any changes / modifications which shall be approved by the Buyers and the Classification society.

10 **Quality Assurance And Testing :**

As per class requirement.

11 **Test, Trial and Inspection :**

Tests and trials shall be carried out, in general, according to the Builder's usual standard practice and normal international shipbuilding practice in the presence of the surveyor of the Classification Society and the Buyer's and the Builder's representatives.

The Supplier shall submit the procedure and schedule of test and trial for the Buyer's approval. All results to be recorded and presented to the Buyer.

Following notice to be given for tests and inspections in shipyard and outside shipyard:

- Two (2) working day for shipyard test and inspections in general
- Four (4) working days for outside shipyard tests and inspections in country of shipyard
- Twenty five (25) days for outside shipyard tests and inspections in country other than the one of shipyard.
- Four (4) weeks for Factory Acceptance Tests

a. **Shop Test and Inspection**

Shop tests and / or inspection of machinery and equipment shall be carried out in accordance with the Builder's and / or Manufacturer's standard practice, except specially mentioned in Section II of this Specification.


Detailed description of shop tests except for minor equipment shall be referred to respective clauses of the Specification.

b. **FATs-(Factory Acceptance Trials) (Acceptance Test Procedure) ATP(QAP document)**

Documentation on equipment FATs procedure is to be submitted by equipment supplier in time bound manner, well in advance for approval by the designated inspection organization.

c. **Harbour Acceptance Trials/Sea Acceptance Trials: -**

During equipment setting to work and HATs/SATs, equipment suppliers shall assist and offer the respective equipment trials for successful completion of trials phase. Equipment testing, tuning and any defect rectification during on-board trials shall be undertaken by the equipment supplier in efficient and effective

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manner.

The HATs/SATs document is to be submitted by the supplier. HATs/SATs shall be carried out to the satisfaction of Inspection agencies.

12 **Spares:** - Spares, 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 along with the technical offer. The list of spares to be supplied should comply with class requirements and those listed in Section II of this document.

13 **Installation & Commissioning Consumables:** -

a. **Installation Tool:** Special tools, jigs and fixtures & test equipment required for Installation, flushing, setting to work, testing & tuning, on-board trials (HATs/SATs) and post Sea Trials inspection of critical internal parts and reassembly of the equipment and its auxiliary systems shall be supplied.

b. **Commissioning Consumable:** 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.

14 **Space Constraints:** - While designing the equipment and its associated auxiliaries/components the supplier is required to take into consideration the space availability in the respective compartments of the ship, ease of operation/maintenance of the equipment on-board the ship, ergonomics aspects and safety. Maintenance envelopes for equipment and its auxiliaries/components shall be provided by the equipment supplier and assessed in consultation with the Shipyard/ owner for finalizing the layout of respective ship compartments. Optimisation in design is to be ensured while meeting the functional, maintainability and ergonomic requirements.


Limiting dimensions & weight of the equipment are to be indicated by the OEM.

Table – 4

| ≤ | Section 1.01 Length h | Section 1.02 Breadth B | Height | Mass |
|---|--------------------------|---------------------------|--------|------|
| | | | | |

15 **Interchangeability:** - Equipment design is to ensure that components and parts having same dimensions and characteristics should be inter-changeable between different units of similar kind, without affecting the specified equipment performance.

16 **Tally and Diagram Plates:** - All major components, including fittings such as valves, cocks, levers, gauges, switches, etc., should be provided with suitable identification tallies for appropriate identification. Tally plates shall be in English language and in SI units. All tallies and diagrammatic plates shall be of anodised aluminium alloy. Tallies for safety, caution & warning considerations should be in bold black letters on a fluorescent

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orange background. Diagrammatic plates indicating details of connections are to be provided / affixed near the terminal box of the motor.

- 17 **Instruction Plates:** - Instruction plates listing the starting/shut-down procedure and precautions in brief are to be prominently displayed on the equipment. The Instruction plates are to be anodized (anodised aluminium alloy). Equipment is to be supplied with a set of instruction plates duly mounted on equipment or supplied loose.
- 18 **Painting:** - Standard painting procedure shall be applicable for suitability for marine environment. Colour scheme for painting the equipment shall be indicated subsequently/during TNC meeting.
- 19 **Lifting Arrangement:** - Equipment components weighing more than 40 kilograms are to be provided with eyebolts, 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 lifting gear shall be supplied to MDL.
- 20 **Preservation / Conditioning:**

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.


