



माझगांव डॉक शिपबिल्डर्स लिमिटेड

(भारत सरकार का उपक्रम)

राष्ट्र के पोत निर्माता

डॉकयार्ड रोड, माझगांव

मुंबई - ४०००१०

भारत

MAZAGON DOCK SHIPBUILDERS LIMITED

(A Government of India Undertaking)

Shipbuilders to the Nation

Dockyard Road, Mazagon,

Mumbai 400 010.

INDIA

ई-निविदा फॉर्म दो हिस्सों में

e-TENDER ENQUIRY FORM (TEF) Two-Bid System

मंडल: समवाय

DIVISION: SHIP BUILDING

विभाग: बाह्यस्तोत-तकनीकी सेवाएँ

DEPARTMENT: OTS-TECHNICAL SERVICES

निविदा क्रमांक: १९०००००२४४

TENDER NO: 1900000244

निविदा जारी दिनांक : २७ नवम्बर २०२५

TENDER DATE: 27 Nov' 2025

निविदा देय दिनांक एवं समय: १८ दिसंबर २०२५ दोपहर १४:३० बजे

CLOSING DATE & TIME: 18 Dec' 2025, at 14:30 Hr

भाग १ - तकनीकी एवं वाणिज्यिक हिस्सा खोलने (ऑनलाइन) की तिथि एवं समय: १९ दिसंबर २०२५, दोपहर १४:३० बजे से

Online Opening of Part-I (Techno-commercial Bid): 19 Dec' 2025, 14:30 Hrs. IST onwards

माझगांव डॉक शिपबिल्डर्स लिमिटेड प्रासिद्ध निविदाकर्ताओं / विक्रेताओं से निम्नलिखित कार्य के लिए प्रतियोगी ऑनलाइन निविदाएँ दो हिस्सों में (भाग १ - तकनीकी एवं वाणिज्यिक हिस्सा और भाग २ - मूल्य हिस्सा) अपने ई-प्रॉक्यूरमेंट पोर्टल <https://eprocuremdl.nic.in> पे आमंत्रित करते हैं।



MAZAGON DOCK SHIPBUILDERS LIMITED hereinafter referred to as **MDL**, INVITES ONLINE COMPETITIVE BIDS from reputed Bidders in TWO BID SYSTEM (Part-I Techno-Commercial Bid and Part-II Price Bid) on e-procurement portal <https://eprocuremdl.nic.in> for the following Work / Services:

कार्य का वर्णन **DESCRIPTION OF WORK**

भूतल दाक्षिण यार्ड ब्लॉक-२ में रखरखाव कार्यालय का नवीनीकरण, एमडीएल मुंबई.

Renovation of Maintenance Office at Ground floor south yard Block-2, MDL, Mumbai.

निविदा क्र.: १९०००००२४४
TENDER NO: 1900000244

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1. प्रस्तावना /PREAMBLE

- 1.1. Mazagon Dock Shipbuilders Ltd. (MDL), a listed Company, hereinafter referred as Employer (Client), is a Public Sector Undertaking by the Government of India under the administrative control of Department of Defence production, Ministry of Defence.
- 1.2. MDL's main business/ activities are Shipbuilding, Submarine Construction and Heavy Engineering Works.
- 1.3. MDL intends to Renovation of Maintenance office at ground floor south yard (Mogul House), MDL, Mumbai.

2. काम का संक्षिप्त विवरण/BRIEF SCOPE OF WORK:

- 2.1. MDL intends to Renovation of Maintenance office at ground floor south yard (Mogul House), MDL, Mumbai.
- 2.2. Bidder shall refer detailed Scope of Work and Technical Specifications which is at **Enclosure 21** and **ANNEXURE- 21A (attached separately)**. The Safety Instructions & Statutory compliances are attached at Annexure A & B respectively.

3. निविदाकर्ताओं के लिए निर्देश/ INSTRUCTIONS TO THE BIDDERS:

- 3.1. This is an e-tender and bids have to be submitted online ONLY. It is the sole responsibility of the bidders to submit their bids online in time. Bidders are, therefore, advised to commence the bidding process on the e-procurement portal WELL IN ADVANCE (preferably 3-4 days prior to tender closing date) and not wait for last minute submission of their bids. MDL reserves the right for grant of extension or otherwise without assigning any reason. Bidder's failure to complete submission of their online bids in time on account of reasons such as SLOW SPEED OF SERVER, TECHNICAL PROBLEMS etc. shall not be entertained and EXTENSION OF SUBMISSION TIME shall not be granted on this account.
- 3.2. In case any bidder intending to respond against the tender and is not having the DSC to facilitate uploading of his bid, should approach the Service Provider at least 10 working days in advance of the tender closing date requesting for DSC. The request so made to the Service Provider should simultaneously be forwarded to MDL Dealing Officer. In case the DSC is not received within 3 to 4 working days of the request by the bidder, the Head of the concerned Commercial section be informed immediately. If the DSC is not received from the Service Provider three working days prior to the tender closing date, suitable extension to the tender closing date shall be considered if requested by the concerned bidder on submission of requisite supporting documents (scanned copy of application submitted to the service provider).
- 3.3. In case of any discrepancies'
 - 3.3.1. Between Hindi and English Versions of the Tender Clauses, English Version will prevail.
 - 3.3.2. In the drawings or between the drawings, technical specifications, and/ or schedule of items/quantities, the contractor shall seek clarification from MDL and shall carry out the work in accordance with the clarification furnished by MDL.
 - 3.3.3. MDL at its discretion, may follow the following order of preference- Description of Schedule of Bill of Quantities, Technical Specifications, Drawings, General Condition of Contract.



- 3.4. Tender due date extension may have considered if extension of time asked by bidder in 3 days' in advance.
- 3.5. The online bid can be submitted by the authorized representative of the bidder as detailed below,
- 3.5.1. By the Proprietor, in case of a proprietary firm; or
- 3.5.2. By a Partner, in case of a partnership firm and/or a limited liability partnership;
- 3.5.3. By a duly authorized person holding the Power of Attorney, in case of a Limited or Private Limited Company or a corporation.
- 3.6. In case of any techno-commercial query prior to submission of bids, the bidder(s) are requested to contact the following from MDL. Letter(s)/emails shall be addressed to GM/HOD (OTS), MDL. Contact details are as under:

MDL	
Shri. Anant Garkhedkar DGM/HOS (OTS-TS) Email: apgarkhedkar@mazdock.com Tel No: +91 22 23763086 Mob No: 9324019254	Shri. G. G. Rathod, DGM (OTS-TS) Email: grathod@mazdock.com Tel No: +91 22 23763312 Mob No: 7506704671

- 3.7. Before submission of the tender, the bidder shall visit the site, examine the General Conditions of Contract, the Specifications (including any drawings and other specifications referred to therein), the schedules and the Bill of Quantities. In case of any ambiguity or discrepancy between any of these documents or between figured and measured dimensions, the bidder should immediately refer the matter to MDL.
- 3.8. **Corrigendum:**
- 3.8.1. Before the deadline for submitting bids, MDL may update, amend, modify, or supplement the information, assessment or assumptions contained in the Tender Document by issuing a corrigendum.
- 3.8.2. The corrigendum shall be published in the same manner as the original Tender Document. Without any liability or obligation, the Portal may send intimation of such corrigendum to bidders who have downloaded the document under their login. However, the bidders' responsibility is to check the website(s) for any corrigendum. Any corrigendum thus issued shall be considered a part of the Tender Document. To give reasonable time to the prospective bidders to take such corrigendum into account in preparing their bids, MDL may suitably extend the deadline for the bid submission, as necessary. After MDL makes such modifications, any Bidder who has submitted his bid in response to the original invitation shall have the opportunity to either withdraw his bid or re-submit his bid superseding the original bid within the extended time of submission.
- 3.9. Mazagon Dock Shipbuilders Limited will not be responsible for any costs or expenses incurred by the Bidder in connection with the preparation and submission of his bid or for any other expenses incurred in connection with such bidding regardless of the conduct or outcome of the tendering process including cancellation of this tender process.
- 3.10. The bidder shall not take any benefit of grammatical or printing mistakes, which may have occurred.
- 3.11. **DEVIATIONS:** - Deviations, if any, from Terms, Conditions & Technical requirements specified in the Tender Enquiry, General Conditions of Contract (GCC)



should be clarified from MDL well before the closing date of the tender. Deviations put up along with the tender is generally discouraged and not accepted.

- 3.12. Information relating to the examination, clarification, evaluation and comparison of bids, and recommendations for the award of a contract, shall not be disclosed to bidders or any other person not officially concerned with such a process until the award to the successful bidder has been announced.
- 3.13. From the time of bid opening to the time of contract award, no bidder shall contact MDL on any matter related to the bid, except on request and prior written permission.
- 3.14. Any effort by the bidder to influence MDL in bid evaluation, bid comparison or contract award decisions will vitiate the process and will result in the rejection of the bidder's bid.

4. ई-टेंडरिंग के लिये मार्गदर्शन /GUIDANCE FOR E-TENDERING:

- 4.1. No offer in sealed envelope will be accepted against e-Procurement.
- 4.2. Bidders can participate in online bidding
 - 4.2.1. By registering with above referred portal for User ID and password.
 - 4.2.2. By obtaining class III B DSC (Digital Signature Certificate) for secured bidding.
- 4.3. For any further details on e-tendering & Digital Signature Certificate (DSC), following are the contact details – email: eproc-support@gov.in , global support number - +91-120-4200462/+91-120-4001002, Mobile No -+918826246593.
- 4.4. For uploading the tender details, DSCs issued by the following are acceptable: i) n-Code ii) MTNL iii) TCS iv) SIFY
- 4.5. For mapping of DSC, representative of National Informatics Centre may be contacted.
- 4.6. Bidders who had earlier participated in MDL tenders on e-Procurement portal <https://mdl.eproc.in> need to register again on the current e-Procurement portal <https://eprocuremdl.nic.in>.

5. दो प्रणाली में ऑनलाइन प्रस्ताव प्रस्तुत करे /ONLINE SUBMISSION OF OFFER IN TWO-BID SYSTEM:

- 5.1. Offer must be submitted in Two parts i.e. Part-I (Techno-Commercial Bid) and Part-II (Price Bid) as appearing online on the portal <https://eprocuremdl.nic.in>
 - 5.1.1. **Techno-Commercial (Part-I) Bid:** Bidders shall submit/upload scanned copy of the following duly filled in, signed & stamped with company seal in online Part (I) bid: -
 - i. In respect of technical requirements of the tender:
 - a. Under taking for making available the required Key personnel as specified in the tender as per **Enclosure-3.1**
 - b. Scanned copy of Bidder's company profile.
 - c. Proposed methodology and Programme for execution duly supported by equipment planning and QA procedures proposed to be adopted by the bidder to be submitted.
 - ii. **In respect of Commercial requirements of the tender:**



- a. Bidder's Undertaking at **Enclosure-1**.
- b. Acceptance on clauses of Tender Enquiry (TEF) in the Prescribed Format **appearing online** stating 'Accepted' OR 'Not Accepted' as applicable for each of the clause in the format attached at **Enclosure-2**.
- c. Acceptance on clauses of General Conditions of Contract (GCC) in the Prescribed Format appearing online stating 'Accepted' OR 'Not Accepted' as applicable for each of the clause in the format attached at **Enclosure-4**.
- d. Deviations, if any, from Terms, Conditions & Technical requirements specified in the Tender Enquiry, GCC with reasons thereof shall be clearly indicated against the relevant clause(s) in the format attached at **Enclosure-5**.
- e. Bidder shall submit Declaration certificate for Local Content as per **TEF Clause No. 41** and in the format attached at **Enclosure-10 (A)**. **A Sample filled up Form is appended for reference.**
- f. Bidder shall submit Declaration in respect of restriction under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 **TEF Clause No. 42** in the format attached at **Enclosure-10 (E)**.
- g. Bidder shall submit Declaration in respect debarred under Public Procurement Policy (PPP) Make In India (MII) **TEF Clause No.41** order, in the format attached at **Enclosure-10 (F)**.
- h. Bidder shall submit Declaration for Banned or delisted Tenderer/firms/Vendors as per **TEF Clause No.39** and in the format attached at **Enclosure-11**.

The address label of the addressee is at Enclosure 27 on the envelope

- i. **EMD instrument (EMD BG)** shall be sent by Registered Post/Speed Post/Courier in a sealed envelope super scribing Tender Enquiry No. and Due date, so as to reach within 07 Days from the closing date of the tender during office working hours i.e. up to 1730 hrs, to the following address.

बिभाग प्रमुख(बाह्यस्त्रोत),
बाह्यस्त्रोत -तकनीकी सेवाएँ,
छटा मंज़िल, सर्विस ब्लॉक बिल्डिंग,
नॉर्थ यार्ड, माझगांव डॉकशिपबिल्डर्स लिमिटेड,
डॉकयार्ड रोड, मुंबई – ४०००१० (भारत)

**Head of the Department (OTS),
OTS-TS Department,
6th Floor, Service Block Building,
North Yard, Mazagon Dock Shipbuilders Limited,
Dock Yard Road, Mumbai – 400010 (INDIA)**

- j. Scanned copy of Bank details for payment by NEFT/RTGS/ECS with authenticated by the Banker in the format attached at **Enclosure-14**.
- k. Scanned copy of GST Registration Certificate & Permanent Account Number (PAN).
- l. Bidder should have valid ESIC code as per ESIC act and PF code- Bidder should have valid registration with Employees Provident Fund Organization under 'EPF and Miscellaneous Provisions Act, 1952'



- m. Scanned copy of Valid Bidder's Shop & Establishment Registration Certificate or Certification of Incorporation from Registrar of Companies or registration certificate from Registrar of firms.
- n. In case of Bidder registered with Mazagon Dock Shipbuilders Limited **may upload scanned copy** of Valid Registration Certificate issued by MDL, for the items/services for which the offer is being submitted.
- o. Power of Attorney, in case of a Limited or Private Limited Company or a corporation.
- p. CHECKLIST OF SUBMITTALS attached along with online Technical Bid as per format at **Enclosure-26**.
- q. Declaration in respect of Conflict of Interest among Bidders/Agents- **Enclosure-29** to be filled and submitted duly signed and stamped.
- r. Signed copy of Corrigendum if issued by MDL
- s. In Price bid, GST to be indicated by the bidder. Further, **Blank Rate sheet as per Price bid** to be submitted by the bidder along with the technical bid, duly indicating the GST, 'quoted or not Quoted' against rate, HSN / SAC code no. as per **(Price Blank sheet format)**.

Notes:

- i) MDL has a right to verify / cross verification of authenticity of the scanned documents with respect to original submitted against this tender
- ii) The bidder is requested to ensure that all the documents asked for are submitted and are clear, legible & duly signed (i.e. self-attested), as it would save considerable time without necessitating the need for furnishing of the documents again by them. The bidder is also requested not to submit unnecessary documents not asked for, like signed & stamped copy of this Tender document, etc.
- iii) Bidders are requested to ensure that only relevant documents complete in all respect as indicated in the tender should be attached with their offer. The first page of every uploaded set of scanned document shall be with an index of its contents.
- iv) The bidder is required to compulsorily select "ACCEPTED" or "DEVIATION" from the choices available against the relevant Para no. / Clause no. of TEF/GCC (as applicable). In case "DEVIATION" is selected against a particular Para no. / Clause no., it would be mandatory to explain the deviation proposed by the bidder in the Deviation form at **Enclosure-5**. Any deviation(s) mentioned elsewhere in the Offer/Bid, other than in the said forms, will not be considered.

5.1.2. मूल्य हिस्सा(भाग-२) /Price Bid (Part-II):

- a. Price Bid as appearing in the format is to be filled by the bidder ONLINE ONLY.
- b. The Bill of Quantities (BOQ) are as appearing at **Enclosure -19**
- c. The quantities of individual items in the BOQ are approximate and may vary.
- d. Bidder after considering the estimated rates of individual items in the BOQ and the total estimated value, shall quote their overall percentage at par, below or above the estimated rates.
- e. The percentage quoted/agreed by the Bidder shall be applied to the estimated rates of individual items in the BOQ, trucking off to two decimal places, to arrive at the order value.
- f. The Lowest Bidder (L1) shall be evaluated based on the overall cost quoted by the bidder including applicable Goods & Service Tax
- g. However, Purchase Preference in line with **Clause No 41.2** shall be given to Class I Local Supplier.
- h. If a firm quotes NIL charges/consideration, the bid shall be treated as unresponsive and will not be considered.
- i. If a firm do not quote GST in the Price bid, then the base price shall be reduced by applicable GST during placement of order.



j. **Note:**

1. If, in the price structure quoted for the required goods, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit prices shall prevail and the total price corrected accordingly.
2. If there is an error in a total corresponding to the addition of subtraction of sub-totals, the sub-totals shall prevail and the total shall be corrected.
3. If there is a discrepancy between words and figures, the amount in words shall prevail.

6. बोलियाँ में संशोधन /MODIFICATION TO THE BIDS :

Bidders desirous of modifying their bids prior to the closing date & time may do so online in the e-Procurement Portal <https://eprocuremdl.nic.in> prior to the tender closing date & time.

7. पूर्व योग्यता मापदंड/ PRE-QUALIFICATION CRITERIA:

7.1. Technical PQC

- 7.1.1. **Particular experience-**निविदा जारी दिनांक के पूर्व माह के अंतिम दिवस के समाप्ती तक पीछले सात वर्षों के दौरान समरूप कार्य के सफलतापूर्वक पूरा करने का अनुभव किसी भी निम्नलिखित के अंतर्गत होनी चाहिए:

Bidder's experience of having successfully completed similar works during last 7 years ending 31 October 2025 should be either of the following:

7.1.1.1. तीन समरूप संपन्न कार्य जिसकी प्रत्येक की लागत ₹ 21 लाख से कम न हो।

Three similar* completed works each costing not less than **₹ 21 Lakhs.**

OR

7.1.1.2. दो समरूप संपन्न कार्य जिसकी प्रत्येक की लागत ₹ 27 लाख से कम न हो।

Two similar* completed works each costing not less than **27 Lakhs.**

OR

7.1.1.3. एक समरूप संपन्न कार्य जिसकी प्रत्येक की लागत ₹ 42 लाख से कम न हो।

One similar* completed work costing not less than **42 Lakhs.**

***Similar Work:** "Similar work shall mean "Renovation of Office/Shopping complex /recreational clubs /Commercial Complex etc. including Civil, interior, Air Conditioning/HVAC and Electrical works"

In respect of the above, following shall be applicable

- (i) Similar completed works referred above means each work and not all works put together.
- (ii) Successfully completed or substantially completed similar works can also be considered for above similar works. Substantial completion shall be based on 80 (eighty) per cent (value wise) or more works completed under the contract. (**Note:** Substantial completion should not be defined in terms of percentage completion, rather it should be based on functional consideration.)
- (iii) Client certificate for 'substantial project/work/asset should contain two parts. Part-I shall 'Financial value of work done' or client certified invoice and Part-II shall contain; certificate of functional completion of project/work/asset'



- (iv) It is clarified that the work executed by the bidders for their in-house or capital use will not be considered for the purpose of bidder's experience of completion of similar works.
- (v) The work executed under labour rate where input materials which are supplied by client shall not be considered as experience in similar completed works.
- (vi) Documentary evidence in support of similar completed works viz., copies of Work Order(s)/Contract Agreement(s) indicating contract amount, Project/Work value, Scope of Work etc. & Work Completion Certificate(s) issued by the Client(s) indicating proper reference of the Work Order/Contract Agreement & date of Completion, duly signed & stamped with company seal shall be scanned and uploaded online. Bidder shall submit scanned copies of TDS certificate/ Copies of Certified invoices of relevant projects.
- (vii) Start-ups shall be given 100% relaxation in prior turnover and prior experience subject to meeting of quality & technical specifications, wherever applicable
- (viii) **Clarification of Bids/ Shortfall Documents:** During evaluation and comparison of bids, MDL may, at his discretion, ask the bidder for clarifications on the bid. Reasonable & fair opportunity may be provided to all the bidders for furnishing shortfall documents. The request for clarification shall be given in writing, asking the bidder to respond by a specified date. If the bidder does not comply or respond by the date, his offer will be liable to be rejected. No change in prices or substance of the bid shall be sought, offered or permitted. No post-bid clarification at the initiative of the bidder shall be entertained. The shortfall information/documents should be sought only in case of historical documents which pre-existed at the time of the tender opening and which have not undergone change since then.
- (ix) **Memorandum of Understanding:** (For Projects involving Design) Bidder has to submit copy of MoU for engagement of agency, if required, for carrying out the Design requirements.
- 7.1.2. **General Construction Experience:** Annual Turnover: The Bidder should have achieved an annual of general construction work (as certified by Chartered Accountant) of at least Rs.180 Lakhs in any of the year over a period of 7 years, ending **31 March 2025**. Further, out of the above annual turnover in the relevant year, the bidder should have achieved at least Rs.90 Lakhs from Civil & MEP work. Bidder has to submit a certificate from their Chartered Accountant for the above
- 7.1.3. **Personnel Capability:** The Contractor's Key Personnel should meet the requirements of qualification and experience as under:

Sr.no	Qualification	Minimum Experience in (years)	Number (of Major+ Minor component)	Designation Technical Staff
1	Graduate Engineer or Diploma Engineer	02 or 05 Years respectively	1 (Full time)	Project Manager cum planning/ quality/site/billing Engineer
2	Diploma in Safety	More than 02 Years	1 (Full time)	Safety Supervisor

Special Condition: Recovery shall be made from the contractor in the event of not fulfilling of above para 7.1.3, Rs. 15,000/- per month per person for Project Manager cum planning/ quality/site/billing Engineer and Safety Supervisor Encloser-3.1

7.2. Commercial PQC



- 7.2.1. Submission of requisite Instrument in support of Bid Security viz EMD/Proof of EMD Exemption.
- 7.2.2. Submission of Valid Bidder's Shop & Establishment Registration Certificate or Certification of Incorporation from Registrar of Companies or registration certificate from local body / Factory license or any document authorizing conduct of business in legal manner.
- 7.2.3. Submission of Integrity Pact. **(Not Applicable to this tender)**
- 7.2.4. Submission of Solvency **(Not Applicable to this tender)**
- 7.2.5. **Financial Capabilities**
 - a. Bidder's average Audited Annual financial turnover during last 3 years ending 31st **March 2025** should be at least Rs. **13 Lakhs/-** as per the annual report or audited balance sheet and profit and loss account of the relevant period, duly authenticated by a Chartered Accountant/ Cost Accountant.
 - b. The bidder should have access to, or possess available liquid assets and other financial means (independent of any contractual advance payments) sufficient to meet the construction cash flow requirements for the subject contract, of the certain minimum amount specified. The bidder should have adequate sources of finance to meet the cash flow requirements of works currently in progress and for future contract commitments. In support of the above, the bidder should have positive Working capital as on **31st March 2025**.

7.3. Clarification of Bids/Shortfall documents:

- 7.3.1. During evaluation and comparison of bids, MDL may, at its discretion, ask the bidder for clarifications on the bid. The request for clarification shall be given in writing, asking the bidder to respond by a specified date & time.
- 7.3.2. If the bidder does not comply or respond by the said date, his offer will be liable to be rejected.
- 7.3.3. Post-bid clarification at the initiative of the bidder shall not be entertained.

8. स्थल मुआयना /SITE VISIT:

- 8.1. The site for the work is located a North Yard, South Yard, & Residential colony of MDL, Mumbai.
- 8.2. It is considered necessary that the Bidder(s) shall visit the site and get clear idea about the work involved, before quoting. The Bidder(s) are therefore advised to visit the site and study all the particulars of the site and the nature of the work.
- 8.3. Bidder(s), if required, may contact on telephone no. 022 2376 3312 or email: grathod@mazdock.com for any doubts /clarifications / site visits.

9. बयाना राशि/ बोली प्रतिज्ञापत्र /EARNEST MONEY DEPOSIT (EMD) / BID BOND:

- 9.1. Bidders shall furnish EMD of **₹ 89,000 (Rupees Eighty-Nine Thousand Only)**, against this tender.
- 9.2. EMD can be paid online through the link mazagondock.in/onlinepayment.aspx Or following the steps listed below:
 - Go to www.mazgondock.in
 - Click on Online Payment Tab available on the home page
 - Click on the Tender Tab.
 - Make the payment online using Debit Cards, Credit cards, Net Banking, BHIM/UPI etc. after filling the required details.