Equipment shall be supplied with Initial preservation for a period of 24 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 are to be provided on all openings.

For re-preservation requirements, at shipyard or on board ship beyond initial preservation period, suitable provision is to be catered for by equipment supplier. Equipment supplier shall provide re-preservation & upkeep procedure, preservatives/consumables and technical assistance/supervision to the shipyard, as per requirements. (If special equipment/Pumps, hoses, fittings, etc. required shall be brought by the supplier along with them for carrying out the preservation on board the ship.

21 **Packing & Shipping:**

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.

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.

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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:

- a) Deliverables related to Main Equipment (to be marked in green colour).
- b) Deliverables related to Auxiliary Equipment (to be marked in green colour).
- c) Deliverables related to Installation material and Tools related to Main & Auxiliary Equipment (to be marked in green colour).
- d) Commissioning consumables and Tools (to be marked in green colour).
- e) Spares and Tools (to be marked in red colour).
- f) Documentation (to be marked in blue colour).

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.

Packing list should give further breakup of items, wherever particular item is quantified by set.

22 **Security of Information:** - The information contained in this document is not to be divulged to any other firm/third party without the prior permission of MDL. Adequate measures are to be taken to ensure safe custody of this document.

23 **Warranty:**

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 supply of equipment to MDL or twelve (12) months after planned delivery date (D) of the ship by MDL to the Owner, whichever is later.

During the said period, the equipment supplied shall be warranted against any malfunction, defects, material failure, and non-compliance to ordered specifications, sub-optimal performance, design deficiency, poor workmanship and quality. Any expense on account of equipment malfunction, repair or supply of spares against guarantee defects is to be borne by the equipment supplier. In case, warranty extension is required the same is to be catered for by the equipment supplier. If any defective part to be taken back to OEM's factory (i.e. importing and re-exporting from Country of origin), for service purpose the liability of the same shall be borne by the supplier.

Extension to Warranty: Supplier shall mandatorily indicate, in the offer, the annual rate for extended warranty period, along with the commercial terms and conditions if any.

The rates are to be indicated for the equipment in preserved state as well as for the equipment having been de-preserved and in operation.

24 **Planned Ship Delivery Details(D):** The planned dates for delivery of the Ships to the Owner by MDL is tabulated below:


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Table 5:

| Ship no. | Yard No. | Planned Delivery date |
|----------|----------|-----------------------|
| 1 | 21001 | Mar 2026 |
| 2 | 21002 | Apr 2026 |
| 3 | 21003 | June 2026 |
| 4 | 21004 | Aug 2026 |
| 5 | 21005 | Oct 2026 |
| 6 | 21006 | Dec 2026 |

- 25 **Weight Recording / Weight Certificate:** - Weights of all components are to be recorded and a suitable certificate shall be submitted, by the equipment supplier. The designated inspection authorities shall countersign such certificates. Format for weight control data sheet, is placed at Annexure 2 of this document.

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 3 of this document.

26 **Technical Assistance:-**


The Supplier shall provide the necessary representative(s) to assist, **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. Setting to Work (including fitment of latest calibrated instrumentation).
- d. Harbour trials.
- e. Assistance in trouble shooting / attending equipment operational problem till warrantee period
- f. Post CST equipment Inspections.

The supplier shall provide Manday rates for each Ship for the above activities. The supplier shall indicate total cost for executing all technical assistance activities mentioned above, in the price bid. Activity-wise cost break up shall also be given in the price bid, to facilitate the payment on satisfactory completion of the activity.

Shipyard has to progress on ship construction activities, simultaneously on ships of the same Class/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.

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.