- 9.3. The EMD can also be remitted directly to MDL Bank Account as per details given below:

Beneficiary's Name	Mazagon Dock Shipbuilders Limited
Name of Bank	State Bank of India
Branch	Mazagon Br.
Branch Code	9054
Bank Address	Mazagon Branch, Mazagaon, Mumbai – 400 010
Telephone No. of Bank	23752802
Account No	10005255246
Account Type	Current Account
IFSC Code	SBIN0009054
MICR / NECS Code	400002120
Income Tax PAN No.	AAACM8029J
Income Tax TAN No.	MUMM02076E

- 9.4. In case bidders pay EMD online or remit the same directly to MDL Bank account through NEFT, they should specifically mention the details of company name as well as nature of remittance, tender number/order number etc. in the text/narration fields of Bank's NEFT remittance in order to identify the same. The format at **Enclosure-14** is required to be filled up by the bidder and scanned copy of the same is to be uploaded along with Techno-commercial bid (Part-I).
- 9.5. EMD can also be submitted in the form of Bank Guarantee in the prescribed format at **Enclosure-15**. The Bank Guarantee (Including E-Bank Guarantee) should be valid for the offer validity period indicated in the Tender plus minimum one month as claim period
- 9.6. BG should be drawn from any of the banks from the list of Banks issued by a Scheduled Commercial (i.e. Indian Banks included in the Second Schedule of Reserve Bank of India Act, 1934 excluding Co-operative banks or Regional Rural Banks).and from list of Bankes approved by SBI/Canara bank published on MDL website.

Bidders submitting EMD by way of Bank Guarantee are requested to inform their issuing Bank to provide complete details viz., address, telephone / fax number(s) and e-mail id on their cover letter enclosing the BG.

- 9.7. The Scanned Copy of the Bank Guarantee towards EMD shall be uploaded in the Techno-commercial bid (Part-I).
- 9.8. The Address Label of the Designated Addressee is at **Enclosure-27**
- 9.9. If the original of EMD instrument is NOT RECEIVED within the stipulated period of 07 Days from the closing date of the tender, the Bids / Offers will be liable for rejection.
- 9.10. Refund of EMD in all the cases shall be without interest as stated below:
9.9.1 EMD will be refunded to the technically rejected bidders within 15 days from the date of price bid opening and remaining bidders within 30 days of determination of L1 or placement of Order on Successful bidder whichever is earlier.



9.9.2 In the event of cancellation of tender, the EMD will be refunded / returned to all the bidders.

9.9.3 EMD of successful bidders may be converted into performance security or refunded on receipt of performance security B.G.

9.9.4 If the validity of the offer of the firm has expired and if bidder is not willing to extend the validity of offer, the EMD of such bidders to be refunded.

9.11. The Earnest Money Deposit shall be forfeited by MDL in the following events:

9.10.1 If the bidder withdraws, amends, impairs or derogates from the tender, agreed conditions of Technical Negotiation Committee/Commercial Negotiation Committee /Price Negotiation Committee in any respect within the period of validity of his offer.

9.10.2 If the successful bidder declines acceptance of order.

9.12. **बयाना राशि जमा करने से छूट/बोली प्रतिज्ञापत्र / EXEMPTION FROM SUBMISSION OF EMD/BID BOND:** Offers with non-submission of EMD shall be categorically rejected other than exempted category. Bidder shall submit/upload the supporting documentary evidence along with Part I bid for claiming EMD exemption. EMD is exempted for following cases:

9.11.1 State & Central Government of India Departments & Public Sector Undertakings.

9.11.2 Firms registered with MDL. To qualify for EMD exemption, firms should necessarily submit valid copy of the Registration Certificate issued by MDL, for the items for which the offer is being submitted, in Part-I offer/bid. Firms in the process of obtaining MDL registration will not be considered for EMD exemption.

9.11.3 Common/Deemed DPSU registered vendors qualify for EMD exemption. Such firms shall submit valid copy of the registration certificate issued by DPSUs (other than MDL) for the works for which the offer is being submitted in Part-I offer/bid. Firms in process of obtaining registration in other DPSUs will not be considered for EMD exemption.

9.11.4 Start-ups as recognized by Department of Industrial Policy and Promotion (DIPP).

9.11.5 Green Channel Status vendors qualify for EMD exemption. Such firms shall submit valid copy of the Green channel certificate issued by MoD for the items for which the offer is being submitted in Part-I offer/bid. Firms in process of obtaining this certificate will not be considered for EMD exemption.

9.11.6 **All the MSME bidders also need to submit the EMD, as there is no EMD exemption for MSME bidders because this being works tender.**

10. अखंडता समझौता / INTEGRITY PACT: Not Applicable to this tender.

11. वैधता अवधि / VALIDITY PERIOD:

11.1 Bids / Offers shall remain valid for a period of not less than **150 Days** after the deadline date of submission.

11.2 Techno-Commercially accepted bidder shall be given opportunity to accept validity as per the tender in case of shorter validity quoted by him. Non-acceptance thereafter the bid shall be rejected by MDL as non-responsive.



- 11.3 In exceptional circumstances, prior to expiry of the original validity of offer(s), the bidders will be requested to extend the period of offer validity for a specified additional period.
- 11.4 In case the day up to which the bids are to remain valid falls on/ subsequently declared a holiday or closed day for MDL, the bid validity shall automatically be deemed to be extended up to the next working day.
- 11.5 In case techno-commercially accepted offer of the bidders than in exceptional circumstances, prior to expiry of the original validity of offer(s), MDL shall request the bidders to extend the period of offer validity for a specified additional period.
- 11.6 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.
- 11.7 If the bidder who has not agreed to extend their offer validity found to be L1 then his price shall be used as reference price for negotiation purpose as applicable.

12. निविदाएँ खोलने की प्रक्रिया /OPENING OF BIDS:

- 12.1. **Part-I (Techno-commercial Bid):** **Part-I bid will be opened online on the due tender** opening date from 14:30 Hrs onwards in OTS-TS Section, OTS-Dept. The bidder can view the tender online by logging their user ID on the portal <https://eprocuremdl.nic.in>
- 12.2. **Part-II (Price Bid):** After completion of Techno-Commercial scrutiny, intimation for opening of Part-II bid will be communicated only to Techno-Commercially accepted bidders. Such intimation may be given at a short notice by E-mail or even by telephone, only to the Techno-Commercially qualified bidder(s). The bidders can view the price bids online from their location by logging on to the portal <https://eprocuremdl.nic.in> with their Class-III B digital signature certificate.

13. बोलियों का मूल्यांकन/EVALUATION OF BIDS:

- 13.1. The Bidders should meet the criteria as stipulated in "Prequalification criteria" and submit all documents as stipulated in Clause "Techno-Commercial (Part-I) Bid"
- 13.2. The Price bid of only Techno-Commercially qualified bidders shall be opened.
- 13.3. 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 Contractor or the Service provider, including all elements of costs, duties, levies, freight, insurance etc. excluding GST (where ITC is available).
- 13.4. The applicable loading towards deviations shall be loaded for ranking purpose.
- 13.5. 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 have to be considered after the said bidder is adjudged as L1.
- 13.6. Instances of multiple L1s: In cases where multiple bidders emerge as L1, the following action in the order of sequence shall be followed
 - 13.6.1 Offline sealed supplementary bids indicating discount offered over already quoted price shall be sought from such L1 bidders on a pre-determined date and time. The sealed supplementary bids shall be opened by tender opening executives in presence of representatives of those bidders on pre-determined date and time.



13.6.2 In case the above option is inconclusive, lottery option to be exercised.

13.7. Negotiations will be done with L1 bidders.

13.8. However, Purchase Preference in line with PUBLIC PROCUREMENT POLICY (Preference to Make in India) ORDER 2017 shall be extended to Class I Local Supplier. Order shall be placed accordingly on offered/negotiated price with such Class I Local Supplier, if the offered/negotiated price is acceptable to MDL

13.9. In case Purchase Preference is not applicable, the Order shall be placed on Lowest bidder (L1) in case the offered/negotiated price of L1 bidder is acceptable to MDL.

14. बोली अस्वीकृति करनेकी मापदंड /BID REJECTION CRITERIA:

14.1. The Following conditions/deviations are non- negotiable and therefore any bid falling under these conditions/ deviations shall be summarily rejected. Bidders to note that they shall not be provided any opportunity to rectify these conditions/ deviations post bid opening:

14.1.1. Bids received after tender closing date and time.

14.1.2. Bids received other than through e-portal.

14.1.3. Bidders who are debarred under Public Procurement Policy (PPP) Make In India (MII) order 2017, GeM, CPPP including Tender holiday issued by MDL.

14.1.4. **Bids received without EMD (other than those who are exempted from payment of EMD).**

14.2. Non-compliance/non-acceptance to any of the terms and conditions of the tender shall render the bid liable for rejection;

14.3. Equal time and opportunity for submission of deficient techno-commercial documents and clarification shall be given to the bidder's subject to **TEF clause no:5.1** Note-s.no. i & ii. Bidders are required to submit such documents / clarifications within the duration / date stipulated by MDL failing which their bids are liable for rejection.

14.4. **DISQUALIFICATION:** Even if a bidder meets the tender terms and conditions including prequalification criteria, he shall be subject to disqualification if he is found to have:

14.4.1 Made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and/ or;

14.4.2 On account of currency of debarment by MDL.

15. बेसलाइन शेड्यूल और प्रभावित शेड्यूल /Baseline Schedule and Impacted Schedule

15.1. The Contractor to submit Baseline Schedule in MS Project, duly approved by EIC/ Consultant, before commencement of Project. In case of additional work, revised schedule to be submitted by the Contractor.

15.2. Extension of Time Period shall be considered for delays not attributable to the Contractor only for the activities identified in the baseline schedule/ revised schedule. No Extension to the Contract shall be considered in case of failure of submission of Baseline Schedule and Impacted Schedule.

15.3. Construction Drawings for any activity identified in the baseline schedule will be issued 60 days prior to start date of that activity.

15.4. Contractor shall notify the Consultant/MDL in writing at least 15 days in advance for any drawings/ sketches/ detailing required during execution of the work at site.

16. समापन अवधि /DELIVERY PERIOD/COMPLETION SCHEDULE:



- 16.1 The overall time period for completion of the work from the date of placement of Work order is **06 (Six)** months excluding 21 days' mobilization period.
- 16.2 The successful bidder shall submit detailed bar chart/work schedule including activity, milestones, deployment of resources/manpower for execution of the work within 21 days after placement of the Purchase Order.

17. लामबन्धी /MOBILIZATION: The Contractor shall deploy his manpower, material & machinery within 21 (Twenty-One) days from Placement of P.O.

18. मूल्य निर्धारण /PRICING: All materials shall be procured by the contractor as specified in the Technical Specification/Bill of Quantities, at his own cost and the price quoted shall be deemed to be inclusive of all applicable taxes, transportation, storage, royalties, handling, etc. The contractor should produce challans / Invoices of the materials and its quantity brought to the site as and when required by MDL.

19. कर और शुल्क /TAXES AND DUTIES:

- 19.1. GST as per GST Laws shall be payable extra as quoted and agreed.
- 19.2. In case of purchases of goods/services from unregistered dealers under GST Laws, GST will be paid by MDL under reverse charge mechanism.
- 19.3. Benefits from reduction in rate of tax/ITC are required to be passed on to consumer. Where "applicable GST" has been quoted as extra, Goods and service providers (except un-registered dealers under GST Law) have to submit declaration that they have complied with 'Anti-profiteering clause' under GST Law. Such declaration be given in technical bid.
- 19.4. If the vendor is registered under GST, vendor shall mention the HSN code for goods &/or SAC for services in their tax invoice, etc. These codes must be in accordance with GST Laws and responsibility of specifying correct HSN codes for goods &/or SAC for services is that of the vendor. MDL shall not be responsible for any error in HSN code for goods &/or SAC for services specified by supplier / contractor. Supplier /Contractor shall pay penalty and/ or interest imposed on MDL or any loss due to delay in availing ITC by MDL or any loss of ITC to MDL due to errors by vendors at any stage. MDL reserves right to recover any such interest, penalty or loss from any amount due to Supplier /Contractor or otherwise.
- 19.5. In case, MDL is unable to avail ITC, supplier/contractor at their own cost shall rectify the shortcoming in the returns to be filed immediately thereafter. Further, if the ITC is delayed / denied to MDL / reversed subsequently as per GST Laws due to non / delayed receipt of goods and / or services and / or tax invoice or expiry of timelines prescribed in GST Laws for availing ITC, non-payment of taxes or non-filing of returns or any other reason not attributable to MDL, Supplier /Contractor shall pay any loss of amount along with interest and penalty on MDL under GST Laws for the number of days the ITC was delayed. If the short coming is not rectified by supplier/contractor and MDL ends up in reversal of credits and / or payments, supplier /contractor is fully liable for making good all the loss incurred by MDL. MDL reserves right to recover any interest, penalty or loss from any amount due to Supplier /Contractor or otherwise.
- 19.6. If the vendor is registered under GST, the GST registration number (15 digit GSTIN) issued by GOI shall be mandatorily provided by the vendor. Vendor having multiple business verticals within state / at multiple states with separate GST registration



numbers shall forward GSTIN of only that vertical which is involved in supply of goods and/or services. MDL GSTIN is 27AAACM8029J1ZA and vendor shall mention the same while invoicing and avoid any data entry error on GST portal.

- 19.7. If the vendor is registered under GST, Vendor shall ensure timely submission of invoice as per the provisions / requirement / timeline promulgated by GOI in relation to GST Law with all required supporting documents to enable MDL to avail input tax credit promptly. The vendors invoice inter alia should contain GSTIN of vendor, GSTIN of MDL (i.e. 27AAACM8029J1ZA), GST tax rate separately, HSN code wise goods or services, place of supply, signature of vendor, etc. Original invoice needs to be submitted to Bill Receipt Centre at MDL gate, and a copy of the invoice should be given to the goods receiving section (GRS).
- 19.8. If the vendor is registered under GST, vendor shall file all applicable returns under GST Laws in the stipulated time & any losses of tax credit to MDL arising due to delay in filing will be recovered from their invoice wherever MDL is eligible to avail tax credit. Any default towards payment of tax and / or uploading of monthly returns by supplier/contractor, MDL retains right to withhold payments towards tax portion until the same is corrected & complied by the supplier/contractor with the requirement of GST along with satisfactory evidence.
- 19.9. The rate sheet enclosed with the tender will indicate the rates to be entered under each head wherever applicable. Bidders must clearly mention the applicable Taxes & Duties unless otherwise stated in tender. The item-wise rates (i.e. Basic +P&F+F&I) quoted in the Rate Sheet should exclude Taxes & Duties. 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. The GST will be applicable on total basic rate of each item (i.e. Basic + P&F + F&I).
- 19.10. **Stamp Duty:** It shall be incumbent on the Contractor to pay Stamp duty on the contract. As per the provision made in article 63, Schedule-I, read with section 30, of the Maharashtra Stamp Act (Bombay Act LX of 1958), Stamp duty is payable by the Contractor for “works contract” that is to say, a contract for works and labour or services involving transfer of property in goods (whether as goods or in some other form) in its executions and includes a sub-contract, as under:

Contract Value	Stamp Duty
a. Where the amount or value said forth in work contract does not exceed ₹10 Lakhs.	₹500.00
b. Where it exceeds ₹10 Lakhs	₹500.00 +0.1% of the amount above ten lakhs subject to maximum of ` 25 lakhs.

Note: The Stamp Duty is applicable on Base value excluding GST.

- 19.11. Bidder(s) will not be entitled to any increase in rate of taxes occurring during the period of extended delivery schedule, if there is delay in supply / completion attributed to him. However, if there is a decrease in taxes, the same must be passed on to MDL.



- 19.12. Wherever all-inclusive prices are quoted by the Bidder(s) without bifurcation of tax elements, no Price Variation can be considered in respect of any variations in statutory levies arising subsequently because of the absence of the required base figures in the purchase order / contract.
- 19.13. Taxes and other levies shall be deducted at source, wherever applicable, from the invoices of the Contractor/Bidder as per statutes.
- 19.14. Any increase/decrease in taxes, duties & levies or introduction of new taxes due to change in the legislation shall be subject to adjustment During currency of the original contract period.
- 19.15. **LABOUR CESS:** Deduction towards Labour Cess shall be made from invoices of contractor in line with 'Building & Other Construction Workers (BOCW) Act, 1996. The Contractors who are having 20 or more workers have to be registered under BOCW (RE& CS) Act, 1996. The Contractor shall ensure compliance of the same, if applicable to them.

20. भुगतान की शर्तें /TERMS OF PAYMENT: MDL Payment terms shall be as under

- 20.1. The payment for work done after reducing any deductibles and/or the amount leviable towards liquidated damages, if any and after including statutory taxes, duties and levies as applicable will be made through RTGS/NEFT/ECS as per the actual quantities of the work executed by way of running account invoices per item basis (R. A.) Preferably as on monthly basis.
- 20.2. The invoices must be submitted in four copies **(1-Original + 3 copies)** along with the joint measurements taken at site duly approved by the designated representatives of the Technical Services department.
- 20.3. The payment against invoices will be made within 15 days of its receipt in MDL provided submission of invoice in totality along with all the necessary documents as under:
- 20.3.1 Invoice Certification as per **Enclosure-24**,
- 20.3.2 Joint Measurement sheets duly signed & stamped by MDL,
- 20.3.3 Soft copy of Joint Measurement sheets.
- 20.3.4 SAP generated work completion certificate indicating deduction if any duly signed & stamped by MDL
- 20.3.5 Copy(s) of invoices of materials,
- 20.3.6 Vendor's self-Declaration (Refer Clause 20.1.6) wherever applicable,
- 20.3.7 Certification of Disposal of Scrap/ Debris as per **Enclosure-28**
- 20.3.8 Before submission of the final bill, the Contractor should sign and submit the following:
- Actual Local Content Certificate as per Enclosure-10 (D)
 - A "No Claim Certificate" indicating that he has no claim against the company under the contract except as included in the final bill.
 - Taking over certificate issued by Engineer In charge, MDL
- 20.3.9 On request from Contractor, ad-hoc payments of not less than 75 % of eligible running account bill/due stage payment, shall be made within 10 working days of the submission of complete bill along with all applicable documents. The remaining payment is also to be made after final checking of the bill within 28 working days of submission of complete bill along with all applicable documents by the contractor.
- 20.3.10 **Electronic Invoicing System (EIS):** In any preceding financial year from 2017-18 onwards Contractor whose turnover is more than **₹ 5 Crores** on



award of Purchase order, need to issue E invoice to MDL, which has an Invoice Registration Number (IRN) and a Quick Response (QR) code. An invoice without an IRN and QR code will be treated as an invalid invoice and MDL will not be entitled for Input Tax Credit (ITC)/ GST on a vendor Invoice which is not compliant with the above invoice notification.

- 20.3.11 **Vendor's self-declaration:** Wherever GST is applicable, payment will be released against **e-Invoice** (refer **TEF Clause No. 22.1.5**) or Invoice accompanied with **Vendor's self-declaration** stating that " **we do not fall under the category of registered persons notified under Rule 48(4) of the Central GST Rules, 2017 and we are not required to comply with the e-Invoicing provisions under GST Act, as our aggregate turnover in any preceding financial year from 2017-18 onwards has not exceeded ₹ 5 Crore as per GST Act**"

20.3.12 **Alternate MSME vendor payment through TReDS:**

In order to address the financial needs of MSME firms, GoI has introduced a platform for facilitating the financing of trade receivables of MSMEs from buyers, through multiple financiers which is termed as Trade Receivables Discounting System (TReDS). At TReDS, auctioning of invoices at competitive & transparent environment is done by financiers based on Buyer's credit profile.

MDL is registered on the "Invoicemart" TReDS platform and M1xchange of M/s Mynd Solutions Pvt. Ltd. Further, MDL has entered into an agreement with M/s.Receivables Exchange of Indica Limited (RXIL) for registration on TreDs platform. As a special gesture, all the above three discounting platforms i.e M/s.RXIL, Invoice Mart and M1Exchange have offered waiver of registration / on boarding fees to MDL Vendors
MSME bidders desirous to receive payments through TReDS platform may avail the facility if they are already registered on

1. "Invoicemart" TReDS platform or by registering on it.

Contact details at "Invoicemart" TReDS platform are as below:
022 6235 7373 and a new mail id service@invoicemart.com.

2. "M1xchange" TReDS platform or by registering on it.

Contact details at "M1xchange" TReDS platform are as below:
+91 9920455374 Ms. Ashwathi Jayandran

email id ashwathi.jayandran@m1xchange.com
+91 8839915724 Ms. Prinyaka Shah Email id prinyaka.shah@m1xchange.com

21. वृद्धि/PRICE VARIATION: Not Applicable for this tender

22. परिनिर्धारित हर्जाना /LIQUIDATED DAMAGES:

- 22.1. Time is the essence of the contract and therefore the job, as ordered, should be completed on the dates mutually agreed upon in accordance with the delivery schedule. In cases of delay not attributable to MDL beyond the agreed schedule, the Contractor shall pay liquidated damages, a sum representing 0.5% (Half percent) per week or part thereof, subject to maximum of 10% of the contract value (completed value).



22.2.If the Contractor fails to complete the works within the time or extended time as per the Order, then the contractor shall pay to MDL the sum stated above as liquidated damages for such default and not as a penalty for every day or part of a day which shall elapse between the time prescribed or extended time as the case may be and the date of completion of works. MDL may without prejudice to any other method of recovery deduct the amount of such damages from any monies in his hands due or which may become due to the contractor. The payment or deduction of such damages shall not relieve the contractor from his obligation to complete the works or from any other of his obligations and liabilities under the contract.

23. दोष दायित्व अवधि/DEFECT LIABILITY PERIOD (DLP):

- 23.1.The defect liability period shall be **01 Year** from the date of actual completion of entire work.
- 23.2.The contractor shall have to rectify any defects noticed in the work either by way of bad material or workmanship during the Defect Liability Period at no extra cost to MDL, on priority.

24. CLAIMS BY FIRMS: No claims by the firms will be entertained after 03 years from completion of Defect Liability Period.

25. अनुबंध निष्पादन गारंटी /CONTRACT PERFORMANCE GUARANTEE

25.1.Within 25 days after placement of order, the Contractor shall submit “PERFORMANCE BANK GUARANTEE” as per MDL format at **Enclosure-16** for 10% of contract value excluding taxes valid till 60 days beyond the stipulated Defect Liability Period of three years from actual completion of entire work.

25.2.In case of increase in the Contract Value during execution of work: -

- i. In case of Contract value increases more than 10% during execution of the work, within 25 days after issue of Amendment of Purchase order, the contractor shall submit the additional “PERFORMANCE BANK GUARANTEE” of 10% of additional contract value excluding taxes valid till 60 days beyond the stipulated Defect Liability Period of three years from actual completion of entire work.
- ii. No additional Bank Guarantee for amended value upto 10% of Original Order Value is required

25.3.The Bank Guarantee shall be submitted by the bidders preferably in E-BG mode or through SWIFT drawn in favour of MAZAGON DOCK SHIPBUILDERS LIMITED, MUMBAI. The Bank Guarantee shall be only from the list of Banks issued by a Scheduled Commercial (i.e. Indian or Foreign Banks included in the Second Schedule of Reserve Bank of India Act, 1934 excluding Co-operative banks or Regional Rural Banks). The Issuing Bank Notified vide OM No.F.9/4/2020-PPD issued by Department of Expenditure dated 30.12.2021 should also state the name and designation of the next Higher Authority of the Officials who have issued the Bank Guarantee. Crossed DD / Pay Order issued by Co-operative banks however may be considered to be accepted and the bid would be considered accordingly.

25.4.The Bank Guarantee shall be from banks as per list approved by SBI Bank published on MDL website. Bank Guarantee from banks not mentioned in the aforesaid approved list shall NOT be accepted.



25.5.Rolling Bank Guarantee towards Performance Security can be submitted with the validity period of at least three years with a claim period of three months within which the same to be extended by the contractor for further period by Amendment.

25.6.In case of non-submission of PBG within 25 days of Placement of Purchase Order, there is likelihood of cancellation of the order.

25.7.In case of delays in submission of the Performance Bank Guarantee, the amount towards the Bank Guarantees shall be retained from the subsequent Invoice. The same shall be returned to the Contractor, without interest, on submission of the Bank Guarantee and receipt of confirmation from the bank. In such case, MDL reserves the right to charge Interest @ SBAR+2% from the firm for such period of delays.

25.8.The Performance Bank Guarantee will be returned only after expiry of the 60 Days beyond the stipulated Defect Liability Period of three years from actual completion of entire work, provided there are no pending defects for rectification, already notified to the contractor. However, in cases where rectification of defects notified are not likely to be completed by the Contractor before expiry of the DLP, the Contractor will have to extend the Performance Bank Guarantee suitably or as requested by MDL.

25.9.The BG's should contain the following:

- i. The name, designation and code number of the Bank officer(s) signing the Guarantee.
- ii. The address and other details (including telephone No.) of the controlling officer of the Bank issuing the BG.

25.10.In case the validity of the Bank Guarantee is on the verge of expiry and the same is not the extended /not renewed by the contractor as per order terms, MDL reserves the right to forfeit the same.