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27 **Compliance Matrix and Deviation** : - Para-wise compliance matrix, including Para 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 at Annexure 1 (The technical offer received without Compliance Matrix shall be liable for rejection)

28 **Technical Offer as Per Shipyard Tender:** - Technical part of the offer with respect to the equipment and its associated auxiliaries/components/controls, to be submitted by the equipment supplier in comprehensive, systematic and structured manner, as per the requirements mentioned in this document, including the following (but not limited to):-


- i. Equipment description along with specifications.
- ii. Equipment performance data
- iii. Characteristics data, curves, efficiency, etc., related to equipment performance
- iv. Outline general arrangement drawings of equipment with footprint, main dimensions, weights and mounting arrangement.
- v. Associated support systems specifications and drawings.
- vi. Interface requirements.
- vii. Relevant drawings with all views and maintenance envelopes.
- viii. Control and monitoring system along with complete list of sensors and instrumentation (in structured manner).
- ix. Mounting data/details and characteristics along with minimum stiffness required for seating/foundation.
- x. Associated electrical equipment specifications and drawings.
- xi. Recommended list of spares, special tools, test equipment, etc., in systematic manner.
- xii. Preliminary quality assurance and test plan.
- xiii. Compliance matrix (Para-wise compliance to tender specifications).
- xiv. Proposed plan for technical assistance for installation, preservation and commissioning, trials, etc.
- xv. List of items required for auxiliary systems (shipboard systems), which are essentially, be fitted for proper functioning of main equipment. Also indicate any of them, which are not supplied along with main equipment.
- xvi. List of Instrumentation & Diagram.
- xvii. Clear demarcation between the scope of supply of firm and that of the yard.
- xviii. Trial and commissioning time of complete system on board.
- xix. Delivery time from receipt of order.
- xx. List of special tools, instruments, jigs & fixtures & facilities required for lifting, transporting, aligning, installing and commissioning of main equipment and their auxiliaries.
- xxi. Details of all connections to plant, Mounting details with pattern no, seat details, flange details etc

29 **SCOPE OF SUPPLY :**

- i. Main equipment as detailed in Section II of this document.
- ii. Auxiliaries related to the Main equipment and its Electrical and Control Systems viz. Starters, Control Panels, Indicators etc. on Ship's foundation/structure. They shall be delivered along with Main Equipment.
- iii. All flexible hoses/bellows, interface flanges, counter-flanges, couplings, pipe stubs and fasteners, required to connect Main and Auxiliary Equipment to the ship's piping. They shall be delivered along with Main Equipment.
- iv. All mating electrical connectors, plugs and sockets for supplied equipment, for assembly with ship's interconnecting cables. Cable glands should be as per BS 6121/EN 62444-2013 and are to be provided at the bottom of the panel. The body of the gland should be made of mild steel and nut of brass. The terminals used are to be

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- approved type, adequately spaced & clearly marked for ease of connection & inspection. Suitable crimping type connectors of electrolytic copper and terminal clamps of Naval brass must be provided for termination of the permanent cables. They shall be delivered along with Main Equipment.
- v. Deliverables related to Installation material and Tools required carrying out installation, alignment of Main and Auxiliary Equipment (shall be delivered along with Main Equipment).
 - vi. Commissioning Spares and Tools (including special tools / instruments / gadgets required to conduct HATs and SATs) shall be delivered before STW of the Main and Auxiliary Equipment.
 - vii. Spares and Tools shall be made available before STW of the Main and Auxiliary Equipment.
 - viii. First charge of Oils, coolants, and Greases for the equipment and items shall be supplied before STW of the Main and Auxiliary Equipment.
 - ix. Preservatives for all mounts shall be supplied along with the mountings.
 - x. Preservatives required for preservation of the equipment & items (shall be delivered along with Main Equipment).
 - xi. Flushing procedure, required to flush the system on board the ship (shall be delivered along with Main Equipment).
 - xii. Special Tools, items etc. required to carry out preservation of Main and Auxiliary Equipment at Yard or on Board the ship (shall be brought by the supplier for carrying out preservation on board the ship).
 - xiii. Documentation in hard as well as soft copies shall be delivered along with Main Equipment for each ship set as detailed in the Para. 9 above.
 - xiv. Details of pump/motor/starter.

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|  | MAZAGON DOCK SHIPBUILDERS LTD., (A Govt. of India Undertaking) | DESIGN OUTFIT | | TSP. NO. | SB/D-F/ MPV/2029 |
| | | TECHNICAL REQUIREMENTS FOR HATCH COVERS AND TWEEN DECKS/BULKHEADS | | REV. NO. | 0 |
| | DATE | | | 02/11/2023 | |
| | PAGE NO. | | | Page 18 of 23 | |
| Dockyard Road, Mumbai - 400 010. | | | | | |

TECHNICAL REQUIREMENTS:

1. HATCH COVERS:

The dry cargo hold shall be covered with pontoon type hatch covers. The panels shall be constructed as closed boxes. Handling of the hatch covers by means of a dedicated electric-hydraulic or electric driven gantry crane. Hatch covers are resting on low wear steel bearing pads. In way of the rubber seal compression areas, stainless steel flat bar of 10 mm shall be welded on the hatch coaming.

Nominal hatchway size shall be 81.00 m Length X 13.50 m Width, which shall consist of pontoon type hatch cover panels. The total no. of pontoon type hatch cover panel shall depend upon final maker details.

The hatch covers shall be cleated manually. The hatch covers shall have build on lashing points and grain loading holes.

Hatch cover uniform load : 2 ton/m²

The tightness of the hatch cover shall be ensured by providing suitable sponge gaskets and manually operated quick acting cleats.

All hatch covers shall be provided with four (4) D-rings per panel for cargo lashings and D- rings for lashing the hatch covers on deck. The pontoons are equipped with clamps to accommodate removable steel supports, required for loading and lashing of wood cargoes (pulp, packages, timber).

To lift hatch covers when the gantry crane is out of order, necessary fittings shall be integrated for the use of a 20ft or 40ft container spreader.

Hatch covers shall be inspected, cleaned and stripe coated on the inside before closing. Each cover is provided with at least one drain plug (socket).


2. GRAIN BULKHEADS / TWEEN DECK PANELS:

The ship shall be provided with six (6) separation panels, forming a total of three (3) grain bulkheads. The bulkheads are of the closed box type without passageway openings or ventilation opening. Each panel has a sufficient number of securing pins and latches.

Grain bulkhead/ Tween deck panel uniform load : 2.5 ton/m²

Minimum 11 grain bulkhead stowing positions shall be provided. The stowing positions of the grain bulkheads shall be optimized for the best intake of bulk and grain loads.

The panels can also be used as tween deck panels. A total of 6 nos totally enclosed removable tween deck panels shall be provided at two different heights in the cargo hold side bulkheads. The tween deck pockets shall be integrated into the wing tank construction. Tween deck panel supports shall be finalized based on maker details.

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|--|---|--|--|-----------------|-------------------------|
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The aft grain bulkhead position shall be used as an A60 separation in case dangerous cargo is carried. This position shall be about 3.5 m forward of the engine room bulkhead and shall meet the dangerous cargo rules and regulations.


The grain bulkheads shall be grain tight, necessary means shall be delivered by the Buyer (magnetic holders etc.).

The grain bulkheads shall be designed in such a way as to be suitable for cargoes with a different specific weight than grain and withstand different forces resulting from the various cargoes.

Stowage position of tween deck panels shall be provided on the aft part of stepped cargo hold as per General arrangement plan.

Also, suitable locking arrangement shall be provided on pontoon hatch covers for stowing tween deck panels.

Sockets shall be provided for portable log stanchions in way of cargo hatch cover

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ANNEXURES



MAZAGON DOCK SHIPBUILDERS LTD.,
(A Govt. of India Undertaking)

Dockyard Road, Mumbai - 400 010.

DESIGN OUTFIT

**TECHNICAL REQUIREMENTS FOR
HATCH COVERS AND TWEEN
DECKS/BULKHEADS**

TSP. NO.

SB/D-F/ MPV/2029

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0

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Annexure No.1

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

COMPLIANCE MATRIX AND DEVIATION

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) |
|-------------|-------------------------|-----------------------------------|----------------------------------|
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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



MAZAGON DOCK SHIPBUILDERS LTD.,
(A Govt. of India Undertaking)

Dockyard Road, Mumbai - 400 010.

DESIGN OUTFIT

**TECHNICAL REQUIREMENTS FOR
HATCH COVERS AND TWEEN
DECK/BULKHEADS**

TSP. NO.

SB/D-F/ MPV/2029

REV. NO.