26. जलरोधी गारंटी /WATERPROOFING GUARANTEE- (Not Applicable to this tender)

27. जल रिसाव के खिलाफ बैंक गारंटी/ BANK GUARANTEE AGAINST WATER LEAKAGE- (Not Applicable to this tender).

28. बीमा / INSURANCE:

28.1.The Contractor has to keep MDL indemnified against any claims by purchasing **CONTRACTOR ALL RISK** insurance policy for the value of the Contract from any Insurance Company of repute.

28.2.The policy shall be obtained in the **joint names of MDL and the Contractor**, with MDL's name appearing first. The Policy should be of full value of the Contract and shall be valid till the completion of the works. Contractor shall submit the policy within 21 days from the date of placement of order or before commencement of work whichever is earlier. The Original CAR Policy shall be deposited with Engineer in Charge and copy to be submitted to HOD (OTS) and shall be extended well in time as required.



28.3. In case Contract value increases more than 10% from Original Contract value during execution of the work, the contractor shall submit the additional **“CONTRACTOR ALL RISK** insurance of additional contract value.

28.4. The original of policy shall be lodged with MDL.

28.5. In case Contractor fails to submit valid CAR policy of full value of contract, their workmen shall not be allowed to enter inside MDL premises/ working areas and Engineer-In-Charge may issue prior Notice for Stoppage of work.

29. ठेकेदार का दायित्व /CONTRACTOR'S OBLIGATION:

29.1. Bidder shall abide by all Terms of Tender Enquiry (TEF), General Conditions of Contract (GCC) for Civil Works and respective acceptance formats **are to be filled as appearing online in e-Techno-Commercial (Part-I) bid**. The bidder shall also abide by the statutory requirements, Official Secret Acts 1923, Safety Code and Security Procedure, which can be downloaded from www.mazagondock.in → Tenders → Technical Services.

- i. The Contractor shall pay to his employees not less than the minimum wages and other statutory obligations applicable to the Engineering Industry as notified from time to time **by the Central Government or the State Government whichever is higher** under Minimum Wages Act.
- ii. The Contractor shall be responsible for timely payment of wages of all his employees engaged in the Purchaser's Yard, not less than the prescribed minimum wages in each case and without any deductions of any kind, except as specified by Government or permissible under the Payment of Wages Act.
- iii. The Contractor must settle all the pending dues of the employees i.e. arrears of wages, proportionate leave wages, proportionate bonus payment, etc.
- iv. Before winding up the site, the Bidder / Contractor shall pay all terminal dues to his employees such as Notice pay, Gratuity, Retrenchment compensation, etc.

29.2. **Breach of Obligation with respect to Bid submitted:** 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 the Purchaser during the period of bid validity.

30. नियम और शर्तों की स्वीकृति/ACCEPTANCE OF TERMS AND CONDITION:

In case of improper on-line filling of Acceptance Formats for Tender Enquiry Form, General Conditions of Contract (GCC), it shall be presumed that all our tender terms & conditions are acceptable to bidder.

31. कार्य एवं माप का क्रियान्वयन /EXECUTION OF WORK AND MEASUREMENT:

31.1. All works shall be carried out and measured as per specifications and standard Engineering practice and mode of measurements, conforming to the relevant IS code. The Contractor shall ensure that skilled workmen in their respective trades are employed. He shall also employ qualified Engineer(s) / Supervisor(s) experienced in similar type of work, as required, for execution of work efficiently.



- 31.2. Request for permission for working on Saturday / Sunday / holidays if required, should be submitted 3 working days prior to the date of holiday, to Personnel department and Security through Technical Services Department.
- 31.3. The work is to be carried out in the area where MDL's normal activities are in progress. The Contractor has to plan his work in such a way as not to disturb the normal activities of MDL. The contractor shall not be paid for any compensation for idle period if generated due to any reason whatsoever. Reasonable extension in time, however, may be considered on application in writing along with supporting Documents.
- 31.4. All the quantities indicated in the Bill of Quantities are indicative only. However, the Contractor shall be paid for the actual work carried out at site in line with the Contract terms and conditions.
- 31.5. All the works under or in course of execution or executed in pursuance of the contract shall at all times be open to inspection and supervision of the MDL and the Contractor at all times during the usual working hours, offer assistance for the inspection of work. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.
- 31.6. The Contractor shall submit supporting documents such as Invoice of Materials, Delivery Challan(s), Release note from the nominated Inspection Agency, Test reports / Certificates, Packing Lists, Invoice, Performance Guarantee, Storage / Preservation / Installation / Commissioning / Maintenance Procedures & other Technical documentation in requisite sets as relevant along with the invoice for the purpose of certification by MDL.
- 31.7. The contractor shall give seven days' notice for MDL to arrange representatives for inspection at their works. Testing of samples shall be made in the presence of MDL representatives. Materials shall be delivered to MDL site only after clearance from MDL along with test certificates. MDL reserves the right to take random samples from materials delivered by the Contractor at site and send the same for testing at Govt. approved laboratory(s). Cost towards the same shall be borne by the Contractor.
- 31.8. Contractor shall arrange for equipment's / instruments with valid calibration certificate as required at site. The cost towards the same is deemed to be included in the quoted rates.
- 31.9. The Contractor shall comply with the sanitary requirements of the local Medical Health Authorities and bear the cost of any charges levied by such Authorities for the execution of work.

32. अनुबंध की निगरानी/MONITORING OF CONTRACT:

- 32.1. The Contractor shall record; submit to the Engineer daily, progress report for the preceding day showing up to date progress and progress during the previous day on all items of each section of the works in relation to and in consideration of the schedule. In addition, the Contractor shall submit on the second day of every fortnight, a detailed progress report giving the progress of the works during the preceding fortnight and also indicating the up to date progress of the work.



- 32.2. The Contractor shall appoint the Contractor's Representative with prior written approval from the MDL and shall give him all authority necessary to act on the Contractor's behalf under the Contract.
- 32.3. The Contractor shall not, without the prior consent of the MDL, revoke the appointment of the Contractor's Representative or appoint a replacement.
- 32.4. The Contractor's Representative shall, on behalf of the Contractor, receive instructions from MDL.
- 32.5. The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at any time revoke the delegation. Any delegation or revocation shall not take effect until the Purchaser has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked. The Contractor shall appoint a team of qualified persons having adequate experience in execution of such works for assisting the Contractor's Representative.
- 32.6. The Contractor has to co-ordinate with the other specialised agencies so working on the project so as to ensure a proper end product of the work.

33. (A) ठेकेदार का दायरा/CONTRACTOR'S SCOPE:

- 33.1. All the equipment, necessary support machines and manpower viz. Slings, Rigger, Lifting Jig, Loader/Unloader, Hydra, Forklift, etc. shall be arranged by the Contractor.
- 33.2. All the steel required for fabrication has to be procured by contractor conforming to appropriate Indian Standard or equivalent standard.
- 33.3. All the equipment required for installation of gate operating winch including Floating Crane/Mobile Crane, travelling tracks or beams to be procured by contractor, conforming to appropriate Indian Standard of equivalent standard.
- 33.4. All consumables like welding electrodes, gases, grinding machine, welding machines, Gas cutting set are to be arranged by contractor.
- 33.5. Welders qualification to be carried out in presence of TPEA and to prepare the test coupons as per welding specifications.
- 33.6. The contractor shall have to depute a qualified Engineer at site to control, supervise labours & be responsible for execution of job with all safety measure for men, materials & machines & to co-ordinate & follow-up as well as maintain a progress report of work & report the weekly status of work to SB-Maintenance dept.
- 33.7. All the scaffolding required for the erection work will be in contractor's scope of work.
- 33.8. The contractor shall be responsible for getting approval by TPEA by providing all the details / clarifications before starting the work.
- 33.9. The supplier shall on completion of work at his own expense restore, reinstate or make good the surfaces of all ground disturbed by his operations; shift any scrap material, rubbish material to the designated places in MDL. Surplus materials will also to be removed from site & leave the site clean to the satisfaction level of MDL executive.
- 33.10. Contractor will have to obtain all the necessary statutory approvals (if any).
- 33.11. It is to be noted here that, MDL's scope of supply is defined below; all other things required to undertake & successful completion of this job shall be arranged by the contractor only.



32(B) MDL का दायरा/MDL's Scope of Supply (Free of Cost):

- a. Electrical supply of 440 & 230 Volts, 50 Hz shall be provided by MDL at pre-designated place.
- b. Compressed air (at 4 bar) required for grinding, welding, chipping etc. shall be provided by MDL at pre-designated place.
- c. Drinking water supply shall be provided by MDL at pre-designated place.

34. अतिरिक्त कार्य /EXTRA ITEMS/VARIATION IN QUANTITY:

- 34.1. Extra items of works, if any, shall be determined supported by a rate analysis on the following basis this needs to be submitted by the contractor the rate analysis shall contain bifurcation of material, labour, transportation and Overhead & profit components:

i. Rates derived from similar items of this Contract.

OR

ii. Rates for similar items of work executed through other agencies for MDL recently.

OR

iii. Rates mutually agreed to.

- 34.2. Variation in the quantities of items in the BOQ is permitted at the same rates provided the total value of the growth does not exceed 25% of the original order value. The same is binding to the contractor and the contractor shall execute the same at the specified rate in the Purchase Order for that item.

- 34.3. MDL reserves the right to conduct price negotiations with the Contractor in the following cases:

i. Finalization of rates for extra items.

ii. To seek reduction in the unit rates of the items for the excess quantity, if the total value of variation in quantities exceeds 25% of the original order value

35. बाधा / HINDRANCE:

- 35.1. A Hindrance Register as per attached format at **Enclosure-22** shall be maintained with the Designated Representative from TS Department. The Contractor shall submit schedule for completion of work and get it signed by MDL Engineer in charge of the project. The Schedule shall list out the major milestones leading to the completion of work as per final delivery date stipulated in the PO/Contract.

- 35.2. The Hindrance Register shall document the following aspect post placement of the PO/ Contract: -

- i. Reasons for the delay vis-à-vis the mutually agreed schedule
- ii. Delay in inputs (Drawings/ Documents/ Site Clearances/ Services/ Inspection Call)
- iii. Delay by Inspection Agency/ Customer
- iv. Delay on account of specialist services
- v. Non-performance by the Contractor
- vi. Delinquency by the vendor
- vii. Force Majeure
- viii. Any other relevant reason

- 35.3. All the hindrances with date of occurrence and removal are to be noted in the hindrance register. The Hindrance Register will be signed by the Designated



Representatives from Technical Services Department (MDL) and the authorized Signatory from the Contractor side.

- 35.4. The Contractor may record their observations in the hindrance register. Any objections raised by the contractor shall be attended to and resolved without any delay.
- 35.5. In case the contractor has a different opinion for hindrance and a dispute arises, then the matter shall be referred to next higher authority in MDL and the decision shall be communicated to the Contractor within 15 days. The Contractor shall note that the decision of the next higher authority from MDL in case of dispute in respect of hindrances during the course of executing an order/ contract shall be final and binding on the contractor.
- 35.6. In case, MDL is unable to remove the hindrance immediately and if it is likely to take some time, the contractor shall be informed accordingly by the user. In such cases the contractor on MDL's approval may reduce manpower deployed on the work. **The Contractor shall also note that Under no circumstances Contractor shall be paid for idle manpower.**

36. कचराहटाना /DEBRIS REMOVAL/ स्वच्छता/HOUSEKEEPING:

- 36.1. Debris generated during execution of work shall be promptly disposed off outside MDL. The site will be maintained clean at all times and the Contractor is expected to budget for the same. Also, during dignitary visits, temporary works materials, debris etc. shall be shifted suitably without any additional cost to MDL.
- 36.2. In case debris is not removed within two days, MDL will remove the same and the charges towards debris removal @ Rs. 10,000/- per truck shall be deducted from Contractor's RA bills. Engineer-In-charge shall keep the record of the same and forward the details of recoveries in Invoice Certification.
- 36.3. The site will be maintained neat and clean at all times and the Contractor is expected to budget for the same. MDL has Designated Bins separately for Scrap Steel, Wood Scrap & Rubbish. Contractor shall segregate unusable scrap steel, wood, rubbish, if any, and deposit the same in the nearest respective bin.
- 36.4. The contractor to submit Certification of Disposal of Scrap/ Debris as per **Enclosure-28**

37. सुरक्षा और प्रशिक्षण /SAFETY AND TRAINING:

- 37.1. During the Construction Period, Safety Engineers shall be deputed on site as and when required and directed by MDL. This is mandatory requirement.
- 37.2. All the workers, Engineers of the contractor shall have Safety PPE's (Personnel Protective Equipment's) like Safety Helmets, Safety Shoes, Safety Belts, Hand Gloves, and Goggles etc. Contractors shall also have provision for minimum 5 to 10 visitors PPE's. The periphery of the building shall be covered with the Green net. The contractor shall also provide Safety net and Safety Belts for height work.
- 37.3. All workers on site shall adhere to the best safety practices applicable. All personal, process & material safety procedures shall be planned & implemented on site. Training & regular inspection shall ensure that safety standards are met.



- 37.4. First Aid kit & First aid training shall be given to all key members of the Site team.
- 37.5. Proper signage's shall be placed on site. Warning in case of any critical/hazardous activity shall be given prior to starting of such activity.
- 37.6. All workers, supervisor's contractor shall optimum training regarding all aspects of site management prior to commencement of work
- 37.7. Please refer Safety Instruction for sub Contractor's as Enclosed at Annexure 'A'.

38. ठेकेदार के कर्मचारियों का पुलिस सत्यापन /POLICE VERIFICATION OF CONTRACTOR's EMPLOYEES: The Contractor shall have to obtain Police Verification Report (PVR) of their Employees prior to deployment at MDL site for execution of the work. A Detailed procedure for Entry Passes for Contractor's Employees is displayed on MDL's website www.mazagondock.in → Tenders → Technical Services. In addition to this for loss of pass, bidders shall refer **Enclosure-23. BIDDERS ARE REQUESTED TO NOTE THE SAME. NO RELAXATION SHOULD BE ASKED FOR.**

39. प्रतिबंध निविदाकार/फर्म/विक्रेता/BANNED OR DE-LISTED TENDERER/FIRMS/ VENDORS:

The Bidder / Contractor declares that they being Proprietors / Directors / Partners have not been any time individually or collectively blacklisted or banned or de-listed by any Government or quasi Government agencies or PSUs. If a Tenderer's entities as stated above have been blacklisted or banned or de-listed by any Government or quasi Government agencies or PSUs, this fact must be clearly stated in the prescribed format **online** at **Enclosure 11**. Filling the information in the said format is Mandatory for every Tenderer. MDL reserves the right to ask for additional information and right to accept /reject the bid.

40. मूल्य वरीयता /PRICE PREFERENCE: NO PRICE PREFERENCE SHALL BE GIVEN TO ANY BIDDER IRRESPECTIVE OF THEIR STATUS.

41. सार्वजनिक खरीद नीति (मेक इन इंडिया को प्राथमिकता) आदेश 2017/PUBLIC PROCUREMENT POLICY (Preference to Make in India) ORDER 2017:

The Government of India has issued revised Public Procurement (Preference to Make in India) order 2017 on 19th July 2024 as part of its policy to encourage "Make in India" and promote manufacturing and production of goods and services in India with a view to enhancing income and employment. Subject to the provisions of this order and to any specific instructions issued by Nodal Ministry or in pursuance of this order, Purchase Preference shall be given to local suppliers in all the procurements undertaken by MDL in the manner specified below:

- 41.1 **Aspects of 'Preference to Make in India':** The following terminology / definitions used in the policy is enumerated below and applicable to the tender:
- i. **Local content:** means the amount of value added in India which shall be the total value of item (goods, services or works or their combination) under procurement (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value in percent. Different definition of local Content may be specified by the Nodal Ministry for items assigned to them which will prevail over above.

Note:



- a) The local content can be increased by vendors through partnerships, cooperation with local companies, establishing production units in India or Joint Ventures (JV) with Indian suppliers, increasing the participation of local employees in services and training them.
- ii. **Class-I Local Supplier**: means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-I Local Supplier' under this Order.
- iii. **Class-II Local Supplier**: means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-II Local Supplier' but less than that prescribed for 'Class-I Local Supplier' under this Order.
- iv. **Non-Local Supplier**: means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than that prescribed for 'Class-II Local Supplier' under this Order.
- v. **Minimum Local Content**: The 'Local Content' requirement to categorize a supplier as 'Class-I Local Supplier' is minimum 50%. For 'Class-II Local Supplier', the 'local content' requirement is minimum 20%.
- vi. L1: means the lowest tender or lowest bid or lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.
- vii. Margin of Purchase Preference: means the maximum extent to which the price quoted by a Class-I Local Supplier may be above the L1 for the purpose of purchase preference. The margin of purchase preference shall be 20%.

Note:

- 1. Procedure for determination of L1 price for the purpose of deciding eligibility for Purchase Preference shall be as per tender Ranking criteria.
- 2. If Price/s of all Class I Local Supplier/s is more than 20% of L1's price, no purchase preference shall be applicable.

41.2 Purchase Preference (PP):

40.2.1 Subject to the provisions of the Order and to any specific instructions issued by the Nodal Ministry or in pursuance of the Order, purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified here under:

In the procurements of goods or works, which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

- a) Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
- b) If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and



the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.

- c) In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.
- d) "Class-II local supplier" will not get purchase preference in any procurement, undertaken by procuring entities.

41.3 Reciprocity Clause:

- i) Entities of countries which have been identified by the nodal ministry/ department as not allowing Indian Companies to participate in their Government procurement for any item related to that nodal ministry shall not be allowed to participate in Government Procurement in India for all items related to that Nodal Ministry/ Department, except for the list of items published by the Ministry/ Department permitting their participation.
- ii) The term 'entity' of a country shall have the same meaning as under the FDI policy of Department for Promotion of Industry and Internal Trade(DPIIT) as amended from time to time.

41.4 Declaration/ Verification of Local content

- i) Participating bidders to indicate the percentage of local content (i.e. value added in India) along with the details of location/s where the local value addition is made, in their bids, item wise or tender wise. The indicated local content percentage shall decide categorization of the vendors as "Class-I Local Supplier" / "Class-II Local Supplier" / "Non-local Supplier". All bidders should declare that the item and service offered meets the minimum local content & indicate its percentage in their offer which shall meet or excel required local content specified in tender. This declaration is necessary even if Custom Duty Exemption and / or ERV (if applicable) are not being sought. Certification as under is to be submitted mandatorily in technical Offer-Part-I bid.

The bidders shall provide a certificate, as per **Enclosure-10(A)**, from statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of supplier other than companies) giving the percentage of local content.

- ii) **Bidders to be noted that once the declaration / certification is committed at tender submission stage, the same cannot be altered subsequently at technical negotiation stage or after award of contract otherwise would be treated / considered as false declaration by bidder and necessary action shall be initiated as per Para 40.6 of the said Order for debarment.**
- iii) Declared Local Content shall be the basis for categorization of the vendors and tender evaluation. However, MDL reserves the right to undertake detailed examination of declared local content and may call vendor to submit relevant documents.
- iv) In cases where MDL received the complaint from any vendor or person, along with the fees prescribed below, verification of Declared Local Content shall be carried out by seeking additional info as deemed necessary and the bidders



(including unsuccessful bidders) against the tender shall be obliged to furnish the necessary documents. Failing to do so, the vendor may invite penal action as per the provisions of the Order. If MDL assess the capability, then it shall perform the verification. However, if in the opinion of MDL matter needs to be dealt at higher level, then the complaint shall be referred to Nodal Ministry and their fees / expenses / charges applicable as per the Nodal Ministry, if any, shall be borne by the complainant. MDL is authorized to prescribe fees for handling complaints under revised PPP MII 2017 Order. The fees for filing a complaint under the order shall be Rs. 10,000/- per case. The complaint shall be filed to the Chairman, Public Grievance Cell. The fee shall be deposited by complainant in MDL's Account by NEFT.

- v) On scrutiny of offer, if all the bidders participating in the tender happen to have either not submitted the declaration certificate or not declared /specified the local content percentage in the declaration certificate or specified local content lower than the minimum local content requirement as per the tender, the subject tender shall be cancelled & matter shall be taken up with Ministry through MDL Nodal Executive. Meanwhile, retendering may be done without applying the provisions of said Order for need fulfilment of MDL.
- vi) On opening of the price bids, if it is identified that there is difference in local content declaration made & local content percentage as per price quoted is now not meeting (i.e. lesser than) the specified tender requirement (i.e. only on the quoted price without any loading) then such bidder shall be disqualified and shall not be considered for ranking purpose. The bid would be treated / considered as given false declaration and necessary action for debarment shall be initiated.

41.5 Price negotiation & contract placement:

- i) MDL has right to negotiate with L1 bidders on the quoted prices. However, it shall be ensured that Local Content percentage as declared by the vendors maintained or increased but not reduced.
The supplier shall provide a Local Content Certificate **Enclosure-10(C)**, from statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of supplier other than companies) giving the percentage of local content.
- ii) Supplier shall be intimated that the supporting documentation towards realization of committed Local Content as per the contract / order terms & conditions shall be maintained for a period of seven years from the date of completion of the contract for audit purpose. Nodal Ministry may constitute committees with internal & external experts for independent verification of self-declarations and auditor's / accountant's certificates on random basis and in the case of complaints.

41.6 Debarment of bidders / suppliers:

- i) False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of GFR 2017 for which a bidder or its successors can be debarred for up to 2 years as per Rule 151(iii) of GFR 2017 along with such other actions as may be permissible under law.
- ii) A supplier who has been debarred by any procuring entity for violation of said Order shall not be eligible for preference under said Order for procurement by



any other procuring entity for the duration of debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in such a manner that ongoing procurements are not disrupted.

42. सामान्य वित्तीय नियमों के नियम 144 (xi) के तहत प्रतिबन्ध/ Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017:

- 42.1. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- 42.2. "Bidder" (including the term 'tenderer', 'Consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- 42.3. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
- a) An entity incorporated, established or registered in such a country; or
 - b) A subsidiary of an entity incorporated, established or registered in such a country; or
 - c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d) An entity whose *beneficial owner* is situated in such a country; or
 - e) An Indian (or other) agent of such an entity; or
 - f) A natural person who is a citizen of such a country; or
 - g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.
- 42.4. The beneficial owner for the purpose of **41.3** above will be as under:
- i. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(S), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
Explanation---
 - a) "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;
 - b) "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholder's agreements or voting agreements. - ii. In case of a partnership firm, the beneficial owner is the natural person(S) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 - iii. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more



than fifteen percent of the property or capital or profits of such association or body of individuals;

- iv. Where no natural person is identified under **(42.4.i) or (42.4.ii) or (42.4.iii)** above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - v. In case of a trust, the identification or beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- 42.5. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- 42.6. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.
- 42.7. The bidders shall provide Declaration in respect of restriction under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 in the prescribed format as per **Enclosure-10 (E)**

43. सार्वजनिक शिकायत कक्ष /PUBLIC GREIVANCE CELL

A Public Grievance Cell headed by **Executive Director (Tech)** has been set up in the Company. Members of public having complaints or grievances are advised to contact him on Wednesday between 10:00 hours and 12:30 hours in his office on **4th Floor, D2 Building, East yard, MDL** or send their complaints / grievances to him in writing for redressal. His Telephone No. is **022- 2376 3512 / 2372 3426 / 8879399826**

44. विवाद समाधान तंत्र /DISPUTE RESOLUTION MECHANISM(DRM) and मध्यस्थता /ARBITRATION: Refer General Conditions of Contract Clause No. 23,24,25.

45. अधिकार क्षेत्र /JURISDICTION: Refer General Conditions of Contract Clause No. 26.

46. एमडीएल का अधिकार /MDL's RIGHT: MDL reserves the right to consider placement of Order / Contract in part or in full against the tendered quantity or reject any or all tenders without assigning any reasons thereof.

47. बोलीदाताओं / एजेंटों के बिच हितों का टकराव / CONFLICT OF INTERESST AMONG BIDDERS /AGENTS:

- 47.1. Conflict of Interest among bidders/ Agents: A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of MDL's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:
- a) They have controlling partner(s) in common; or
 - b) They receive or have received any direct or indirect subsidy/ financial stake from any of them; or
 - c) They have the same legal representative/agent for purposes of this bid; or



- d) They have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
 - e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid.
 - f) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/ management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidder must proactively declare such sister/ common business/ management units in same/ similar line of business.
- 47.2. Declaration in respect of Conflict of Interest among Bidders/ Agents as per format at **Enclosure-29** is to be submitted by bidder.

We look forward to your participation in on-line bidding by offering your most competitive and reasonable bid against this tender.