0

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ANNEXURE: 2

WEIGHT CONTROL DATA SHEET

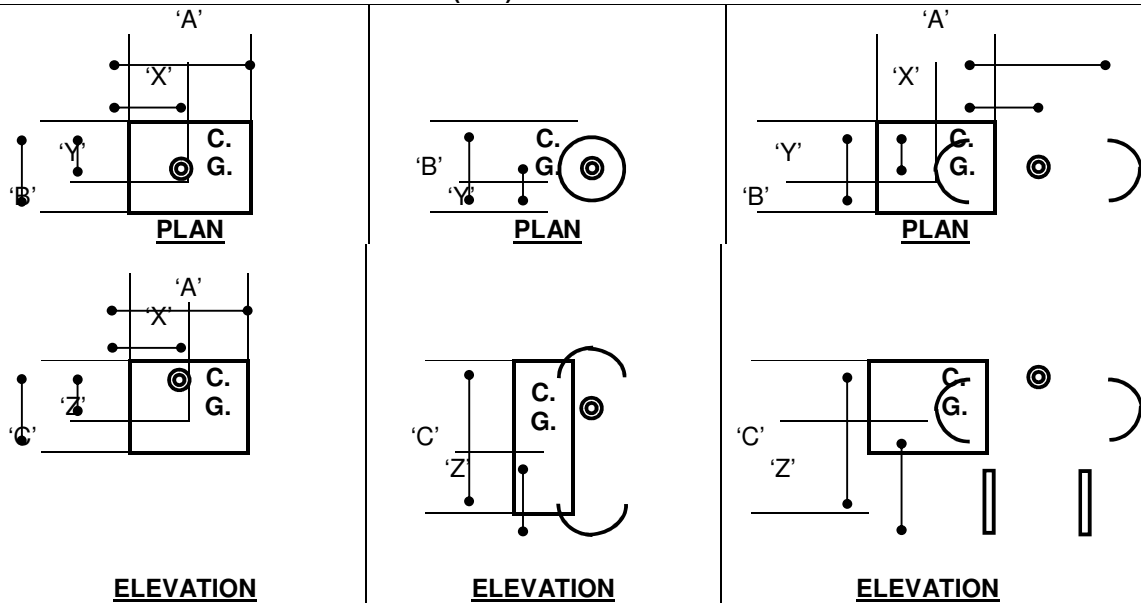
| | | | |
|------------------------------|--|----------------------|--|
| EQUIPMENT DESCRIPTION | | EQUIPMENT NO. | |
| COMPARTMENT | | LOCATION | |

TOLERANCE CODE
 PRELIMINARY EST.
 DESIGN EST.
 BOM. (CALC)
 WEIGHED
 TOLERANCE ± %

1. WEIGHT (Kg.)

| | | | | |
|-----|-----------|--|------|---|
| (a) | DRY | | Kg ± | % |
| (b) | FLUID | | Kg ± | % |
| © | OPERATING | | Kg ± | % |
| (d) | TEST | | Kg ± | % |
| (e) | TOTAL | | Kg ± | % |

2. EQUIPMENT DIMENSIONAL DATA (mm).



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

NOTE :

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

VENDOR'S SEAL

VENDOR'S SIGNATURE & DATE



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DESIGN OUTFIT

TECHNICAL REQUIREMENTS FOR
HATCH COVERS AND TWEEN
DECKS/BULKHEADS

TSP. NO.

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ANNEXURE: 3

WEIGHT CERTIFICATE

EQUIPMENT DESCRIPTION :

EQUIPMENT NO. :

The form has to be completed by Supplier & to be supplied along with the equipment.

**SUPPLIER'S
NAME**

Ref. Drg. No.

ADDRESS

Part No.

TELEPHONE NO.

ORDER NO.

EQPT. NO.

METHOD OF WEIGHING :

Supplier to prescribe Method & Equipment Used :

**DATE OF LAST
CALIBRATION**

**SPECIFIED ACCURACY
REQUIREMENT**

NOTE :-

RESULT OF WEIGHING TOTAL EQUIPMENT DRY WEIGHT

(Excluding packing, temporary protection etc.)

ALLOCATED WEIGHT

(Weight estimate agreed by purchaser
and supplier based on order specs).

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