Yours faithfully,
For **MAZAGON DOCK SHIPBUILDERS
LIMITED,**
GM/HOD (OTS)

**Enclosures:**

1.	Enclosure-1	-	Form of undertaking to be furnished by the bidder
2.	Enclosure-2	-	Tender Enquiry Acceptance Form
3.	Enclosure-3, Enclosure -3.1	-	Details Of General Engineering Work - Special Condition of Contract
4.	Enclosure-4	-	General Conditions of Contract (GCC) Acceptance Form-GCC attached separately.
5.	Enclosure-5	-	Deviations from Tender Enquiry Form/ GCC
6.	Enclosure-6	-	Financial Information of Bidder
7.	Enclosure-7	-	Details of Existing Commitments & On-going Works-Calculation of Bid capacity.
8.	Enclosure-8	-	Particulars of Experience in Similar Projects
9.	Enclosure-9	-	Personnel available with the Contractor for this Project
10.	Enclosure- 10 (A)	-	Declaration Certificate for Local Content (Sample Filled up Form for Filling Enclosure-10 (A) ATTACHED SEPERATELY)
11.	Enclosure- 10 (C)	-	Actual Local Content Certificate
12.	Enclosure- 10 (E)	-	Declaration in respect of restriction under Rule 144 (xi) of the General Financial Rules (GFRs), 2017
13.	Enclosure- 10 (F)	-	Declaration in respect of debarred under Public Procurement Policy (PPP) Make In India (MII) order 2017
14.	Enclosure-11	-	Banned or Delisted of Firm/Vendor
15.	Enclosure-12	-	MDL Bank Account Details for Online Remittance of Security Deposit/ Performance Bank Guarantee
16.	Enclosure-13	-	Integrity Pact- Not applicable to this tender
17.	Enclosure-14	-	RTGS/NEFT/ECS – Mandate Authorisation Form
18.	Enclosure-15	-	EMD
19.	Enclosure-16	-	Performa for Performance Bank Guarantee
20.	Enclosure-17	-	Performa for Waterproofing Bank Guarantee (Not Applicable to this tender)
21.	Enclosure-18	-	Performa for Bank Guarantee against water leakage- (Not applicable to this tender)
22.	Enclosure-19	-	Price Bid (Part-II) - to be submitted online
23.	Enclosure-20	-	List of Drawings
24.	Enclosure-21	-	Scope of Work
25.	Enclosure-22	-	Hindrance Register Format
26.	Enclosure-23	-	Loss of Pass
27.	Enclosure-24	-	Invoice Certification Format



28.	Enclosure-25	-	Extract of Official Secrets Act, 1923
29.	Enclosure-26	-	CHECKLIST OF SUBMITTALS ATTACHED ALONGWITH ONLINE TECHNICAL BID
30.	Enclosure-27	-	Address Label
31.	Enclosure-28		Certification for Disposal of Scrap/Debris
32.	Enclosure-29		Declaration in respect of Conflict of Interest among Bidders/ Agents
33.	SAMPLE FORMAT	-	SAMPLE FORMAT FOR FILLING ENCLOSURE-10 (B) OF TENDER
34.	Statutory requirements & Safety clause	-	<u>To be downloaded from our website www.mazagondock.in</u>
35.	Procedure for security passes	-	<u>To be downloaded from our website www.mazagondock.in</u>
36.	ANNEXURE-A		<u>SAFETY INSTRUCTIONS FOR SUB-CONTRACTORS IN MDL, attached separately</u>
37.	ANNEXURE-B		<u>STANDARD TERMS AND CONDITION (HR) FOR STATUTORY COMPLIANCE WHILE ENGAGING SUB-CONTRACTORS/ OUTSOURCED MANPOWER AND ITS UNIT attached separately</u>
38.	Enclosure GCC		GENERAL CONDITIONS OF CONTRACT FOR WORKS

**Enclosure-1****FORM OF UNDERTAKING TO BE FURNISHED BY THE BIDDER**

(To be typed on Bidder's Letter head)

To,
The General Manager (OTS),
OTS-TS Section
Mazagon Dock Shipbuilders Limited,
Dockyard Road, Mumbai-400 010.
Sir,

Sub: Renovation of Maintenance office at Ground Floor South Block-2 (Moghul House),
South Yard MDL, Mumbai.

Ref: MDL Tender Enquiry No. 1900000244

1. Having visited the site and having examined the General Conditions of Contract, Special Conditions of Contract, Technical Specifications and Bill of Quantities for the above named work, we offer to construct, complete and maintain the whole of the said works in conformity with the said General Conditions of Contract, Special Conditions of Contract, Technical Specifications, and Bill of Quantities for the sum stated in Bill of Quantities included in this Tender Document for such other sum as may be ascertained in accordance with the said conditions of Contract.
2. We undertake to complete and deliver the whole of the works comprised in the Contract within the time stated in this tender.
3. We have independently considered the amount of Liquidated damages indicated in the tender and agree that it represents a fair estimate of the loss likely to be suffered by you in the event of the work(s) not being completed in time.
4. If our Tender is accepted, we will, when required, obtain the guarantees from a Bank (to be approved by you) to be jointly and severally bound with us for the sum named in the tender for the due performance of the Contract under the terms of a Bond to be approved by you.
5. The Contractor's All Risk Policy for the full value of the Contract valid till the completion period will be obtained by us in the joint names of Mazagon Dock Shipbuilders Limited and ourselves.
6. We agree to abide by this Tender for the period of **150** days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiry of this period.
7. Unless and until a formal Agreement or Order is prepared and executed, this tender together with your written acceptance thereof, shall constitute a binding Contract between us.
8. We understand that if our Tender-Bid is accepted, we are to be jointly and severally responsible for the due performance of the Contract.
9. We understand that you are not bound to accept the lowest or any Tender you may receive.
10. We undertake to comply with the Anti-profiteering provisions of GST Act 2017 and we will pass on the benefits from reduction in the rate of Tax/input Tax credit if any, to MDL and there will be no liability on MDL on account of GST/Input Tax Credit.

Dated this _____ day of _____ (year)

Signature _____ in the capacity of _____

duly authorised to sign Tenders for and on behalf of _____

(IN BLOCK CAPITALS)

Witness:

Signature _____ Address of Witness _____

Name _____ Occupation _____

**Enclosure-2****TENDER ENQUIRY (TEF) ACCEPTANCE FORM**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED**

TENDER ENQUIRY No. 1900000244

TEF CLAUSE NO.	TENDERER'S REMARK	TEF CLAUSE NO.	TENDERER'S REMARK
	ACCEPTED/ DEVIATION		ACCEPTED/ DEVIATION
1		24	
2		25	NA
3		26	NA
4		27	
5		28	
6		29	
7		30	
8		31	
9		32	
10		33	
11		34	
12		35	
13		36	
14		37	
15		38	
16		39	
17		40	
18		41	
19		42	
20		43	
21		44	
22		45	
23		46	

COMPANY'S NAME & ADDRESS :**SIGNATURE:****DATE:****NAME:****DESIGNATION:****TENDERER'S COMPANY****SEAL:**



NOTES :

1. Bidder(s) should carefully read the Tender Enquiry Terms & Conditions (TEF) included in the tender prior to filling up this acceptance format.
2. Bidder(s) should indicate Accepted/ Deviation Taken for each clause number in the above table.
3. Bidder(s) to attach Separate Sheet indicating all relevant details such as Number & description of the Clause, Reasons for Deviation and Alternative suggested for any deviations taken by them in the prescribed format indicated at **Enclosure-5**.
4. TEF clause numbers shown in the above format also includes the sub-clauses under these clauses. For example 4 means – clause nos. 4, 4(i), 4(ii) etc.

**Enclosure-3**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

Renovation of Maintenance office at Ground Floor South Block-2 (Moghul House), South Yard MDL, Mumbai.

Details of General Construction Work

(To be typed on Bidders Letterhead & submitted)

Sr. No	Financial Year	Particulars	Amount in Rs.
1		Annual value of General Construction work	
2		Annual value of Civil Construction & MEP work	

Signature of Chartered Accountant
with Seal

Signature and Seal of the Bidder

**Enclosure-3.1**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

Sr. No.	Qualification	Minimum Experience	Number (of Major +Minor component	Designation Technical Staff
1	Graduate /Diploma Engineer	More than 02 or 05 Years respectively	01(full time)	Project Manager cum planning /Quality/ Site/Billing Engineer
2	Diploma Safety	More than 02 Years	01(full time)	Safety Supervisor

Special Condition: Recovery shall be made from the contractor in the event of not fulfilling of above para 7.1.3, Rs. 15,000/- per month per person for Project Manager cum planning/ quality/site/billing Engineer and Safety Supervisor Encloser-3.1



Enclosure-4

ACCEPTANCE FORM FOR GENERAL CONDITIONS OF CONTRACT (GCC)

To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED

TENDER ENQUIRY No. 1900000244

GCC CLAUSE No.	TENDERER'S REMARK	GCC CLAUSE No.	TENDERER'S REMARK	GCC CLAUSE No.	TENDERER'S REMARK
	ACCEPTED/ DEVIATION		ACCEPTED/ DEVIATION		ACCEPTED/ DEVIATION
1		38		76	
2		39		77	
3		40		78	
4		41		79	
5		42		80	
6		43		81	
7		44		82	
8		45		83	
9		46		84	
10		47		85	
11		48		86	
12		49		87	
13		50		88	
14		51		89	
15		52		90	
16		53		91	
17		54		92	
18		55		93	
19		56		94	
20		57		95	
21		58		96	
22		59		97	
23		60		98	
24		61		99	
25		62		100	
26		63		101	
27		64		102	
28		65		103	
29		67		104	
30		68		105	
31		69		106	
32		70		107	
33		71		108	
34		72		109	



35		73		110	Not Applicable
36		74			
37		75			

COMPANY'S NAME & ADDRESS:

SIGNATURE:

DATE:

NAME:

DESIGNATION:

TENDERER'S COMPANY

SEAL:

NOTES:

1. Bidder(s) should carefully read the General Conditions OF CONTRACT (GCC) of the Tender Enquiry prior to filling up this acceptance format.
2. Bidder(s) should indicate Accepted/ Deviation Taken for each clause number in the above table.
3. Bidder(s) to attach Separate Sheet indicating all relevant details such as Number & description of the Clause, Reasons for Deviation and Alternative suggested for any deviations taken by them in the prescribed format indicated at **Enclosure-5**.
4. Clause numbers shown in the above format also includes the sub-clauses under these clauses. For example, Clause no. 56 means – Clause nos. 56, 56 i), 56 a) etc.

**Enclosure-5**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

**DEVIATIONS FROM TERMS & CONDITIONS OF TENDER ENQUIRY
FORM/GCC/TECHNICAL SPECIFICATION**

All deviations from the Conditions of Tender Enquiry Form/ GCC shall be filled in by the bidder clause by clause in this Schedule. If deviations are discussed in the covering Letter of Tender, then reference to the said letter shall be made below.

Clause No.	Contractual requirement	Deviation proposed by the Bidder	Reason for proposed deviation
(1)	(2)	(3)	(4)

The Bidder hereby certifies that the above mentioned are the only deviations from the Conditions of Contract.

SIGNATURE _____

NAME _____

DESIGNATION _____

COMPANY SEAL

COMPANY _____

DATE _____



Enclosure-6

To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.

MDL Tender No. 1900000244: (Not Applicable to this work)

Financial Information of Bidder

(To be typed on Bidders Letterhead & submitted)

Description	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Maximum Value ₹
	V	W	X	Y	Z	(A)
Maximum value of General Civil Construction & MEP work						
Above Value updated at the current price level by applying a weightage of 7% per annum						

Signature of Chartered Accountant
with Seal

Signature and Seal of the Bidder

**Enclosure-7**

To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.

MDL Tender No. 1900000244 (Not applicable to this tender)

Details of Existing Commitments & On-going Works

(To be typed on Bidders Letterhead & submitted)

1	2	3	4	5	6	7	8
Sr. No.	Name of the Work/ Project	Contract Value (₹)	Date of start as per PO/ Contract	Date of Completion as per PO/Contract	Work Done up to the preceding Month of submission of Bid (₹)	Value of existing commitments and on-going works to be completed (for all the Clients of the Bidder) during the period of completion of work for which bids have been invited (₹)	Value updated at the current price level (₹) (B)

Note: The bidder shall also include the value of all such works which are awarded to bidder but yet not started up to the last day of preceding month of submission of bid.

CALCULATION OF AVAILABLE BID CAPACITY

- (a) Available Bid Capacity = $[AxNx1.5]-B$, where
- A = Maximum value of engineering (Civil/ Electrical/ Mechanical as relevant to work being procured) works executed in any one year during the last five years (updated at the current price level by applying a weightage of 7% per annum), taking into account the completed as well as works in progress. Value of engineering works executed during last five years shall be certified by Chartered Accountant and shall be considered for evaluation.
 - N = Number of years prescribed for completion of work for which bids have been invited = **0.50 (06 Months)**.
 - B = Value (updated at the current price level) of the existing commitments and ongoing works to be completed in the next 'N' years. This statement should be submitted duly verified by Chartered Accountant.



Note: -

- a) The yield rate of GoI bonds as on the closing date of the tender shall be considered as discounting factor for updation of the value of “B”.

Available Bid Capacity = ₹_____

Note: The bidder should attach the proof for ‘A’ & ‘B’ mentioned above.

Signature of Chartered Accountant
with Seal

Signature and Seal of the Bidder

**Enclosure-8****PARTICULARS OF EXPERIENCE IN SIMILAR PROJECTS**

The General Manager,
OTS Department,
6th Floor, Service Block Bldg. NY,
Mazagon Dock Shipbuilders Limited,
Dock Yard Road,
Mumbai - 400010, INDIA

Sir,

Sub: Renovation of Maintenance office at Ground Floor South Block-2 (Moghul House),
South Yard MDL, Mumbai.

Ref: MDL Tender No. 1900000244

With reference to the above and after having read the terms & conditions in the Tender Enquiry, we wish to submit our bid for consideration of pre-qualification under **Clause 7.1.1.1/7.1.1.2/7.1.1.3** (*strike out whichever is not applicable*) of the tender. The details of similar projects as stipulated in the tender enquiry form and completed satisfactorily by us are as under:

Clause 7.1.1.1: Three similar completed works each costing not less than **₹ 21 Lakhs.**

Sr. No	PO No & Date	Completion Cost	Work order (Submitted/Not submitted)	Completion Certificate (Submitted/Not Submitted)
1				
2				
3				

OR

Clause 7.1.1.2: Two similar completed works each costing not less than **₹ 27 Lakhs.**

Sr. No	PO No & Date	Completion Cost	Work order (Submitted/Not submitted)	Completion Certificate (Submitted/Not Submitted)
1				
2				

OR

Clause 7.1.1.3: One similar completed work costing not less than **₹ 42 Lakhs.**

Sr. No	PO No & Date	Completion Cost	Work order (Submitted/Not submitted)	Completion Certificate (Submitted/Not Submitted)
1				

2. The brief details of above similar projects are as under: (Use separate sheet for each work)

i.	Project Name:	
ii.	Project Location	
iii.	Client:	
iv.	Address of the Client & contact person with Tel No. & Fax No	
v.	Brief Description of the work	
vi.	Cost of project	
vii.	Contract/Work order No:	



viii.	Completion Certificate details viz, ref. No & date of issue	
ix.	Date of Commencement of Work	
x.	Date of completion work	

3. The following documents in support of the above similar projects are enclosed in our techno-commercial bid:
1. Copy of Work Order/Contract Agreement indicating contract amount, Project/Work value, Scope of Work & other details with signature of Both Parties.
 2. Work Completion Certificates issued by the Client(s) indicating proper reference of Contract Agreement & Date of Completion.
 3. Any other document (*please specify*)
4. We further agree to produce originals of the documents submitted in respect of the similar projects detailed above for verification by MDL as and when called for.

Signature of Contractor:

Name and Address:

Place:

Date:

Official Seal

**Enclosure-9**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

KEY PERSONNEL AVAILABLE WITH THE CONTRACTOR FOR THIS PROJECT

Bidders should provide information of personnel of relevant discipline (Engineers & Supervisors) including Safety Officer(s) who will be deployed for this Project in the following prescribed format.

Sr. No.	Designation of the Personnel with Discipline	No of Personnel to be deployed	Month wise Duration of Deployment for this project	No of Years of Relevant Experience

**Enclosure-10 (A)**

**To,
OTS-TS SECTION
OTS Department, (OTS-TS Section)
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

DECLARATION CERTIFICATE FOR LOCAL CONTENT

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

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

**IN RESPECT OF BID/ TENDER No.....
ISSUED BY: MAZAGON DOCK SHIPBUILDERS LIMITED**

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

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

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

(b) I have read and understood the requirement of local content (LC) and same is specified as percentage calculated in accordance with the definition provided at clause 2 of revised Public Procurement (preference to Make in India) Order2017.

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

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

(d) The local content calculated using the definition given above are asunder:

Tender Item Sr No	Local content calculated as above %	Location of value addition
1		



2			
3			
4			

Attach separate sheet duly signed if space is not sufficient

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

(e) I accept that the Procurement Authority / Institution / MDL / Nodal Ministry has the right to request that the local content be verified in terms of the requirements of revised Public Procurement (preference to Make in India) Order 2017 dtd 16.09.2020 and I shall furnish the document / information on demand. Failure on my part to furnish the data will be treated as false declaration as per PPP MII Order 2017. In case of contract being awarded, I undertake to retain the relevant documents for 7 years from date of execution.

(f) I understand that the submission of incorrect data, or data that are not verifiable as described in revised Public Procurement (preference to Make in India) Order 2017, may result in the Procurement Authority / Nodal Ministry / MDL imposing any or all of the remedies as provided for in Clause 9 of the Revised Public Procurement (preference to Make in India) Order 2017 dated 16.09.2020.

SIGNATURE: (TO BE SIGNED & STAMPED BY AUTHORISED SIGNATORY STRICTLY AS PER TEF CLAUSE NO. 41.4.i)) - VIZ; CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CORPORATION, PARTNERSHIP OR INDIVIDUAL)

Seal / Stamp of Authorized Signatory DATE: _____

**Enclosure-10 (C)****ACTUAL LOCAL CONTENT CERTIFICATE**

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

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

IN RESPECT OF CONTRACT No./ PO

No.....

ISSUED BY: MAZAGON DOCK SHIPBUILDERS LIMITED

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

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

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

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

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

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

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

(d) I accept that the Procurement Authority / Institution / MDL / Nodal



Ministry has the right to request that the local content be verified in terms of the requirements of revised Public Procurement (preference to Make in India) Order 2017 dated 16.09.2020 and I shall furnish the document / information on demand. Failure on my part to furnish the data will be treated as false declaration as per PPP MII Order 2017. I undertake to retain the relevant documents for 7 years from date of execution.

(e) I understand that the submission of incorrect data, or data that are not verifiable as described in revised Public Procurement (preference to Make in India) Order 2017, may result in the Procurement Authority / Nodal Ministry / MDL imposing any or all of the remedies as provided for in Clause 9 of the Revised Public Procurement (preference to Make in India) Order 2017 dated 16.09.2020.

SIGNATURE: _____

DATE:

Seal / Stamp of Bidder



Enclosure-10 (E)

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

**Declaration in respect of restriction under Rule 144 (xi) of the General
Financial Rules (GFRs), 2017**

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authorities and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authorities. I hereby certify that this bidder fulfils all requirements in this regards and is eligible to be considered. (Where applicable, evidence of valid registration by the Competent Authorities shall be attached]

SIGNATURE: _____

DATE:

Seal / Stamp of Bidder



Enclosure-10 (F)

To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.

MDL Tender No. 1900000244

**Declaration in respect of debarred under Public Procurement Policy
(PPP) Make In India (MII) order 2017, GeM, CPPP including Tender
holiday issued by MDL.**

*I have read the **Clause No. 41** of the Tender and hereby declare that I/ we have not been debarred by any Government or quasi Government agencies or PSU's under Public Procurement Policy (PPP) Make In India (MII) order 2017, GeM and CPPP.*

Further, I hereby declare that I/ we have not been given the Tender holiday by MDL.

SIGNATURE: _____

DATE:

Seal / Stamp of Bidder

**Enclosure-11**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

PARTICULARS OF BANNED OR DE-LISTED TENDERER/FIRM/VENDORS

The General Manager,
OTS Department,
6th Floor, Service Block Bldg. NY,
Mazagon Dock Shipbuilders Limited,
Dock Yard Road,
Mumbai - 400010, INDIA

Sir,

Sub: Renovation of Maintenance office at Ground Floor South Block-2 (Moghul House), South Yard MDL, Mumbai.

Ref: MDL Tender No. 1900000244

With reference to **Clause no: 39** (Banned or De-Listed Tenderer/ Firms / Vendors), referred Tender Enquiry, we declare the Information as below.

A. In case of Banned / Blacklisted by the client.

Sl	Name of Government/ quasi Government agencies/or PSUs who has Banned/Black listed	Name of Project value which firm is Banned/ Blacklisted	Banned/ Black listed for the Duration	Reasons

B. In case of penal Action Proceeding / Show cause notices initiated/issued by the Government or quasi Government agencies or PSU's including Pending in Judicial proceedings:

Sl	Name of Client	Name of Project / Work	Status

C. The bidding firm to enclose / submit all relevant documents pertaining to Sr. no. A & Sr. no. B above.

Signature of Contractor:

Name and Address:

Place:



Date:

Official Seal

Enclosure-12

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

MAZAGON DOCK SHIPBUILDERS LIMITED
DOCKYARD ROAD
MUMBAI - 400010

1. MDL'S BANK ACCOUNT DETAILS:

NAME OF BANK A/C HOLDER	:	MAZAGON DOCK SHIPBUILDERS LTD
BANK AND BRANCH	:	STATE BANK OF INDIA, MAZAGON BRANCH, MUMBAI
BRANCH CODE	:	9054
BANK ACCOUNT NO	:	10005255246
IFSC CODE		SBIN0009054
MICR/NECS CODE		400002120
INCOME TAX PAN NO		AAACM8029J
INCOME TAX TAN NO		MUMM02076E

2. DETAILS OF REMITTANCE TO MDL'S BANK ACCOUNT:

(To be filled in by the vendors/firms making remittance of funds in MDL'S Bank Account)

Date of Remittance	Name of Firm	UTR No.	MDL tender/PO. Ref No.	Nature of Remittance viz. Performance Bank Guarantee etc.	Amount Remitted (₹)
			MDL Tender No. 1900000244		

Signature of Bidder**3. SAP Parked Document No: _____ Date: _____**



(To be filled in by MDL's Commercial Executive)

Enclosure-13

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

INTEGRITY PACT: Not Applicable to this tender

**Enclosure-14**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.
MDL Tender No. 1900000244**

RTGS/NEFT/ECS – MANDATE AUTHORISATION FORM

1.	NAME OF THE FIRM	:	
2.	CONTACT PERSON AND DESIGNATION	:	
3.	PAN NO	:	
4.	VENDOR ADDRESS	:	
5.	VENDOR'S TELEPHONE/FAX	:	
6.	E-MAIL ADDRESS	:	
7.	BANK NAME	:	
8.	BANK ADDRESS	:	
9.	ACCOUNT NUMBER	:	
10.	ACCOUNT TYPE	:	
11.	IFSC CODE	:	
12.	MICR CODE	:	
13.	GST ID NO.	:	

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

Date **Vendor's Seal** **Authorised Signature of the Vendor**

Certified that the particulars as per Serial No. 1 & 6 to 12 are correct as per our records.

Date **Bank's Stamp** **Authorised Signature of the Bank Officer**

**Enclosure-15**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

PROFORMA BANK GUARANTEE FOR BID BOND / EMD

(On Non-Judicial stamp paper of value ₹500/-)

IN CONSIDERATION OF MAZAGON DOCK SHIPBUILDERS LIMITED, a company incorporated under the Companies Act 1956 and having its registered office at Dockyard Road, Mumbai 400010 (hereinafter referred to as the "the Company" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors and assigns) having agreed to accept the Earnest Money Deposit (EMD) of Rs------(Rupees----- only) in the form of Bank Guarantee from Messers a partnership firm/sole proprietor business/a company registered under the Companies Act, 1956 having its office at(hereinafter called " the tenderer" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors and assigns) for participating in the Tender no.....dated..... (hereinafter called "the tender" which expression shall include any amendments/alterations to "the tender" issued by "the Company") for the supply, delivery at site, installation and commissioning of certain equipment, item/services/civil works etc., We, Bank having office at (hereinafter referred to as "the Bank" which expression shall includes its successors and assigns) hereby agree to pay to the Company without any demur on first demand an amount not exceeding Rs..... (Rupees.....only) against any loss or damage, costs, charges and expenses caused to or suffered by the Company by reason of non performance and non-fulfilment or for any breach on the part of the tenderer of any of the terms and conditions of the said tender.

2. We, Bank further agree that the Company shall be sole judge whether the said tenderer has failed to perform or fulfil the said tender in terms thereof or committed breach of any terms and conditions of the tender the extent of loss, damage, cost, charges and expenses suffered or incurred or would be suffered or incurred by the Company on account thereof and we waive in the favour of the Company all the rights and defences to which we as guarantors may be entitled to.

3. We, Bank further agree that the amount demanded by the Company as such shall be final and binding on the Bank as to the Bank 's liability to pay and the amount demanded and the Bank undertake to pay the Company the amount so demanded on first demand and without any demur notwithstanding any dispute raised by the tenderer or any suit or other legal proceedings including arbitration pending before any court, tribunal or arbitrator relating thereto, our liability under this guarantee being absolute and unconditional.

4. We, Bank further agree with the Company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said tender/or to extend time of performance by the tenderer from time to time or to postpone



for any time to time any of the powers exercisable by the Company against the tenderer and to forbear to enforce any of the terms and conditions relating to the tender and we shall not be relieved from our liability by reason of any such variation or extension being granted to the tenderer or for any forbearance, act or omission on the part of the Company or any indulgence by the Company to the tenderer or by any such matter or things whatsoever which under the law relating to sureties would have the effect of relieving us.

5. We, Bank further undertake not to revoke this guarantee during its currency except with the previous consent of the Company in writing.

6. We, Bank also agree that the Bank's liability under this guarantee shall not be affected by any change in the constitution of the tenderer or dissolution or winding up of the business of the tenderer.

7. Notwithstanding anything contained herein above:

- i) Our liability under this guarantee shall not exceed Rs.....
- ii) This Bank Guarantee shall be valid upto and including; and
- iii) We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before(validity + --- weeks from the date of expiry of this guarantee).

8. This Guarantee shall be governed by Indian laws and the Courts at Mumbai, India shall have the exclusive jurisdiction.

IN WITNESS WHEREOF the Bank has executed this document on this..... day of

For Bank
(by its constituted attorney
or the person authorised to sign)

(Signature of a person authorised
to sign on behalf of "the Bank")

**Enclosure-16**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

PROFORMA FOR PERFORMANCE BANK GUARANTEE

(On Non-Judicial stamp paper of value ₹500/-)

IN CONSIDERATION OF MAZAGON DOCK SHIPBUILDERS LIMITED (formerly known as MAZAGON DOCK LIMITED, a company incorporated under the Companies Act 1956 and having its registered office at Dockyard Road, Mumbai 400010 (hereinafter referred to as the "the Company" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors and assigns) having placed an order on Messers a partnership firm/sole proprietor business/a company registered under the Companies Act, 1956 having its office at(hereinafter called " the Contractor" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors and assigns) vide order No..... dated..... (hereinafter called "the order" which expression shall include any amendments/alterations to "the order" issued by "the Company") for the work of _____ as stated in the said Order and the Company having agreed that the Contractor shall furnish a security for the performance of the Contractor obligations and/or discharge of the Contractor liability in connection with the said order and the Company having agreed with the Contractor to accept a performance guarantee, We, Bank having office at (hereinafter referred to as "the Bank" which expression shall includes its successors and assigns) hereby agree to pay to the Company without any demur on first demand an amount not exceeding Rs..... (Rupees.....only) against any loss or damage, costs, charges and expenses caused to or suffered by the Company by reason of non performance and non-fulfillment or for any breach on the part of the Contractor of any of the terms and conditions of the said order.

2. We, Bank further agree that the Company shall be sole judge whether the said Contractor has failed to perform or fulfill the said order in terms thereof or committed breach of any terms and conditions of the order and the extent of loss, damage, cost, charges and expenses suffered or incurred or would be suffered or incurred by the Company on account thereof and we waive in the favour of the Company all the rights and defences to which we as guarantors may be entitled to.

3. We, Bank further agree that the amount demanded by the Company as such shall be final and binding on the Bank as to the Bank's liability to pay and the amount demanded and the Bank undertake to pay the Company the amount so demanded on first demand and without any demur notwithstanding any dispute raised by the Contractor or any suit or other legal proceedings including arbitration pending before any court, tribunal or arbitrator relating thereto, our liability under this guarantee being absolute and unconditional.



4. We, Bank further agree with the Company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said order/or to extend time of performance by the Contractor from time to time or to postpone for any time to time any of the powers exercisable by the Company against the Contractor and to forbear to enforce any of the terms and conditions relating to the order and we shall not be relieved from our liability by reason of any such variation or extension being granted to the Contractor or for any forbearance, act or omission on the part of the Company or any indulgence by the Company to the Contractor or by any such matter or things whatsoever which under the law relating to sureties would have the effect of relieving us.

5. We, Bank further undertake not to revoke this guarantee during its currency except with the previous consent of the Company in writing.

6. We, Bank also agree that the Bank's liability under this guarantee shall not be affected by any change in the constitution of the Contractor.

7. Notwithstanding anything contained herein above:

- i) Our liability under this guarantee shall not exceed Rs.....
- ii) This Bank Guarantee shall be valid upto and including; and
- iii) We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before(validity + ---weeks from the date of expiry of this guarantee).

8. This Guarantee shall be governed by Indian laws and the Courts at Mumbai, India shall have the exclusive jurisdiction.

IN WITNESS WHEREOF the Bank has executed this document on this..... day of

For Bank
(by its constituted attorney)

(Signature of a person authorised
to sign on behalf of "the Bank")

**Enclosure-17**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 190000244

**PROFORMA FOR WATERPROOFING BANK GUARANTEE (Not Applicable to this
tender)**

(On Non-Judicial stamp paper)

IN CONSIDERATION OF MAZAGON DOCK SHIPBUILDERS LIMITED, a company incorporated under the Companies Act 1956 and having its registered office at Dockyard Road, Mumbai 400010(hereinafter referred to as the "the Company" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors, liquidators and assigns) having placed an order on Messers a partnership firm/sole proprietor business/a company registered under the Companies Act, 1956 having its office at(hereinafter called " the Contractors" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors and assigns) vide order No..... dated..... (Hereinafter called "the order" which expression shall include any amendments/alterations to "the order" issued by "the Purchaser") for the work ofas stated in the said Order and the Company having agreed that the Contractors shall furnish a security for the performance of the Contractors obligations and/or discharge of the Contractors liability in connection with the waterproofing work(s) executed under the said order and the Company having agreed with the Contractors to accept a waterproofing bank guarantee, We, Bank having office at (Hereinafter referred to as "the Bank" which expression shall includes its successors and assigns) hereby agree to pay to the Company without any demur on first demand an amount not exceeding Rs..... (Rupees.....only) 10% of the total value of waterproofing work(s) in the order against any loss or damage, costs, charges and expenses caused to or suffered by the Company by reason of any defects in waterproofing work done by the Contractor, as per the terms and conditions of the said order.

1. We, (Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for satisfactory performance and fulfilment in all respects of the said contract, which consists of 05 years after satisfactory completion of the waterproofing work as per terms and conditions of the said order.

2. We, Bank further agree that the Company shall be sole judge whether the said Contractors has failed to perform or fulfil the said order in terms thereof or committed breach of any terms and conditions of the order and the extent of loss, damage, cost, charges and expenses suffered or incurred or would be suffered or incurred by the Company on account thereof and we waive in the favour of the Company all the rights and defences to which we as guarantors may be entitled to.



3. We, Bank further agree that the amount demanded by the Company as such shall be final and binding on the Bank as to the Bank's liability to pay and the amount demanded and the Bank undertake to pay the Company the amount so demanded on first demand and without any demur notwithstanding any dispute raised by the

Contractors or any suit or other legal proceedings including arbitration pending before any court, tribunal or arbitrator relating thereto, our liability under this guarantee being absolute and unconditional.

4. We, Bank further agree with the Company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said order/or to extend time of performance by the Contractors from time to time or to postpone for any time to time any of the powers exercisable by the Company against the Contractors and to forbear to enforce any of the terms and conditions relating to the order and we shall not be relieved from our liability by reason of any such variation or extension being granted to the Contractors or for any forbearance, act or omission on the part of the Company or any indulgence by the Company to the Contractors or by any such matter or things whatsoever which under the law relating to sureties would have the effect of relieving us.

5. We, Bank further undertake not to revoke this guarantee during its currency except with the previous consent of the Company in writing.

6. We, Bank also agree that the Bank's liability under this guarantee shall not be affected by any change in the constitution of the Contractors.

7. Notwithstanding anything contained herein above:

- i) Our liability under this guarantee shall not exceed Rs.....
- ii) This Bank Guarantee shall be valid up to and including; and
- iii) We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before.(Validity + ---weeks from the date of expiry of this guarantee).

8. This Guarantee shall be governed by Indian laws and the Courts at Mumbai, India shall have the exclusive jurisdiction.

IN WITNESS WHEREOF the Bank has executed this document on this.....day of

For Bank
(by its constituted attorney)

(Signature of a person authorised
to sign on behalf of "the Bank")

**Enclosure-18**

To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.

MDL Tender No. 1900000244

PROFORMA FOR BANK GUARANTEE AGAINST WATER LEAKAGE (Not applicable to this tender)

(On Non-Judicial stamp paper)

IN CONSIDERATION OF MAZAGON DOCK LIMITED, a company incorporated under the Companies Act 1956 and having its registered office at Dockyard Road, Mumbai 400010(hereinafter referred to as the "the Company" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors, liquidators and assigns) having placed an order on Messers a partnership firm/sole proprietor business/a company registered under the Companies Act, 1956 having its office at(hereinafter called " the Contractors" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors and assigns) vide order No..... dated..... (Hereinafter called "the order" which expression shall include any amendments/alterations to "the order" issued by "the Purchaser") for the work of _____ as stated in the said Order and the Company having agreed that the Contractors shall furnish a security for the performance of the Contractors obligations and/or discharge of the Contractors liability in connection with the **roof sheeting/ cladding work(s)** executed under the said order and the Company having agreed with the Contractors to accept a bank guarantee against water leakage, We, Bank having office at (Hereinafter referred to as "the Bank" which expression shall includes its successors and assigns) hereby agree to pay to the Company without any demur on first demand an amount not exceeding Rs..... (Rupees.....only) 10% of the total value of **roof sheeting/ cladding work(s)** in the order against any loss or damage, costs, charges and expenses caused to or suffered by the Company by reason of any defects in **roof sheeting/cladding work(s) leading to water leakage** by the Contractor, as per the terms and conditions of the said order.

1. We, (Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for satisfactory performance and fulfilment in all respects of the said contract, which consists of 05 years after satisfactory completion of the **roof sheeting/ cladding work** as per terms and conditions of the said order.



2. We, Bank further agree that the Company shall be sole judge whether the said Contractors has failed to perform or fulfil the said order in terms thereof or committed breach of any terms and conditions of the order and the extent of loss, damage, cost, charges and expenses suffered or incurred or would be suffered or incurred by the Company on account thereof and we waive in the favour of the Company all the rights and defences to which we as guarantors may be entitled to.

3. We, Bank further agree that the amount demanded by the Company as such shall be final and binding on the Bank as to the Bank's liability to pay and the amount demanded and the Bank undertake to pay the Company the amount so demanded on first demand and without any demur notwithstanding any dispute raised by the Contractors or any suit or other legal proceedings including arbitration pending before any court, tribunal or arbitrator relating thereto, our liability under this guarantee being absolute and unconditional.

4. We, Bank further agree with the Company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said order/or to extend time of performance by the Contractors from time to time or to postpone for any time to time any of the powers exercisable by the Company against the Contractors and to forbear to enforce any of the terms and conditions relating to the order and we shall not be relieved from our liability by reason of any such variation or extension being granted to the Contractors or for any forbearance, act or omission on the part of the Company or any indulgence by the Company to the Contractors or by any such matter or things whatsoever which under the law relating to sureties would have the effect of relieving us.

5. We, Bank further undertake not to revoke this guarantee during its currency except with the previous consent of the Company in writing.

6. We, Bank also agree that the Bank's liability under this guarantee shall not be affected by any change in the constitution of the Contractors.

7. Notwithstanding anything contained herein above:

- i) Our liability under this guarantee shall not exceed Rs.....
- ii) This Bank Guarantee shall be valid up to and including; and
- iii) We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before.(Validity + ---weeks from the date of expiry of this guarantee).

8. This Guarantee shall be governed by Indian laws and the Courts at Mumbai, India shall have the exclusive jurisdiction.



IN WITNESS WHEREOF the Bank has executed this document on
this.....day of

For Bank

(by its constituted attorney)

(Signature of a person authorised
to sign on behalf of "the Bank")



Enclosure-19

Enclosure-19 is attached Separately

Note:

- i. The Bill of Quantities (BOQ) are as appearing at **Enclosure -19** which is attached Separately.
- ii. The quantities of individual items in the BOQ are approximate and may vary.
- iii. Bidder after considering the estimated rates of individual items in the BOQ and the total estimated value, shall quote their overall percentage on line price sheet only

**Enclosure-20**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

LIST OF TENDER DRAWINGS (Attached Separately)

Sr. No	Drawing No.	Description of Drawing	Remark
1	TS/CV/SY/SB2/G FLR/RO REV-0	Proposed layout Plan SY Maintenance office GF South Block-2 SY	Separately Attached
2	TS/CV/SY/ MH/05/RO	LAYOUT OF GROUND FLOOR MOGUL HOUSE SOUTH YARD	Separately Attached



Enclosure-21

A. SCOPE OF WORK OF CIVIL WORK

Sub: Renovation of SY Maintenance Office at Ground Floor South Block 2(Moghul House), MDL, Mumbai

The brief Scope of Work is as under:

- i. Dismantling existing flooring & dado, wooden partitions, brick masonry, damaged plaster, doors, windows, etc. of office area
- ii. Repair of damaged RCC members (slab, beams, columns) by Polymer modified mortar, applying rust preventing coating, bond coat etc. wherever required.
- iii. Internal cement plastering and royal luster painting with wall putty and primer
- iv. Solid partition with aluminum frame, double skin 10mm thick calcium silicate board with rock wool & laminate finish as per drawing or as directed.
- v. Wall masonry with 75mm thick non-asbestos fiber reinforced aerated cement sandwich solid core panels as per drawing or as directed.
- vi. Vitrified tiles for flooring & skirting at office area & pantry.
- vii. Calcium silicate board and tile grid false ceiling at office area.
- viii. Aluminum two/three track sliding windows on granite frame with roller blinds.
- ix. Wooden 35 mm thick solid core flush doors with vision panel and fittings.
- x. Partly glazed partition and 12mm thick toughened glass door with frosted film at office area.
- xi. Granite pantry platform with stainless steel sink & plumbing fittings.
- xii. Full/Low height 470mm deep Storage unit at per drawing or as directed.
- xiii. Furniture work: Executive table with Extended Return Unit, Linear work station, chairs, two seater sofa, etc.

GENERAL SPECIFICATION FOR CIVIL & PLUMBING WORK:
PLEASE REFR ANNEXURE- 21A

AND

CIVIL & INTERIOR WORKS TECHNICAL SPECIFICATIONS:
ATTACHED SEPRATLAY AT ANNEXURE- 21A



B. Detailed Scope of Work: Electrical Work

1. Carefully dismantling all electrical accessories after disconnection of mains power supply
2. Supply & Installation of Point wiring accessories
3. Supply of Installation of HMS PVC Conduits for wiring.
4. Supply & Laying of Main Supply Cables, Wires through conduit.
5. Supply & Laying of CAT-6 & Telephone Cables through Raceways.
6. Supply & Installation of LED Light Fixtures, Wall Fans, SFU, Power Distribution Boards.
7. Glanding & Termination of Mains Cable in SFU, Power Distribution Boards.
8. Supply & Installation of Modular Switch Sockets & Accessories and end connection of wires, data cables and telephone cable in Modular accessories.
9. Testing & Commissioning of PDB's, Switch Sockets, Light Fixtures, Network Switch, Telephone Junction Box, Data & Telephone Points, TV, Fridge, Oven.
10. Labeling PDB's, Modular Switch Boards, Data & Telephone Points etc. with Stick able Talley Plates.
11. Preparation of as Fitted Drawings (Four Copies) and submission of these sets after verification from Approving Authority.



TECHNICAL SPECIFICATION FOR ELECTRICAL WORK

I. GENERAL INSTRUCTIONS

1. SPECIAL INSTRUCTIONS

- 1.1. Actual work shall be carried out by persons holding valid PWD Wireman License. The electrification work shall be supervised by persons holding PWD Supervisors License / Diploma Holder.
- 1.2. The work of electrification shall be carried out after the layout is finalized and as per the instructions given from time to time by site engineer. The electrical installation shall be as per the Indian standard codes and in conformity with Indian Electricity rules 1956, as amended up to date, and also the relevant regulation of licensee.
- 1.3. The scope of electrification work will include providing labour, material, transport, insurance security, clearing of site, handing over and one year free maintenance of the work from the date of commissioning. The material used shall be new and of category makes specified or approved. Any work where specifications are not clear, relevant provision in I.S. or Indian Electricity rules shall be followed. Engineer' decision and direction in such cases shall be final.
- 1.4. Site Engineers of MDL approval in writing shall be obtained prior to commencement of the work to the following: -
 - (a) Layout of wiring.
 - (b) Sizes of Cables.
 - (c) Layout of electrical lighting arrangement.
 - (d) Main Power DB, Lighting DB, Air Condition DB & Computer DB,
 - (e) Make of the materials, fittings / fixtures / Fan, etc. which shall be of the approved make.

2. QUALITY OF THE MATERIAL

- 2.1. All the materials shall be new from the fresh stock and shall conform to I.S. specifications. When standard does not exist, such material / sample shall be submitted for site Engineer's of MDL approval, with Test Certificate from Government approved laboratories.
- 2.2. Contractors shall produce, on demand, such details as called for by the site Engineer of MDL to prove the genuineness of the material.
- 2.3. Rejected materials must be replaced by the contractors within 7 (seven) days.

3. WORKMANSHIP

The work shall be carried out keeping in mind the aesthetic requirement of individual site and matching of final work with the surrounding by proper finishing as necessary to maintain uniformity. Good workmanship is an essential requirement of this contract. Poor workmanship will be liable for penalization.

4. MEASUREMENT & CANCELLATION OF THE PART CONTRACT

The bills of the quantities are based on the plans of the buildings/ individual office showing the approximate location of all outlets, switchgear, etc. and are approximate only. The contractor shall be paid at actual as measured jointly by the representatives of the Contractor and Site Engineer of MDL.

5. INSPECTION & TESTS

- 5.1. The Contractor shall offer each and every equipment for test at the works or otherwise test certificate shall be furnished in case inspection is waited.
- 5.2. All the materials shall be approved before starting the work.
- 5.3. PVC switchboards shall be ISI and approved make.



- 5.4. Wiring shall be approved before boards or blocks are fixed up.
- 5.5. Casing-N-Capping / Conduit pipes shall be inspected before erection.
- 5.6. Mounting arrangement of the ceiling fans / light fittings / spotlights shall be inspected and approved by the Site Engineer, MDL.
- 5.7. Connections to earth electrodes shall be inspected and got approved by the Site Engineer, MDL, prior to connection.

6. DRAWINGS & CERTIFICATION:

The contractor shall submit, following certificates, in duplicate, to the Site Engineer, MDL, for record purpose after the completion of the work.

- 6.1. Completion Drawings of in built layout of cable (lighting DB, Power DB, Computer power DB, etc.)
- 6.2. Copies of Completion Certificate and Test Report submitted to Manufacturer.
- 6.3. Any other Certificate / Reports as called for by the Site Engineer, MDL.
- 6.4. Instruction & Operation Manuals, Catalogues, etc.
- 6.5. On completion of the work, 3 (Three) sets of wiring diagram with proper symbol shall be prepared and submitted to the Site Engineer, MDL.

All wiring diagrams shall indicate clearly the main Power Distribution Board, MCB Distribution Board, switchboards, the runs of various mains and sub-mains and position of all the points and their control. All circuits shall be clearly indicated and numbered in the wiring diagrams and all points shall be given the electrical connection.

II. TECHNICAL SPECIFICATION

1. WIRING (WG)

General:

All material shall be conforming to relevant standard as per BIS and shall carry ISI mark. If any particular category of material for which ISI mark is not available in market, it shall either carry valid 'Quality Control' certificate issued by the Chief Engineer (Elect), P.W. Dept. Maharashtra State Govt. as included in approved list.

Work shall be carried out as per the Method of Construction specified by BIS. If there is no reference for particular Method of Construction in IS, such work shall be carried out as per the approved Method of Construction specified in chapter 16 of P.W. Dept. Handbook.

Material and Work not qualifying to any provision mentioned above shall be to the satisfaction of the Engineer in Charge.

Material shall be tested in approved Testing Laboratory and shall qualify the relevant tests as and when directed by Engineer In-Charge.

Recommended Standards:

The following list is showing Indian Standards, which are acceptable as good practice, and accepted standards.

IS 732: 1989	Code of Practice for Electrical Wiring Installations?
IS 4648: 1968	Guide for Electrical Layout in residential buildings
IS 9537 (Part 1): 1980	Conduits for Electrical Installations: General requirements
IS 9537 (Part 2): 1981	Rigid Steel Conduits
IS 9537 (Part 3): 1983	Rigid Plain Conduits of insulating material
IS 3419: 1989	Specifications for fittings for rigid non metallic conduits
IS 694:	PVC insulated cables for working voltages up to and including 1100V
IS 1554 (Part 1): 1988	PVC insulated (heavy-duty) electric cables for working voltages up to and including 1100V
IS 3961 (Part 5): 1968	Recommended current ratings for cables: PVC insulated light duty cables.



IS 4288: 1988	PVC insulated (heavy duty) electric cables with solid aluminium conductors for voltages up to and including 1100V
IS 14772: 2000	Specifications for Accessories for household and similar fixed Electrical Installations
IS 3043: 1987	Code of practice for Earthing
SP 30: 1984	National Electrical Code
SP 7 (Group 4): 2005	National Building Code
IS 14927(Part 1): 2001	Cable Trunking and Ducting systems for electrical installations.

1.1 Conduits / Trunking (Casing Capping) (Surface type)

1.1.1 PVC Conduits Specification No : (WG-MA/CON)

Scope:

PVC Conduits: Surface

Providing specified PVC Conduits and erecting as per approved Method of Construction; on surface of wall / ceiling, etc. including entries through walls / slabs / flooring as per requirement, and with all necessary hardware, accessories such as Spacers, Saddles, Bends, Tees, Junction boxes, Check-nuts, etc.; making conduits erection work rigid and duly finishing, removing debris from site.

Material:

PVC Conduit:

PVC pipe minimum 20mm dia and above depending on No. of wires to be drawn (refer Table No. 1/2) ISI mark, HMS grade (2mm thick), accessories for PVC pipes of the same make that of pipe; such as Spacers & Saddles, Couplers, Bends, inspection or non-inspection type Elbows, Tees, Junction boxes of required ways and resin / adhesive to make all joints rigid. Black pipe shall not be used for surface type wiring.

Hardware:

Sheet Metal (SM) screws of sizes specified in Method of Construction, washers, rawl / PVC / fill type plugs, wooden gutties, etc.

Method of Construction:

Erection PVC Conduits for Surface type wiring:

General:

Erection shall be done as per the final approved layout, in perfect level and plumb. Conduits shall be firmly fixed on spacers with saddles. Fixing of spacers shall be equidistant and at ends, bends, elbows, junction boxes, couplings, boards. CSK screws of minimum 35x8 mm and suitable plugs shall be used for fixing spacers and 12x5 mm, round headed screws for fixing saddles on spacers. In case of stonewalls wooden gutties shall be grouted in wall for fixing of spacers. Distance between 2 spacers shall not be more than 600mm. Size of conduit shall be correct depending on number of wires to be drawn (as per Table No. 1/2 for PVC conduits). Separate pipe shall be used for each phase in 1-ph distribution and for power and light distribution. Also for wiring for other utilities like data, telephone, TV cabling distance between pipes shall not be less than 300 mm. or ant electrostatic partition/separate pipe should be used. Adequate use of conduit accessories shall be made at required locations. Entries in wall shall be at level of surface and with colour coding conduit (For visual identification) as per Table No. 1/4. Flexible conduits shall be used at expansion joints.

Especially for PVC Conduits of surface type wiring:

In addition to general instructions above, all joints shall be made rigid with resin / adhesive. Wherever offsets are necessary, it shall be done with bending spring. Size of conduit shall be as per Table No. 1/2 for number of wires to be drawn through the conduit.

1.1.2 PVC Trunking (Casing capping)Specification No (WG-MA/CON)**Scope:**

PVC Trunking:

Providing specified PVC Trunking (Casing capping) and erecting as per approved Method of Construction, on surface of wall / ceiling, etc. including entries made with PVC conduit through walls / slabs / flooring as per requirement with all necessary hardware, accessories such as inner / outer Elbows, Tees, Junction boxes, etc. and duly finishing, removing debris from site.

Material:

PVC Trunking (casing capping):

PVC Trunking (casing capping) ISI mark, 1.2 mm thick, minimum 20 mm width and above depending on No. of wires to be drawn (Refer Table No 1/3 for the size of trunking and number of wires to be drawn); with double locking arrangement, 1.8mm thick push-fit joints/ accessories for PVC trunking such as couplers, elbows, internal / external angles, junction boxes of required ways of the same make.

Hardware:

Sheet Metal (SM) screws of sizes specified in Method of Construction, washers, rawl / PVC / fill type plugs, wooden gutties, etc.

Method of Construction:**Erection of PVC Trunking for surface type wiring:**

Erection shall be done as per the final approved layout. The Trunking shall be in perfect level and plumb. Screws of minimum 35x8 mm and suitable plugs shall be used for fixing. In case of stonewalls wooden gutties shall be grouted in wall for fixing of screws of Trunking. Distance between 2 screws shall not be more than 600 mm. Size of Trunking shall be correct depending on number of wires to be drawn as per Table No 1/3 but not less than 20mm. Separate Trunking shall be used for each phase in single phase distribution and for power and light distribution and also for wiring of other utilities like data, telephone, TV cabling and distance of 300 mm shall be maintained between the Trunking or anti electrostatic partition to be provided. Double locking shall be checked while fixing capping. Adequate use of accessories shall be made at joints and at required locations.

1.2 **Bunch of wires:****Specification No (WG-MA/BW)****Scope:****Bunch of wires:**

Providing specified wires and drawing them through provided conduits / trunking and / or as directed; with coded ferrules, harnessing the bunch of wires with necessary material when used in panel boards, duly connecting / terminating with lugs, and testing for safety and beneficial use.

Material:**Wires: in conduits / Trunking / panel boards**

Mains / Sub-mains / Circuit mains (comprising phase and neutral wires):

PVC insulated wire of specified size, minimum FR grade insulation, copper conductor of electrolytic tough pitch (ETP) grade, having insulation of 1.1 kV grade, ISI marked, of required colour coding as per Table No 1/5.

Wires: open



PVC insulated and PVC sheathed wire of specified size, minimum FR grade insulation, copper conductor of electrolytic tough pitch (ETP) grade, having insulation of 1.1 kV grade, ISI marked, of required colour coding as per Table No 1/5.

Earth Continuity Wire:

PVC insulated wire minimum FR grade insulation copper conductor of electrolytic grade, having insulation of 1.1 kV grade, of green / green yellow colour, ISI marked, of specified size but not less than 2.5 Sq mm as per Table No 1/5.

Lugs: Copper lugs of appropriate size & type

Other material: Rubber grommet, bush, harnessing material, flexible conduit etc.

Method of Construction:

Bunch of wires:

Drawing of wires: General

Specified wires shall be drawn with adequate care. Correct colour coding shall be used for phase, neutral and earth. Wires shall not have intermediate joint in between terminals of the accessories. Earth-wire and Return wire (neutral) may be looped only within circuit. For lighting load or single-phase distribution wires of two different phases shall not be drawn in single pipe. Wires shall be terminated in the terminals of accessories only, with appropriate type and size of lugs.

Drawing of wires: through PVC conduits

Bush shall be used at pipe opening to protect wire insulation from getting damaged due to sharp edges. Number of wires shall not exceed with respect to size of pipe.

Drawing of wires: through Rigid Steel conduits

Bush shall be used at pipe opening to protect wire insulation from getting damaged due to burrs / sharp edges. Number of wires shall not exceed with respect to size of pipe as per Table No. 1/1.

Open Wire bunch: Open wires shall be erected with due care so as to avoid chances of any mechanical injury. Harnessing shall be done with required material in an approved manner in panel boards or where ever necessary. For covering lead wires flexible conduit shall be used with gland as per necessity.

Testing:

Insulation resistance test:

All wiring shall be tested with 500V Meggar between phases, phase – neutral and to Earth. IR value shall not be less than 1M-ohm.

Earth continuity:

Earth continuity shall be ensured between termination points of Earth wire.

Polarity Test:

Test shall be carried out for ensuring the correct polarity in switch and plug.

Mode of Measurement:

Measurement shall be carried out on the basis per running meter length of single wire or bunch as specified.

1.3 **Mains (surface type)**

1.3.1 Mains in PVC Trunking (casing capping) **Specification No (WG-MA/PC)**

Scope: Surface type Mains in PVC Trunking (casing capping)



Providing specified PVC Trunking, Wires and erecting the Trunking as per approved Method of Construction; on surface of wall / ceiling, etc. including entries made with PVC conduit through walls / slabs / flooring as per requirement with all necessary hardware, accessories such as inner / outer Elbows, Tees, Junction boxes, etc; including erection of specified wires in PVC trunking, with coded ferrules and duly connecting with lugs, and finishing, removing debris from site; testing for safety and beneficial use.

Material:**PVC Trunking:**

PVC Trunking (casing capping) ISI mark, 1.2 mm thick, minimum 20 mm width and above depending on No. of wires to be drawn (Refer Table No 1/2 for the size of trunking and number of wires to be drawn); with double locking arrangement, 1.8mm thick push-fit joints/ accessories for PVC trunking such as couplers, elbows, internal / external angles, junction boxes of required ways of the same make.

Hardware:

Sheet Metal (SM) screws of sizes specified in Method of Construction, washers, rawl / PVC / fill type plugs, wooden gutties, etc.

Wires: Mains / Sub-mains / Circuit mains (comprising phase and neutral wires)

PVC insulated wire of specified size, minimum FR grade insulation, copper conductor of electrolytic grade, having insulation of 1.1 kV grade, ISI marked, of required colour coding as per Table No 1/5

Earth Continuity Wire: PVC insulated wire minimum FR grade insulation copper conductor of electrolytic grade, having insulation of 1.1 kV grade, of green colour, ISI marked, of specified size but not less than 1.5 Sqmm as per Table No 1/5

Lugs: Copper lugs of appropriate type and size.

Other material: Flexible PVC conduit, gland coded ferrules, etc.

Method of Construction:**Erection of PVC Trunking for surface type wiring**

Erection shall be done as per the final approved layout. The Trunking shall be in perfect level and plumb. Screws of minimum 35x8 mm and suitable plugs shall be used for fixing. In case of unlevelled surface number and size of screws shall be changed to higher size as per requirement and in case of stonewalls wooden gutties shall be grouted in wall for fixing of screws of Trunking. Distance between 2 screws shall not be more than 600 mm. Size of Trunking shall be correct depending on number of wires to be drawn as per Table No 1/3 but not less than 20mm. Separate Trunking shall be used for each phase in 1-ph distribution and for power and light distribution and also for wiring of other utilities like data, telephone, TV cabling and distance of 300 mm shall be maintained between the Trunking or anti electrostatic partition is to be provided. Double locking shall be checked while fixing capping. Adequate use of accessories shall be made at joints and required locations.

Erecting wires in Trunking:

Wires shall be erected within Trunking with adequate care. Correct colour coding as per Table No. 1/5 shall be used for phase, neutral and earth. Wires shall not have intermediate joint in between terminals of the accessories. Earth-wire and Return wire (neutral) may be looped only within circuit. For lighting load or single-phase distribution wires of two different phases shall not be erected in single Trunking. Wires shall be terminated in the terminals of accessories only, with appropriate type and size of lugs. Insulated Earth wire of green or green-yellow colour of minimum 2.5 sq mm or as per specified shall be erected through Trunking. Number of wires shall not exceed with respect to size of Trunking as per Table No. 1/3. After erection of wires double locking shall be checked while fixing capping. At the termination end flexible PVC conduit shall be used with gland as per required.

1.4 Point wiring (Surface type)**Specification No (WG-PW/SW)****Scope:**

Point wiring (Surface type):



Providing all required approved specified material including hardware and erecting wiring on surface of wall, ceiling from switch board to outlet for light / fan / bell / independent plug point, in rigid steel / PVC conduit or PVC trunking as specified; fixing one board with a 1 way switch for one way point or two boards with a 2 way switch on each board, in case of 2 way point; for controlling power supply and one board / block with accessory for outlet of light / fan / plug and terminating wires within as per approved Method of Construction; removing all debris and testing the installation for safety and beneficial use.

Material:

Point wiring (Surface)

PVC Trunking:

PVC Trunking (casing capping) ISI mark, 1.2 mm thick, minimum 20 mm width and above depending on No. of wires to be drawn (Refer Table No 1/2 for the size of trunking and number of wires to be drawn); with double locking arrangement, 1.8 mm thick push-fit joints / accessories for PVC trunking such as couplers, elbows, internal / external angles, junction boxes of required ways of the same make.

Wires: Phase and Neutral

PVC insulated wires of specified size, 1.1 kV, & minimum FR grade insulation, electrolytic tough pitch (ETP) copper conductor, ISI marked, of required colour coding as per Table No 1/5

Earth Wire:

PVC insulated minimum FR grade copper wires of electrolytic grade, having insulation of 1.1 kV grade, of green / green-yellow colour, ISI marked, 2.5 Sqmm or bare copper wire of 14g

Accessories:

Switch: 1 or 2-way Piano type 6/10 A, 1 or 2-way Modular type switch 6/10A.

Outlet: 6A angle / batten lamp holder or 3 plate ceiling-rose or Bakelite / porcelain three way connector or if plug point, 6A, 3-pin plug socket.

Boards:

Switchboards shall be double walled (back and front) of suitable size, to accommodate independent slot for each switch, socket, fan regulator. Boards shall be made up of 4mm thick marine grade plywood for back and front fixed on wooden frame with 0.8mm thick laminate pasted on exposed portion of front ply, totally varnished and with either brass hinged door or screwed top.

Or

As above with 3mm thick Bakelite/Hylam top instead of laminated front ply.

Or

Board made from Filled polypropylene.

Round/Square double wooden block or PVC board for mounting light / fan outlet accessory.

Hardware:

Sheet Metal (SM) screws of sizes specified in Method of Construction, washers, rawl / PVC / fill type plugs, wooden gutties, PVC/ rubber bushings etc.

Method of Construction:



Point wiring (Surface)

Erection of conduits:

General:

Erection shall be done as per the final approved layout, in perfect level and plumb. Conduits shall be duly screwed and firmly fixed on spacers with saddles. Fixing of spacers shall be equidistant and at ends, bends, elbows, junction boxes, couplings, boards. CSK screws of minimum 35x8 mm and suitable plugs shall be used for fixing spacers and 12x5 mm round headed for fixing saddles on spacers. In case of stonewalls wooden gutties shall be grouted in wall for fixing of spacers and saddles. Distance between 2 spacers shall not be more than 600mm. Separate pipe shall be used for each phase in 1-ph distribution and for power and light distribution. Also for wiring for other utilities like data, telephone, TV cabling distance between pipes shall not be less than 300 mm. Adequate use of conduit accessories shall be made at required locations. Entries in wall shall be at level of surface conduit with colour coding (For Visual identification) as per Table No 1/4. Flexible conduits shall be used at expansion joints. Bushing shall be provided at open ends.

Erection of conduits:

PVC pipes for surface type wiring:

In addition to General conditions above, all joints shall be made rigid with resin / adhesive. Wherever offsets are necessary, same shall be done with bending spring. Size of conduit shall be correct depending on number of wires to be drawn as per Table No. 1/2.

Erection of PVC Trunking for surface type wiring:

Erection shall be done as per the final approved layout. The Trunking shall be in perfect level and plumb. Screws of minimum 35x8 mm and suitable plugs shall be used for fixing. In case of unlevelled surface number and size of screws shall be changed to higher size as per requirement and in case of stonewalls wooden gutties shall be grouted in wall for fixing of screws of Trunking. Distance between 2 screws shall not be more than 600 mm. Size of Trunking shall be correct depending on number of wires to be drawn as per Table No 1/3 but not less than 20mm. Separate Trunking shall be used for each phase in 1-ph distribution and for power and light distribution and also for wiring of other utilities like data, telephone, TV cabling and distance of 300 mm shall be maintained between the Trunking. Double locking shall be checked while fixing capping. Adequate use of accessories shall be made at joints and required locations.

Drawing of wires: General

Wires shall be drawn with adequate care. Correct colour coding as per Table No 1/5 shall be used for phase, neutral and earth. Wires shall not have intermediate joint in between terminals of the accessories. Earth-wire and Return wire (neutral) may be looped within circuit. For lighting load distribution wires of two different phases shall not be drawn in single pipe. Wires shall be terminated in the terminals of accessories only. Insulated Earth wire of green or green-yellow colour of minimum 2.5 sq mm or as per specified shall be erected wherever necessary. In case of 2-way point wiring additional wires of phase conductor shall be provided between the 2-way switches.

Erecting wires in Trunking:

Wires shall be erected within Trunking with adequate care. Number of wires shall not exceed with respect to size of Trunking as per Table No. 1/3. After erection of wires double locking shall be checked while fixing capping.

Fixing Switchboards and accessories:



Control switchboards shall generally be erected at 1.35m height or as specified and fixed with minimum 2 Nos. (and more as per size of board) of screws of length not less than 50mm, termination of wires shall be done with lugs on switch and other accessories only by carefully inserting all strands in lugs, terminals and proper tightening. Switches shall be provided on phase wire only. Bare wire shall not be used for looping incoming supply to switches and for earthing inside switchboards. For plug socket phase wire shall be connected in right side terminal when seen from front. Proper termination of earth wire in Earth terminal shall be ensured.

Testing:

Insulation resistance test:

All wiring shall be tested with 500V Meggar between phases, phase – neutral and to Earth. IR value shall not be less than 1M-ohm.

Earth continuity:

Earth continuity shall be ensured at all earth terminals of plug outlets and at earth terminals of metal enclosures.

Polarity test:

Polarity test shall be carried out for ensuring the correct polarity in switch and plug.

Mode of Measurement:

Measurement shall be carried out on the basis per number of points, **for the point length up to 6 metre between switch and outlet.** For the length exceeding 6 metre 10% of overall rate shall be added for every 1m.

1.2 Conduits (Concealed type)

Specification No (WG-MA/CC)

1.2.1 Concealing PVC Conduits in RCC work

Scope:

Providing specified PVC conduit and laying / erecting in RCC work, such as slab, beam, column before casting as per approved Method of Construction along with of all required material including hardware, binding wire, fish wire; accessories such as deep / long neck PVC junction boxes, PVC / MS junction / draw-in boxes, check-nuts, flexible PVC pipe, drawing fish-wires and making all piping rigid, removing debris from site and supervising the work during casting to confirm rigidity, continuity and avoid damages.

Material:

PVC Conduit:

PVC pipe of minimum 20mm dia and above depending on No. of wires to be drawn (refer Table No.1/2); ISI mark, HMS grade (2mm thick), accessories for PVC pipes of the same make that of pipe; Couplers, long Bends, deep Junction boxes of required ways and resin / adhesive to make all joints rigid.

Junction boxes / Draw-in boxes:

Junction box shall be 5 sided with removable top plate and of suitable size to accommodate No. of entries; PVC or fabricated from 16g CRCA sheet steel with earth terminal duly treated with antirust treatment and painted with two coats of red oxide paint. There shall be knockout holes in required numbers and dia. for entry of conduit pipes and arrangement to fix cover plates on it.

Hardware:

'U' nails, plumbing and general use nails of required sizes, washers, check-nuts, steel binding wire, steel fish wire etc.

Method of Construction:

Concealing of PVC conduits:

General:



Work shall be done in co-ordination with civil work and to suite final approved layout. Size of conduit shall be correct depending on number of wires to be drawn. (Table No 1/2 for PVC conduits) Separate pipe shall be used for each phase in single phase distribution and for power and light distribution and also for wiring for other utilities like data, telephone, TV cabling, etc. The distance between pipes shall not be less than 300 mm or anti electrostatic partition is to be provided. Adequate use of conduit accessories shall be made at required locations. Entries in wall shall be at level of corresponding conduit with colour coding as per Table No. 1/4. (For Visual identification) Flexible conduits shall be used at expansion joints. Erection shall be done as per the layout finalized, with minimum sharp bends, with junction boxes at angular junctions and for straight runs at every 4.25m, in such manner so as to facilitate drawing of wires. All PVC conduit bending shall be done with Bending Spring. All joints shall be made rigid with resin.

Concealing of PVC conduits:**In RCC work:**

Work shall be commenced after fixing of steel re-enforcement on centering material. Conduits shall be firmly fixed on steel of RCC work by binding wire. Fixing of conduits shall be such that it will remain rigid during casting of slab, beam, and column even after use of vibrator. Deep junction boxes and other draw-in boxes shall be such that their open end and centering material will not have gap in between so as to avoid concrete entering inside even after fixing covers to steel re-enforcement; and be filled with dry sand. Open ends of conduits; to be concealed in walls, shall be provided with couplers / sockets at ends and be flush with bottom of beam, and located at the center of the beam. As far as possible bunching / grouping of conduits shall be avoided so that it will not affect strength of RCC work especially in beams. Suitable steel fish wire shall be drawn through in the conduits for drawing of wires later on.

1.2.2 Concealing PVC Conduits in walls / flooring**Scope:**

Providing specified PVC conduit and erecting / laying in wall, flooring by making chases / grooves / entries as per approved Method of Construction along with of all required material including hardware such as 'U' nails, binding wire, fish wire; accessories such as PVC / MS junction boxes / inspection boxes, check-nuts, flexible PVC pipe, glands, drawing fish-wires and making all piping rigid, refinishing the surface with cement mortar, removing debris from site.

Material:***PVC Conduit:***

PVC pipe minimum 20mm dia and above depending on No. of wires to be drawn (refer Table No.1/2), ISI mark, HMS grade (2mm thick), accessories for PVC pipes of the same make that of pipe; Couplers, long Bends, Junction boxes of required ways, type and resin / adhesive to make all joints rigid.

Junction boxes / Draw-in boxes:

Junction box shall be 5 sided with removable top plate and of suitable size to accommodate No. of entries; PVC or fabricated from 16g CRCA sheet steel with earth terminal duly treated with antirust treatment and painted with two coats of red oxide paint. There shall be knockout holes in required numbers and dia. for entry of conduit pipes and arrangement to fix cover plate on it.

Hardware:

'U' nails, plumbing and general use nails of required sizes, washers, check-nuts, steel binding wire 20g, steel fish wire, etc.

Other material for Surface finishing: Cement, sand, putty, and water.



Method of Construction:

Concealing of PVC conduits: (General)

Work shall be done in co-ordination with civil work to suite final approved layout. Size of conduit shall be correct depending on number of wires to be drawn. (Table No 1/2 for PVC conduits) Separate pipe shall be used for each phase in 1-ph distribution and for power and light distribution and also for wiring for other utilities like data, telephone, TV cabling, etc. for which the distance between pipes shall not be less than 300 mm or anti electrostatic partition is be provided. Adequate use of conduit accessories shall be made at required locations. Entries in wall shall be at level of corresponding conduit with colour coding as per Table No.1/4. (For Visual identification) Flexible conduits shall be used at expansion joints. Erection shall be done as per the layout finalized, with minimum sharp bends, with junction boxes at angular junctions and for straight runs at every 4.25m, in such manner so as to facilitate drawing of wires. All bending of conduits shall be done with Bending Spring. All joints shall be made rigid with resin.

Concealing of PVC Conduits In walls / flooring:

Chases shall be made in walls of adequate width, with cutter and chiseling through it. Necessary finishing of the wall surface shall be done. Work in flooring shall not disturb RCC work, Conduits of adequate size shall be erected with use of appropriate accessories, and 'U' nails. All joints shall be made rigid with resin. Draw-in / inspection boxes shall be fixed with check-nut, flush with surrounding surface and earthed.

1.2.3 Rigid Steel Conduits in RCC work

Specification No (WG-MA/CC)

Scope:

Concealing of Rigid Steel Conduits:

In RCC work:

Providing specified Rigid Steel conduit and laying / erecting in RCC work, such as slab, beam, column before casting as per approved Method of Construction along with continuous earth wire and all required material including earth clips, hardware, binding wire, fish wire; accessories such as deep junction boxes, MS draw-in / junction / inspection boxes, check-nuts, flexible PVC pipe, drawing fish-wires and making all piping rigid, removing debris from site and supervising the work during casting to confirm rigidity, continuity and avoid damages.

Material:

Rigid Steel conduit:

Rigid HG steel screwed conduit, minimum 20mm dia. and higher depending on No. of wires to be drawn as per Table No. 1/1, 16 gauge, ERW grade duly processed for anti-rust treatment and painted with black enamel paint, accessories for rigid steel conduits such as check nuts, long bends, deep junction boxes for slab, regular junction boxes for walls; of required ways, all of the same make.

Earth continuity wire:

GI wire of 2.5 sq. mm; GI earth clips 22g, 10mm width, for fixing earth wire along the conduits.

Junction boxes / Draw-in boxes:

Junction box shall be 5 sided with removable top plate and of suitable size to accommodate No. of entries; fabricated from 16g CRCA sheet steel with earth terminal duly treated with antirust treatment and painted with two coats of red



oxide paint. There shall be knockout holes in required numbers and dia. for entry of conduit pipes and arrangement to fix cover plate on it.

Hardware:

U' nails, plumbing and general use nails of required sizes, washers, check-nuts, steel binding wire 20g, fish wire, etc

Method of Construction:

Concealing of Rigid steel Conduits:

General:

Work shall be done in co-ordination with civil work to suite final approved layout. Conduit shall be duly screwed and size of conduit shall be correct depending on number of wires to be drawn. (Table No.1/1, for Steel conduits) Separate pipe shall be used for each phase in 1-ph distribution and for power and light distribution and also for wiring for other utilities like data, telephone, TV cabling, etc. for which distance between pipes shall not be less than 300 mm or anti electrostatic partition is to be provided. Adequate use of conduit accessories shall be made at required locations. Entries in wall shall be at level of corresponding conduit with colour coding as per Table No. 1/4. (For visual identification). Flexible conduits shall be used at expansion joints. Erection shall be done as per the layout finalized, with minimum sharp bends, with junction boxes at angular junctions and for straight runs at every 4.25m, in such manner so as to facilitate drawing of wires. All bending of conduits shall be done approved manner without changing the cross-section.

In RCC work:

Work shall be commenced after fixing of steel (re-enforcement) on centering material. Conduits shall be firmly fixed with steel in slab by binding wire. Fixing of conduits shall be possibly done with welding tags so that it will remain rigid during casting of slab, beam, and column even after use of vibrator. Deep junction boxes and other draw-in boxes shall be such that their open end and centering material will not have gap in between so as to avoid concrete entering inside even after fixing covers to steel re-enforcement; and be filled with dry sand. Open ends of conduits; to be concealed in walls, shall be provided with couplers / sockets at ends and be flush with bottom of beam, and located at the center of the beam. As far as possible bunching / grouping of conduits shall be avoided so that it will not affect strength of RCC work especially in beams. Suitable steel fish wire shall be drawn through the conduits for drawing of wires later on.

1.2.4 Rigid steel Conduits in walls / flooring

Specification No (WG-MA/CC)

Scope:

Concealing of Rigid steel Conduits:

In walls / flooring:

Providing specified Rigid Steel Conduits and erecting in wall, flooring by making chases / grooves / entries as per approved Method of Construction along with continuous earth wire and all required material including earth clips hardware such as 'U' nails, binding wire, fish wire; accessories such as MS junction / inspection boxes, check-nuts, flexible PVC pipe, drawing fish-wires and making all piping rigid, refinishing the surface with cement mortar, removing debris from site.

Material:

Rigid Steel conduit:

Rigid steel HG conduit minimum 20mm dia. and 16 gauge, ERW grade duly processed for anti-rust treatment and painted with black enamel paint, accessories for rigid steel conduits such as check nuts, long bends, deep junction



boxes for flooring, regular junction boxes for walls; of required ways all of the same make.

Earth continuity wire:

GI wire of 2.5 sq. mm, GI earth clips 22g, 10mm width, for fixing earth wire along the conduits.

Junction boxes / Draw-in boxes:

Junction box shall be 5 sided with removable top plate and of suitable size to accommodate No. of entries; fabricated from 16 SWG CRCA sheet steel with earth terminal duly treated with antirust treatment and painted with two coats of red oxide paint. There shall be knockout holes in required numbers and dia. for entry of conduit pipes and arrangement to fix cover plates on it.

Hardware:

'U' nails, plumbing and general use nails of required sizes, washers, check-nuts, steel binding wire 20g, GI fish wire, etc.

Other material for Surface finishing: Cement, sand, putty and water.

Method of Construction:

Concealing of Rigid Steel Conduits:

General:

Work shall be done in co-ordination with civil work to suite final approved layout. Size of conduit shall be correct depending on number of wires to be drawn. (Table No.1/1, for Steel conduits) Separate pipe shall be used for each phase in 1-ph distribution and for power and light distribution and also for wiring for other utilities like data, telephone, TV cabling, etc; for which the distance between pipes shall not be less than 300 mm or anti electrostatic partition is to be provided. Adequate use of conduit accessories shall be made at required locations. Entries in wall shall be at level of corresponding conduit with colour coding as per Table No. 1/4. (For Visual identification) Flexible conduits shall be used at expansion joints. Erection shall be done as per the layout finalized, with minimum sharp bends, with junction boxes at angular junctions and for straight runs at every 4.25 metre, in such manner so as to facilitate drawing of wires. All bending of conduits shall be done approved manner without changing the cross-section.

Concealing of Rigid Steel Conduits in walls/ flooring:

Chases shall be made in walls of adequate width, with cutter and chiseling through it. Necessary finishing of the wall surface shall be done. Work in flooring shall not disturb RCC work, Conduits of adequate size shall be erected with use of appropriate accessories, and hardware like 'U' nails, etc. Draw-in / inspection boxes shall be fixed with check-nut, flush with surrounding surface and earthed.

Testing:

Earth continuity:

Earth continuity shall be ensured at termination point of Earth wire, between the ends of metal conduit.

Mode of Measurement:

Measurement shall be carried out on the basis per running meter length of conduit

1.5 TELEPHONE WIRING

1.5.1 General



All material shall conform to relevant standard as per BIS and shall carry ISI mark. If any particular category of material for which PSI mark is not available in market, it shall be approved either by ITD I DOT of Govt. of India. Work shall be carried out as per the Method of Construction specified by BIS and as specified by DOT (Department of Telephone), Govt. of India. Material and Work not qualifying to any provision mentioned above shall be to the satisfaction of Engineer in Charge.

1.5.2 Scope:**Specification No (WG-TW)**

To provide wiring for telephone on surface of wall or ceiling concealed in slab, wall, under flooring, etc, through existing metallic conduits, rigid PVC conduits, PVC trunking, with all necessary hardware, material, etc. as specified. To provide, install, test & commission the instruments / equipments and accessories used in telephone system, such as; Main Distribution Frames (MDF), Krone Modules, Over Voltage Magazine, PBX / EPABX, CO-axial cable, Rosette box, Jumper wire, etc.

1.5.3 Material:

PVC Telephone cable: PVC insulated Tinned copper solid conductor with minimum 0.5 mm dia. (Single & Multi pair) properly paired and colour coded, shall be terminated on KRONE module with suitable tool.

Jelly filled Armoured Telephone cable: PVC insulated, PVC sheathed with steel armoring, Tinned copper solid conductor with minimum 0.5 mm dia multi pair, with Jelly, properly paired and colour coded.

Saddles: Saddles fabricated from G I sheet of required gauge (16/18 gauge) either galvanized finish or painted with superior quality enamel black paint, with necessary shearing for mechanical strength, semi circular shaped with extended piece having suitable holes for fixing on spacer.

Hardware: Sheet Metal (SM) screws of required sizes, plugs, wooden gutties, etc.

MDF: Manufactured by reputed manufacturer of specified capacity, facility for wall mounting, with door & lock, aluminium frame for fixing of KRONE, duly enclosed in cabinet made from 18 SWG CRCA sheet with powder coating of required colour.

Junction box: Manufactured by reputed manufacturer of specified capacity, facility for + wall mounting, with door & lock, aluminium frame for fixing of Krone, duly enclosed in cabinet made from 18 SWG CRCA sheet with powder coating of required colour. The depth of the box should consider the height of KRONE module plus protection magazine.

Rosette box: PVC I Bakelite box with LED indicator, RJ 11 jack, facility for fixing on wall.

Jumper wire: Twin twisted PVC insulated with Tinned copper solid conductor minimum 0.5 mm dia.

KRONE Module: Disconnection type KRONE module having capacity to connect 10 pairs with silver-plated terminal contacts.

RG-11 Co-axial low voltage grade cable: PVC insulated with Tinned copper solid conductor minimum 0.5 mm dia, with connector at both ends suitable for termination in RJ type socket.

PBX (Analogue type): Manufactured by reputed manufacturer and approved by Telephone Engineering Certificate (TEC) of specified extensions, having following features:

1.5.4 Method of Construction:

Drawing of telephone wire through Steel conduit/ PVC conduit/ PVC Trunking:

As specified in Chapter for Point Wiring.

Erection of MDF Junction box / Rosette box / PBX / EPABX, etc:

Specified equipment shall be fixed to wall with minimum 50x8 mm SM screws, with necessary plugs, wooden gutties, etc. or may be fixed on Table Top if required.

1.5.5 Mode of Measurement:

Work done for telephone in Steel I PVC conduit I PVC Trunking will be measured on running meter basis, (i.e. per running meter) for each single run. For the other accessories / equipments shall be done as per unit specified. (I.e. Job / each

**1.6 NETWORKING (Computer Cabling)****A) UTP Networking Cable:****General:**

All material shall conform to relevant standard as per ISO/IEC11801, CENELEC EN50173 & TIA/EIA 568-B2-1; CUL listed & ETL verified.

Material and Work not qualifying to any provision mentioned above shall be to the satisfaction of Engineer in Charge.

Scope:**Specification No (WG-COC/NC)**

To lay the cables for Computers on surface of wall or ceiling concealed in slab, wall, under flooring etc. through existing metallic conduits, rigid PVC conduits, PVC trunking, with all necessary hardware, material, etc. as specified. The cable shall be used only for connections between Information Outlet & Patch/ Multimax Panel. (Exception: For making MDIX patch cord)

Material:**UTP cable:**

4 pairs, 100 ohms, unshielded twisted pair (UTP), each pair separated by a PE former (Star shaped) solid 23AWG tinned copper conductor rated for temperature of 75°C, PVC insulated grey colour with following types as in the table 1.12/1

Table 1.12/1

Sr. No.	Type	Class	Tested frequency
1	Cat 6	E	350MHz
2	Cat 6+	E	500MHz

1. The Category 6 cable and Category 6 channel components shall be manufactured by a single manufacturer. The manufacturer shall warrant the Category 6 channel cable, components, and applications for a period of 20 years.
2. The Delay Skew on the 100 meter channel shall not exceed 30 ns
3. The 20-year warranty shall be a transferable warranty and has component replacement policy in case of manufacturing defect
4. Category 6, 100mtr channel, **4-connection** model should guarantee 400% margin over standard NEXT specification across swept frequency
5. Category 6, 100mtr channel, **6-connection** model should guarantee +4dB margin over standard NEXT Specification across swept frequency (1~250MHZ)
6. The high performance Category 6 UTP cable 23AWG shall be of the traditional round design with Mylar bisector tape Non-Plenum rated.
7. The cable shall support Voice, Analog Baseband Video/Audio, Fax, Modem, Switched-56, T-1, ISDN, RS-232, RS422, RS-485, 10BASE – T Ethernet, Token Ring, 100Mbps TP-PMD, 100BASE-T Ethernet, 155 Mbps ATM, AES/EBU Digital Audio, 270 Mbps Digital Video, 622 Mbps 64-CAP ATM and emerging high-bandwidth applications, including 1 Gbps Ethernet, gigabit ATM, IEEE 1394B S100 and S400, as well as all 77 channels (550 MHz) of analog broadband video.
8. The cable jacket shall comply with Article 800 NEC for use as a non-plenum cable. The 4 pair UTP cable shall be UL® and c (UL®) Listed Type CM.
9. Performance shall be characterized to 550 MHz to support high-bandwidth video applications

Non Plenum CAT6 UTP Cable

- 1 Weight=25.3 lb (1000 ft.)
- 2 Jacket Thickness=.022 in



- 3 Outside Diameter=0.232 in
- 4 Conductor Diameter=.022 in
- 5 Insulation Type=High density Polyethylene
- 6 Jacket Material=PVC
- 7 Maximum Pulling Tension=25 lbs
- 8 Nom. Velocity of Propagation=0.69
- 9 Max DC Resistance=9.83 Ohms/100m
- 10 Mutual Capacitance @ 1 kHz = 4.95 nF/100m
- 11 Operating Temperature= -20 to 60° C
- 12 The high performance Category 6 UTP cable shall be of the **traditional round design with Mylar bisector tape.**
- 13 The 4 pair UTP cable shall be UL Type CM (non-plenum)
- 14 Performance shall be characterized to 550 MHz to support high-bandwidth video applications

Method of Construction:

The cable shall be laid in provided separate casing n capping/ PVC conduit/ trunking 400mm away from electrical cables wherever required without sharp bends. The cable shall be spliced at both the ends for punching/ crimping at keystone jacks/ UTP connectors.

Mode of measurement: Executed quantity shall be measured on running metre basis.

B) UTP Patch cord**Scope:****Specification No (WG-COC/PC)**

Structured cabling, to make connections from switch to patch panel or information outlet to computer

Material:**UTP Patch Cord:**

Assembly (conforming to EIA/TIA 568B-2-1) of Cat 6 type 4 unshielded twisted pair 24-26AWG (0.51mm-0.40mm), each pair separated by a PE former (Star shaped) 100 ohms stranded wire PVC insulated cables with modular RJ-45 polycarbonate UL94V housing 15milliohms gold over nickel contacts (superior three piece connector) crimped on both ends with T568A & T568B wiring schemes with 8P8C connection. The cord shall be branded. The cords shall be used in structured cabling in accordance with following table 1.12/2.

Table 1.12/2

Sr. No.	Length	Use in
1	1m	from switch to patch panel



2	3m	from computer to information outlet
---	----	-------------------------------------

All patch cords shall exceed TIA/EIA and ISO/IEC Category 6/Class E specifications.
All patch cords shall be backward compatible with Category 5 and Category 5E systems.
The patch cords shall incorporate an anti-snag feature that provides maximum protection from snagging during moves and re-arrangements.
Patch cords shall be UL listed, UL-C certified and AUSTEL approved.
Patch cords shall support network line speeds in excess of 1 gigabit per second.

Physical Specifications:

Contact Material:	Phosphor Bronze
Contact Plating:	Gold 50 micro-inch (1.27 microns) Nickel 100 micro -inch (2.54 microns)
Insertion Life:	750 minimum
Plug Material:	Polycarbonate UL-rated 94 V-O
Operating Temperature:	14°F to 140°F (-10°C to 60°C)

Method of construction:

The patch cord shall be erected for making connections from switch to patch panel or from computer to information outlet.

Mode of measurement: Executed quantity shall be counted on number basis

1.17 Networking Accessories (NAS)**LAN Accessories****A) UTP connector (RJ-45) (UTPC)**

General: All material shall conform to relevant standard as per TIA/EIA 568-B2-1.

Scope: **Specification No (WG-NAS/UTPC)**

To make MDIX (Cross) patch cord required for cascade connections of switches & routers.

Material:

UTP connector:

Assembly of Gold over nickel contacts with 1.5A current carrying capacity, 30V with 15milli ohms contact resistance, 8P8C connection easy to crimp with crimping tool in polycarbonate UL94V housing.

Method of construction:

The UTP cable shall be spliced, untwisted not more than 12mm, inserted into the connector with sequence as shown in the diagram ____ as per EIA/TIA 568 B.2-1 & crimped firmly with crimping tool.

Mode of Measurement: Executed quantity shall be counted on number basis.

B) Information Outlet (Ethernet) (IO)

General:

All material shall conform to relevant standard as per TIA/EIA 568-B2-1.

Scope: **Specification No:(WG-NAS/IO)**

For connecting computers to wired LAN or external wireless Ethernet interface in Wireless LAN.

Material:

Information Outlet Flush/ Surface type:

Spring shuttered front access, high impact plastic body FR grade with high performance unshielded RJ-45 keystone jack (conforming to EIA/TIA 568-B.2-1 Cat 6), 15



milliohms contact resistance, gold over nickel spring contact, 1.5A current carrying capacity, with T568A/T568B wiring option, insulation displacement connector for cable crimping to accept 22-26AWG solid wire for connections up to Gigabit Ethernet.

1. All Category 6 outlets shall meet or exceed Category 6 transmission requirements for connecting hardware, as specified in TIA/EIA 568-B.2-1 Commercial Building Telecommunications Cabling Standard and ISO/IEC 11801:2002 Second Edition.
2. The Category 6 outlets shall be backward compatible with Category 5E, 5 and 3 cords and cables.
3. The Category 6 outlets shall be of a universal design supporting T568 A & B wiring.
4. The Category 6 outlets shall be capable of being in a modular patching situation or as a modular telecommunication outlet (TO) supporting current 10BASE-T, Token Ring, 100 Mbps TP-PMD, 155 Mbps ATM, 622 Mbps ATM using parallel transmission schemes and evolving high-speed, high-bandwidth applications, including Ethernet, 1000BASE-T and 1.2 Gbps ATM.
5. The Category 6 outlets shall be capable of being installed at either a 45° or a 90° angle in any M-series modular faceplate, frame, or surface-mounted box avoiding the need for special faceplates.
6. The Category 6 outlets shall have improved pair splitters and wider channel for enhanced conductor placement. The outlet shall also have a low-profile wire cap, which protects against contamination and secures the connection. Multicolored identification labels shall be available to assure accurate installation.

Hardware:

Sheet Metal (SM) screws of required sizes, plugs, wooden gitties, etc.

Method of construction:

The Information outlet shall be fixed on the wall with sheet metal (SM) screws, rawl plugs/wooden gitties and making due connections as per EIA/TIA 568 B.2-1 by splicing the UTP cable, untwisted up to 12mm & punching the 4 pairs in the keystone jack with the help of punching tool. Not a single wire shall be left without connections.

Mode of Measurement: Executed quantity shall be counted on number basis.

C) Keystone jack (RJ-45) (KJ)

Scope:

Specification No (WG-NAS/KJ)

Structured cabling, to provide connections to switch/ server from desktop computers/ Wireless devices in the patch panel.

Material:

Keystone jack:

High impact plastic body FR grade with high performance unshielded RJ-45 keystone jack (conforming to EIA/TIA 568-B.2-1 Cat 6) , 20milli ohms contact resistance, gold over nickel spring contact ,1.5A current carrying capacity, with T568A/T568B wiring option, insulation displacement connector for cable crimping to accept 22-26AWG solid wire for connections up to Gigabit Ethernet.

Method of construction:

The keystone jack shall be fixed with the help of its self-locking arrangement in provided patch panel before making due connection as per EIA/TIA 568 B.2-1 by splicing UTP cable, untwisted up to 12mm & punching the 4 pairs in the keystone jack with the help of punching tool. Not a single wire shall be left without connections.

Mode of Measurement: Executed quantity shall be counted on number basis.

D) Patch Panel (PP)

Scope:

Specification No (WG-NAS/PP)

Structured cabling for the installation of keystone jacks.

Material:

**Patch Panel:**

Three piece structure including front panel, cable management plate with pre-fitted B-clip to help in routing cables & metal case of 1.6mm thick Mild Steel powder coated panel of size 442.6mm X 44.5mm with the provision for 1 to 24 high density keystone jacks

1. 24 and 48 port patch panels with 110 IDC connector terminations on rear
2. The patch shall have electrical performance guaranteed to meet or exceed TIA/EIA 568-B.2-1 Category 6 and ISO/IEC Category 6/Class E specifications.
3. The panel shall have vertical and horizontal cord organizers available as to improve patch cord management.
4. The panel shall be available in 24-port and 48-port configurations with universal A/B labeling and 110 connector terminations on rear of panel allowing for quick and easy installation of 22 to 24 AWG cable.
5. The patch panel shall have a black powder finish over high-strength steel.
6. The panel shall be equipped with a removable rear mounted cable management bar and front and rear labels.
7. The panel shall be UL listed, UL-C certified and ACA approved.
8. The panel shall support network line speeds in excess of 1 gigabit per second and be backward compatible with Category 5e, 5 and 3 cords and cables.
9. The Category 6 modular jack panels shall meet or exceed the Category 6/Class E standards requirements in ISO/IEC 11801, CENLEC EN 50173 and TIA/EIA and shall be UL Listed.
10. The panels shall be either wall or 19-inch rack mountable.
11. The panels shall meet the following specifications:

Performance Specifications:

	Category 6 Patch Panel	High Performance Solution	Premium Performance Solution
		Category 6 Channel (4 Connectors)	
	Typical Worst	Guaranteed	Guaranteed
	Pair Margin*	Margin**	Margin**
Insertion Loss	64.3%	5.0%	7.5%
NEXT	6.6 dB	6.0 dB	7.0 dB
PSNEXT	7.3 dB	7.5 dB	8.5 dB
ELFEXT	6.4 dB	6.0 dB	8.0 dB
PSELFEXT	6.1 dB	8.0 dB	10.0 dB
Return Loss	6.6 dB	4.0 dB	4.0 dB
Frequency Range	1-250 MHz	1-250 MHz	1-250 MHz

Operational Specifications:

Operating Temperature Range:	14°F to 140°F (-10°C to 60°C)
Storage Temperature Range:	-40°F to 158°F (-40°C to 70°C)
Humidity:	95% (non-condensing)
Nominal Solid Conductor Diameter:	0.025 to 0.020 in (0.64 to 0.51 mm) (22 to 24 AWG)
Nominal Stranded Conductor Diameter:	0.025 to 0.020 in (0.64 to 0.51 mm) (22 to 24 AWG)
Insulation Size:	0.042 in (1.08 mm) (22 to 24 AWG) Maximum DOD
Insulation Types:	All plastic insulates (including PVC, irradiated PVC, Polyethylene, Polypropylene, PTF Polyurethane, Nylon, and FEP)



Insertion Life:	750 minimum insertions of an FCC 8-Position Telecommunications Plug
Front Panel:	Black powder painted steel.
Plastic:	High-impact, flame retardant, UL-rated 94V-0 thermoplastic

Hardware:

Chromium plated brass nuts & bolts with special type of U shaped square washers of required sizes.

Method of construction

The Patch Panel shall be firmly secured in U Rack (Networking Cabinet) with 4 nos. of chromium plated brass nuts & bolts.

Mode of Measurement: Executed quantity shall be counted on number basis.

E) Lightguide Interconnect Unit (LIU)**General:**

All material shall conform to relevant standard as per IEEE, EIA/TIA, and CENELEC

Scope:**Specification No (WG-NAS/LIU)**

To terminate the fibre backbone cables & the equipment cables.

Material:**Lightguide Interconnect Unit:**

Wall mount type Lightguide Interconnect Unit with dimensions shown in the table, an interfacing unit for fiber cables coming in from field & those originating from the equipments. consisting of fiber spools to provide minimum bending radius & splice trays as splice cover for pigtail splicing, two compartment design with adaptor panel in the centre, compartmentalizing the box, complete aluminium housing, fully powder coated, two doors enclosure with lock & key, rubber grommets at the cable entry points for tight sealing; Splice trays of 140 x125 x 10mm complete aluminium body fully powder coated with provision for fibre splices fully cushioned splice holder containing grooves for fixing splice protective sleeves; FR grade high impact resistance plastic two halves design stackable sufficient room for excess cable.

Sr. No.	Ports	Dimensions	Fiber splices
1	12	300 x 300 x 80mm	6
2	24	370 x 350 x 80mm	12

Hardware:

Sheet Metal (SM) screws of required sizes, plugs, wooden gitties, etc.

Method of Construction:

Supplying & erecting Lightguide Interconnect Unit (LIU) on wall with cable termination complete with sheet metal screws of required size, plugs/ wooden gitties.

Mode of Measurement: Executed quantity shall be counted on number basis.

2. SWITCHGEAR

**2.1 DISTRIBUTION BOARDS:** (incoming MCCB/MCB, outgoing MCB)

The DBs shall be suitable for operation on 3-phase/single phase 415/230 Volts, 50 cycles. The DBs shall comply with the addition of relevant Indian Standards and Indian Electricity Rules and Regulation.

Fabrication, supply, installation and commissioning of three-phase/single phase DB with neutral using C.R.C.A. sheet steel 18/20 SWG std. If 16/18 SWG/1.62/1.21mm is not available in market for approved makes by MDL. Distribution boards with front operated door, D.P & TPN switches with neutral link connectors for incoming and outgoing circuits. 'L' or suitable series miniature circuit breakers of appropriate rating mounted on DIN rail and enclosed in slotted lid type boards with PVC insulated wires of copper conductor for interconnection. The DB shall be mounted on angle iron frame with anchor fastener grouted in the wall as per specification. The cost is inclusive of interconnection with PVC insulated copper wires and sleeves / PVC flexible pipe, glands etc. in cost of DB. Charges for marine plywood and M.S angle iron frame are not included in the rate of DB. The SP, DP, TP MCB shall be as per Interconnection charges are included in cost of distribution board.

Vertical DB:

The vertical distribution board shall be three phase and neutral, sheet steel, powder coated double door type. One cover (door) shall be screwed for incoming and outgoing MCB's and as cover for protection of complete DB. DB shall be fitted with colour coated bus bar, neutral link, earth bar and DIN rail etc (Complete pre-wired DB). The TP & SP MCB's can be used for outgoing circuit as per the requirement of site.

2.2 IC/Metal clad TP/TPN switches (MTP)**Scope:****Specification No (SW-SWR/MTP)**

Supplying and erecting IC/Metal clad TP/TPN /on load/off load changeover switches of specified rating on angle iron frame of suitable size.

Material:

TP/TPN Switches: Three phase Triple pole / Three phase Triple pole with neutral link weatherproof metal clad air break switch fuse unit of specified rating, confirming to IS: 13947 (part- 1 &3)/ 1993 with positive make and break arrangement with shrouded incoming contacts, facility suitable for Three phase 415 volts, 50 Hz AC supply, It shall be fitted with interlock-able cover and re-wire able type porcelain fuse and having cable entry holes, sealing arrangement and mounting arrangements.

Fabrication: Required size of angle iron / MS Flat.

Paint: Superior quality enamel paint of specified shade & colour, Red Oxide paint.

Hardware: SM screws, MS Nuts & bolts, rawl plug, wooden gutties etc.

Grouting Material: Cement, Sand, Putty, water, etc.

Method of Construction:

The switch shall be erected at designated place duly mounted on suitable size of angle iron frame as per Table No. 5.1/1 with the help of required nut bolt, washer, etc; on frame/wall. The angle frame to be erected on wall with the help of screws, or to be grouted in wall with the help of cement plaster, and finished as original. The Frame shall be painted prior to erection.

Mode of Measurement:

Executed quantity will be counted on number basis. (i.e. Each)

2.3 MINIATURE CIRCUIT BREAKERS (MCBs)**General Specification for MCB's:**



MCB's shall be of current limiting type, ISI marked confirms to IS 8828 -1996. The power loss per pole shall be low and shall be in accordance with IS 8828 – 1996. All cable entries shall be either from bottom or top. Miniature circuit breakers shall have quick make and break non-welding self wiping silver alloy contacts for 10 kA short circuit both on the manual & automatic operation and shall conform to relevant Indian Standards. All the active, live parts of MCB's should be out of human reach, ensuring safety & conforms to IP: 55 degree of protection. The MCB's must house transparent label holder to ensure circuit identification. The MCB's must have fully insulated safety shutters. The MCB's shall have lockable switching lever. The minimum electrical endurance shall be 20,000 operations. The housing of the MCB shall be mounted self-extinguishing DMC (Dough Moulding Compound). The short circuit current shall be brought to zero within 4-5 milliseconds from the time they are established. All MCB's shall have a minimum short circuit capacity of 10 kA RMS.

Material:

Single pole / Single pole with neutral / Double Pole / Triple pole / Four Pole:

MCB, ISI marked as per IS 8828: 1996 (IEC 60898) with hammer trip and watch mechanism 15 arc plates, 10 kA capacity with nominal rating of 240/415V.

Lugs: Copper lugs of suitable size.

Method of Construction:

MCB's shall be erected in provided enclosure / distribution board and terminating the provided wires by copper lugs (crimping type) and connecting the same.

Mode of Measurement: Executed quantity shall be counted on number basis.

2.4 SWITCHGEAR:

- 2.4.1 The metal clad, T.P / T.P.N switch fuse units, Bus bar, distribution boards, starters, etc. shall be mounted vertically on M.S frame of suitable sizes.
- 2.4.2 The M.S frame i.e. Angle Iron Frame shall be fabricated from M.S angles and M.S flat as specified.
- 2.4.3 The M.S frame shall be rigidly fixed to the wall by anchor fastener.
- 2.4.4 The switchgear shall be fixed on M.S. frame with suitable size nut and bolt etc. / M 10 (10 mm dia.) x 40 mm. Long G.I nuts, bolts and washers. The mounting height shall not be less than 1200 mm from the floor.
- 2.4.5 Before fixing, the M.S frame shall be painted with red oxide paint. After grouting, the surface shall be finished nicely and frame shall be painted with two coats of synthetic enamel paint of Grey shade.
- 2.4.6 After installation of switches, starters, busbar, D.B's, all nuts and bolts shall be thoroughly greased and tightened properly.
- 2.4.7 An earthing terminal shall be fixed to the M.S frame.
- 2.4.8 Inter connections shall be made with PVC insulated flexible copper wires in adequate size PVC flexible pipe with PVC glands. Inter connection charges are included in cost of switchgear.
- 2.4.9 Charges for marine plywood and M.S angle iron frame are not included in the rate of switchgear.
- 2.4.10 The switch fuse unit above 63A shall be provided with suitable size of cable end boxes wherever necessary. The cost is not included in the rate of switchgear.

3. TECHNICAL SPECIFICATIONS FOR SUPPLY OF LIGHT FIXTURE**SCOPE OF WORK**



The scope of work shall cover the supply, installation and testing of various types of LED light fixtures & other fitting are used in the project.

General Conditions

Following codes and acts with its latest amendments shall be applicable for this work:

- i. Indian Electricity Act, 2003 with amendments thereto if any
 - ii. Indian Electricity Rules, 1956
 - iii. CEA Regulations -2010
 - iv. Relevant standards of the Bureau of Indian Standards (IS Codes) International standards
 - v. American Society of Testing of Materials (ASTM Codes).
 - vi. Other approved standards and / or Rules and Regulations related to the add subject matter of tender.
- a) Design, materials, and workmanship shall satisfy all the applicable standards, specifications and codes as applicable for LED Lighting Fixtures.
 - b) Scope of work as described in tender document is not limiting in so far as the responsibilities of Vendor is concerned and shall include carrying out all works and providing all facilities that are required for commissioning of LED Lighting fixtures complying fully with all requirements as envisaged, complete in all respect and satisfying all Performance and guarantee requirements as stated or implied from contents of tender document.

TECHNICAL REQUIREMENTS

3.1 LIGHTING SYSTEM & POWER RECEPTACLES:

- 3.1.1 The contractors shall supply all lighting switches, power receptacles, MCCB distribution boards and MCB distribution boards complete with MCCB & MCB with neutral terminal blocks and earthing terminal, glands, supporting and anchoring materials, to make the installation complete. The contractor shall also supply all lighting fixtures complete with lamps and cables. All materials, fittings and appliances used in the electrical installation shall conform to the I.S. specifications and technical specification mentioned in BOQ.
- 3.1.2 Wiring shall be colour coded so as to enable easy identification of phase, neutral and earth wire.
- 3.1.3 Main Power distribution boards shall conform to the stipulations of IS 732 or as approved by the Site Engineer, MDL at site. These shall be weatherproof and dust-proof and IP protection mentioned in item specification or technical specification.
- 3.1.4 Receptacle and lighting fixtures shall be fed from different circuits.
- 3.1.5 All exposed metal parts of the plug, when the plug is in complete engagement with the socket outlet, shall be in effective electrical connection with the earthing pin.
- 3.1.6 Metal conduits and fixtures shall be grounded properly by tinned copper wires by means of approved type grounding clamps efficiently fastened to the conduit pipe with earthing clips. To achieve perfect electrical continuity, the conduits shall be bounded effectively on both end of couplings and other points. Conduits shall be grounded at the ends adjacent to switchboards at which they originate or otherwise at the commencement of the run by a grounding conductor connected to an earth clip, clamp or gland in active electrical contact with the conduit.
- 3.1.7 Installation tests stipulated in IS 732 and other codes or practices shall be carried out by the contractor in the presence of the Site Engineer, MDL, before putting the installation in service.

3.2 LIGHTING FIXTURES:

- 3.2.1 The lighting fixtures offered shall comply with the following requirement:



- i. The fixtures shall be suitable for operation on a normal supply of 240 Volts, Single Phase, 50 Hz, A. C. with a voltage variation of $\pm 6\%$.
 - ii. All fixtures shall be designed for minimum glare. The finish of all parts of the fixtures shall be such that no bright spots are produced either by direct light source or by reflection.
 - iii. All fixtures shall be designed for continuous operation under atmospheric conditions specified without reduction in lamp life, deterioration of material and internal wiring.
 - iv. For multi-lamp fluorescent fittings, the circuit should be designed in such a manner as to reduce the stroboscopic effect to the minimum.
- 3.2.2 Lighting fixture ballast shall be designed, manufactured and supplied in accordance with the relevant standard and shall function satisfactorily under site conditions specified. The ballast shall have a long service life and low power loss.
- i. Ballast shall be mounted using self-locking, anti-vibration fixture without removing the fixture. Ballast shall be of electronic type.
- 3.2.3 Lighting fixture starter shall be of the safety type i.e. if the lamp fails to ignite at the first start, no further starting must be possible without attending to the tube light. Starter shall have bimetal electrodes and high mechanical strength. Starters shall be replaceable without disturbing the reflector or lamps and without the use of any tool. Starter shall have brass contacts and radio interference capacitor.
- 3.2.4 Lamp holders for fluorescent tubes shall be spring loaded, low contact resistance, bi-pin rotor type, resistant to wear and suitable for operation at the specified temperature, without deterioration in insulation value, contact resistance or lamp holding quality. Rotors shall hold the lamp in position under normal condition of shock and vibration. Lamp holders for incandescent and manufactured in accordance with the relevant standard and designed to give long and satisfactory service.
- 3.2.5 Lighting fixture reflectors shall generally be manufactured from sheet steel or aluminium of not less than 22/24 SWG. Fixtures shall be readily removable from the housing for cleaning and maintenance without disturbing the lamp and without the use of tools. Fixtures shall be securely mounted to the housing by means of positive fastening devices of a captive type. The gauge of the C.R.C.A. sheet shall be as per manufacturer's design.
- 3.2.6 Each fixture shall be complete with a four way terminal block for the connection and looping of incoming and outgoing supply cables. Each terminal shall be able to accept two 6 sq. mm solid aluminium conductors.
- 3.2.7 Each lighting fixture shall be provided with a grounding terminal.
- 3.2.8 On completion of manufacture, all surfaces of the fixtures shall be thoroughly cleaned and degreased. The fixture shall be free from scale, dust, sharp edges and burrs.
- i. The enamel finish shall be as per standard, non-porous and free from blemishes, blisters and fading.
 - ii. The surface shall be scratch resistant, and shall have no signs of cracking or flaking when bent through 90 degree on a 12mm diameter mandrel.
 - iii. All light reflecting surfaces shall have optimum light reflecting co-efficient such as to ensure the overall light specified.
 - iv. All reflectors and louvers shall be finished to the standard as the fixture housing.
- 3.2.9 The following routine tests shall be conducted as per the relevant Indian Standards:
- i. Each fixture completes with its proper lamp / lamps shall operate satisfactorily at its normal voltage and frequency.
 - ii. Each fixture shall be examined visually to ensure that it is complete in all respects and satisfactorily finished.

All luminaries provided with glass covers shall be subjected to thermal shockproof test. This test shall be conducted to ensure that the cover glass will withstand sudden variation in surface temperature due to rainfall or splashing water when the lighting fixture is fitted. The cover glass shall be heated in an oven to attain a steady temperature of 100°C and then plugged into cold water. No crack should develop.



3.3 LED Lamps:

LED lamp is a light-emitting diode (LED) product which is assembled into a lamp (or light bulb) for use in lighting fixtures. LED lamps have a lifespan and electrical efficiency which are several times longer than incandescent lamps, and significantly more efficient than most fluorescent lamps. LEDs come to full brightness without need for a warm-up time; the life of fluorescent lighting is also reduced by frequent switching on and off.

LEDs are “directional” light sources, which mean they emit light in a specific direction, unlike incandescent and compact fluorescent bulbs, which emit light and heat in all directions.

The chart below shows the amount of brightness in lumens you can expect from different wattage light bulbs. The LED bulbs require much less wattage than the CFL or Incandescent light bulbs.

LED PANEL LIGHT (IP43) TECH SPECS:-

- System power :- 36 WATT
- LED Type :- High Brightness Power Led
- Color Temperature :- 4000K-6500K
- Nominal Voltage 240V AC
- Frequency Range 50-60 Hz
- System Efficiency >10%
- Power Factor(PF) > 0.95
- THD < 10%
- Operating Temperature 10°C to +45°C
- Lamp Body Material PDC aluminum.
- IP Rating IP43
- Surge Protection up to 4 kV
- Working Life > 60,000 Hrs
- System efficacy shall not be less than 85 lumens/watt,
- CRI shall be more than 70.
- Total Harmonic Distortion Voltage and Current shall be less than 15%.
- Luminaries and Lamp shall be LM79, LM80 compliant respectively.

LED DOWNLIGHTER LIGHT (IP43) TECH SPECS:-

- System power: - 9- 12 WATT LED RECESSED DOWNLIGHTER
- LED Type :- High Brightness Power LED
- Color Temperature :- 2500 - 7500K
- CRI :- >90
- Lens :- 95 Deg.

LED Driver Specification: -

- Input Voltage 120V ~ 240V AC
- Frequency Range 50-60 Hz
- System Efficiency >90%
- Power Factor(PF) > 0.95
- THD < 10%

Other Parameters:-

- Working Humidity : 10 % ~ 90 % RH
- Lamp Body Material : PDC aluminium
- IP Rating : IP43
- Surge Protection : > 6.5KV
- Working Life : > 50,000 Hrs

LED DOWNLIGHTER LIGHT (IP43) TECH SPECS: -

- System power: - 19 WATT LED RECESSED DOWNLIGHTER
- LED Type :- High Brightness Power LED
- Color Temperature: - 2500 - 7500K
- CRI :- >90
- Lens :- 95 Deg.



LED Driver Specification: -

- Input Voltage 120V ~ 240V AC
- Frequency Range 50-60 Hz
- System Efficiency > 90%
- Power Factor (PF) > 0.95
- THD < 10%

Other Parameters:-

- Working Humidity 10 % ~ 90 % RH
- Lamp Body Material PDC aluminium
- IP Rating IP43
- Surge Protection > 6.5KV
- Working Life > 50,000 Hrs

3.5 Tests / Inspection

Inspection will be done in 2 stages.

Stage-1: Inspection of LED Modules before assembly.

Stage-2: After Completion of Assembly & Manufacturing to ensure performance.

- a) All standard tests on LED Lighting fixtures in accordance with the standards adopted & as per QAP shall be carried out at manufacturer's works so as to ensure efficient operation and satisfactory performance of all components / parts of LED lighting fixtures.
- b) Work is subject to inspection at all times and at all places by MDL
- c) Vendor shall carry out all instructions given during inspection and shall ensure that work is carried out according to relevant codes of practice & QAP

Decision of MDL in regard to quality of work and materials and performance to specifications shall be final & binding on vendor. If any item is found not conforming to standards during test/inspection, the same shall be replaced / rectified by Vendor without any cost to MDL and shall be re-offered for inspection within reasonable period at factory test.

3.6 Warranty

- a) The offered LED Lighting Fixtures including the drivers shall be guaranteed for a minimum period of **60 Months**. During this period the lumen depreciation shall not exceed the permissible limit specified in the LM70 report of the lighting fixture. If it is found that the lumen depreciation is more than the permissible limit, the vendor shall replace the lighting fixture with no extra cost to MDL.
- b) The vendor shall have final and total single point responsibility for the design and performance of the LED lighting fixture, driver, control gear and all components supplied under this specification.
- c) The supplier shall,
 - i) Warrant that the LED lighting fixture, driver and all materials to be free from defects in Design, material and workmanship.
 - ii) Warrant that the LED lighting fixture will satisfy the requirements of the intended use and be suitable for the application.
 - iii) Agree to repair or replace any component under this warranty at site with prevailing model of same make, which proves to be defective during **guarantee period of 60 months**. The fixture shall have suitable mounting arrangement on poles/walls with extended portion of control gear and 2 nos. of sturdy 'U' shaped clamps. The fixture shall have suitable mounting, arrangement on wall with swan neck type G.I pipe up to control gear using 2 nos. of sturdy 'U' shaped clamps, complete with G.I. 16 SWG/1.62 mm junction box 100mmx100mmx75mm with fuse unit



connector and 3x2.5 Sq mm multi strand copper wires from fitting to junction box in PVC flexible pipe with gland.

4. FANS

4.1 Wall Mounted Fans

Wall mounted fan with plastic body & blades, 300 mm sweep & air delivery of 52 Cu.mtr./min; three number blade made of plastic material, suitable for single phase, AC 210 volts, 50 Hz supply and conforming to class I of IS :374/1979 with amendment no 1 to 6 except for performance parameters to the extent modified as details in general requirements. The power input required of 80Watt with the speed at 2100 RPM.

Method of Construction:

The Cabin fan complete with all above accessories and duly wired shall be erected at specified position, connected to the supply and tested.

Testing:

After erection fan shall be tested by connecting to supply. Also steadiness and Vibrations if any, of fan shall be checked at full speed, so that there is no wobbling. Mode of Measurement: Executed quantity shall be counted on number basis. (i.e. each)

4.2 EXHAUST FANS

The Propeller fan shall be direct-driven, three or four blade type, mounted on a steel mounting plate with orifice ring. Mounting Plate shall be of steel construction, square with streamlined venturi inlet coated with baked enamel paint. Mounting plate shall be of standard size, constructed of 12 to 16 gauge sheet steel depending upon the fan size. Orifice ring shall be correctly formed by spinning or stamping to provide easy passage of air without turbulence and to direct the air stream. Fan blades and hub assembly shall be statically and dynamically balanced at the manufacturer's works. Motor shall be standard permanent split capacitor or shaded pole for small sizes, totally enclosed with pre-lubricated sleeve or ball bearings, designed for quiet operation with a maximum speed of 1000 rpm for fans 60 cm dia or larger and 1440 rpm for fans 45 cm dia and smaller. Motors for larger fans shall be suitable for $415 \pm 6\%$ volts, 50 cycles 3 phase power supply, and for smaller fans shall be suitable for $220 \pm 6\%$ volts, 50 cycles single phase power supply. Motors shall be suitable for either horizontal or vertical service. Wire guard on inlet side and bird screen at the outlet, Fixed or gravity louvers built into a steel frame at the outlet., Regulator for controlling fan speed for single phase fan motor, Single phase preventers for 3 phase fans shall be included in fan cost.

5. CABLES:

5.1 General

All material shall conform to relevant standard as per BIS and shall carry ISI mark. If any particular category of material for which ISI mark is not available in market, it shall be as included in approved list.

Work shall be carried out as per the method of construction specified by BIS. If there is no reference for particular method of construction in IS, such work shall be carried out as per the approved method of construction specified in chapter 16 of P.W. Dept. Handbook.

Material and Work not qualifying to any provision mentioned above shall be to the satisfaction of the Engineer in Charge.

5.2 Cables: (Armoured)

The following list records those Indian Standards in force, which are acceptable as good practice, and accepted standards.

SP 30: 1984 : National Electrical Code



SP 7 (Group 4): 2005	:	National Building Code
IS 1255: 1983		Code of practice of Installation & Maintenance of armoured cables up to 33 kV.
IS 3961: Part 2: 1967	:	Recommended current ratings of PVC cables.
IS 1554: Part 1; 1988	:	PVC Insulated (Heavy duty) Electric Cables; Part 1 for working voltages up to and including 1100 Volts.
IS 1554: Part 2; 1988	:	PVC Insulated (Heavy duty) Electric Cables; Part 1 for working voltages up to and including 3.3 kV to 11 kV.
IS 10810: Part 63; 1993	:	Method for Test of cables, Part 63 Smoke density of electric cables under fire condition.
IS: 7098 (Part-I), 1988 Cross linked polyethylene insulated cables for working voltages upto 1100V.		

5.3 Scope: (Armoured cables)**Specification No. (CB-LT/AL, CB-LT/CU, CB-HT)**

Providing armoured cable of specified voltage level, size & specified conducting material (Aluminum / Copper) as per **Table no. 7/3** including required material, hardware's for erection and erecting on wall, ceiling, RCC slab or drawing the same through pole, pipe, laying in provided conduit, trench, ducts, trays as per approved method of construction including glands, lugs, etc.

5.4 Material:*Cables:*

Cables shall be XLPE for LT/MP and XLPE for HT as per Table no. 7/3 and of required construction, colour, shall carry ISI mark, IS No, manufacturer's name, size, duly embossed / screen printed at every meter and having the total count of progressive length in meter at each mark.

Earth wire: Galvanized Iron (G I) wire of appropriate gauge

XLPE Cables (CB)

Armoured Cables (HT & LT)

General

All material shall conform to relevant standard as per BIS and shall carry ISI mark. If any particular category of material for which ISI mark is not available in market, it shall be as included in approved list.

Work shall be carried out as per the method of construction specified by BIS. If there is no reference for particular method of construction in IS, such work shall be carried out as per the approved method of construction specified in chapter 16 of P.W. Dept. Handbook.

Material and Work not qualifying to any provision mentioned above shall be to the satisfaction of the Engineer in Charge.

Cables: (Armoured)

The following list records those Indian Standards in force, which are acceptable as good practice, and accepted standards.

SP 30: 1984	:	National Electrical Code
SP 7 (Group 4): 2005	:	National Building Code
IS 1255: 1983		Code of practice of Installation & Maintenance of armoured cables up to 33 kV.
IS 3961: Part 2: 1967	:	Recommended current ratings of PVC cables.
IS 1554: Part 1; 1988	:	PVC Insulated (Heavy duty) Electric Cables; Part 1 for working voltages up to and including 1100 Volts.
IS 1554: Part 2; 1988	:	PVC Insulated (Heavy duty) Electric Cables; Part 1 for working voltages up to and including 3.3 kV to 11 kV.
IS 10810: Part 63; 1993	:	Method for Test of cables, Part 63 Smoke density of electric cables under fire condition.

Scope: (Armoured cables)

**Specification No. (CB-LT/AL, CB-LT/CU, CB-HT)**

Providing armoured cable of specified voltage level, size & specified conducting material (Aluminum / Copper) as per Table no. 7/3 including required material, hardware's for erection and erecting on wall, ceiling, RCC slab or drawing the same through pole, pipe, laying in provided conduit, trench, ducts, trays as per approved method of construction including glands, lugs, etc.

Material:**Cables:**

Cables shall be XLPE for LT/MP and XLPE for HT as per Table no. 7/3 and of required construction, color, shall carry ISI mark, IS No, manufacturer's name, size, duly embossed / screen printed at every meter and having the total count of progressive length in meter at each mark.

Earth wire: Galvanized Iron (G I) wire of appropriate gauge as per Table No 7/1.

Glands: As per specification (CB-GL)

Lugs: As per specification (CB-CL/AL, CB-CL/CU)

Saddles: Saddles fabricated from GI sheet of required gauge and size depending on dia of cable either galvanized or painted with superior quality enamel black paint with necessary shearing mechanical strength, semicircular shaped with extended piece having suitable holes for fixing.

G I Strip: 22 g x 25 mm width G I Strip.

Clamps: MS Clamps fabricated of required length and shape, having the size of 3/6 mm thick mild steel having 25/50 mm width (as per size of cable), rounded ends with wooden / resin cast grip for holding the cable.

Identification tags: For identifying root, connection position GI strip with identification mark / name embossed / painted with arrangement to tie should be fix on cable or arrangement of ferrules to be done.

Hardware: Sheet Metal (SM) screws of required sizes, plugs / wooden gutties, etc.

Method of Construction:**General:**

Irrespective of method of construction the cable ends shall be terminated with appropriate size & type of glands with lugs duly crimped, as directed by Site engineer.

Wherever the cable has to be bent, the turning radius shall be as mentioned in Table No 7/2. Grouping of cables shall be done with adequate distance between cables as mentioned in IS so as to minimize de-rating. Cables shall be tagged/ferruled with identification name / mark at the point from where distribution starts and at ends. Bare earth wire of appropriate size as per Table no. 7/1 shall run along with the cable. Earth wire running with the cable shall be terminated at the earth terminal nearest to cable termination.

Erection of Cable on Surface:

Erection shall be done as per the routes and layout finalized, in perfect level and in plumb. Before fixing the cable shall be straightened as far as possible for good aesthetics look, continuous bare GI earth wire of required gauge as per Table No 7/1 shall be run. Cable with G I wire shall be fixed by saddles firmly clipped on cable and shall be fixed to wall with minimum 50 x 8 mm SM screws with plugs/wooden gutties, etc. (Distance between two supports / saddles shall be maximum 450 mm). Wooden gutties shall be used wherever required (Especially for stone wall). The entries made in wall, floor slab, etc for laying the cable shall be made good by filling and finishing with plastering the same.

Erection of Cable on Trusses:

Cable along with bare GI earth wire, while erecting on trusses, shall be firmly clamped by wrapping GI strip of 22 g, 25 mm width of required length fixed to truss with nuts and bolts.

Erection of Cable on Pole:

Cable along with bare GI earth wire, while erecting on pole, shall be firmly clipped by suitable wooden / epoxy resin cast grips, clamped with 25 x 3 mm or 50x6 mm MS strip of required length and fixed to pole with nuts and bolts.

Laying of Cable in provided Trench/Pole:

While laying Cable along with bare GI earth wire, utmost care shall be taken to prevent damage to the insulation of the cable and to the open end. Cable shall be brought out from trench vertically straight (minimum 1.0 metre above G L). Care shall be taken to inspect the trench so



that depth of cable shall not be less than as shown in Table No 7/4. Suitable size of cable loops shall be provided near termination point at adequate depth.

Erecting cable in constructed Trench / duct:

Erection of cable/s in constructed trench / duct, shall be as per guide lines of IS 1255.

Erection of cable/s on trays:

Cable/s shall be tied with PVC tags on GI trays. At bending point care shall be taken so that sharp edges of sheet will not damage insulation of cable.

Mode of Measurement: Executed quantity shall be measured on the basis of running metre per run of cable.

Dismantling

Cable laid underground, or fixed on any surface shall be dismantled carefully without damaging complete with all its accessories, making coil and stored as directed. The surface of the dismantled cable shall be made clear by removing of unwanted material, cement mortar, etc. When cable is dismantled from trench refill back the trench and making the surface proper.

Mode of Measurement: Executed quantity shall be measured on the basis of running metre per run of cable.

Table No 7/1

Size of Bare GI Earth wire to be used with LT Cables upto 1.1 kV

S.No.	Size of cable	Size of bare GI Earth wire to be used with cable
1	2.5 Sqmm to 50 Sqmm of all cores.	12 SWG
2	70 Sqmm to 95 Sqmm of all cores.	10 SWG
3	120 Sqmm and above of all cores.	8 SWG

Table No 7/2

Minimum bending Radius for Cables

S.No.	Voltage level of cables	Single core	Multi core Unarmoured	Multi core Armoured
1	Up to 11 kV	20 D	15 D	12 D
2	Up to 22 kV	25 D	20 D	15 D
3	Up to 33 kV	30 D	25 D	20 D

Note: D diameter of cable.

Wherever possible, 25 percent larger radii than the specified above should be used.

Table No 7/3

Current Rating (In Ground) for PVC/ XLPE Insulated 1.1 kV Grade Cables

Nominal area of conductor	Aluminum Conductor				Copper Conductor			
	Single Core		Multi Core		Single Core		Multi Core	
Sqmm	PVC	XLPE	PVC	XLPE	PVC	XLPE	PVC	XLPE
10	51	55	46	50	65	71	60	65
16	66	74	60	68	85	95	77	87
25	86	98	76	90	110	125	99	115
35	100	118	92	108	130	150	120	138
50	120	137	110	126	155	175	145	161
70	140	172	135	158	190	220	175	202
95	175	204	165	187	220	260	210	239
120	195	234	185	215	250	301	240	276



150	220	262	210	240	280	336	270	308
185	240	298	235	273	305	381	300	350
240	270	344	275	316	345	441	345	405
300	295	387	305	355	375	496	385	455
400	325	458	335	420	400	586	425	538
500	345	495	-	-	425	635	-	-
630	390	555	-	-	470	710	-	-
800	440	625	-	-	-	-	-	-
1000	490	685	-	-	-	-	-	-
Rating Factors for Variation in Ambient Air Temperature								
Air Temperature (oC)	40		45		50			
Rating Factor (XLPE)	1.00		0.94		0.88			
Rating Factor (PVC)	1.00		0.90		0.81			

Table No 7/4

Minimum laying Depth of cables (IS: 1255)

S.No.	Voltage level of cables	Minimum depth from top of the cable
1	Up to 1.1 kV	750 mm
2	3.3 kV to 11 kV	900 mm
3	22 kV to 33 kV	1050 mm
4	At road crossing	1000 mm
5	At railway crossing (from Bottom of sleepers to Top of pipe)	1000 mm

Notes below Table No 7/4:

1.	PVC Insulated electrical cable for voltage grade up to 1.1 kV is based on 8 volts drop.			
2.	The distances are given in meters and after rounding.			
3.	The distances are given in meters and after rounding.			
For Temperature Correction please see as detailed below:				
Ground temp.	20 degree C	25 degree C	30 degree C	35 degree C
Rating factors:	0.95	0.90	0.85	0.80

Table No 7/5

Distance up to which different sizes of UG Aluminum Conductor Cables 1.1 kV grade, can be used for different current ratings of 8 Volts drop. (PVC insulated, PVC Sheathed, 3 cores or 4 cores)

Maximum Conductor temperature – 70 degree C														
S. No	Current	Distance in meters for the following cable sizes in Sqmm												
	Amp	6	10	16	25	35	50	70	95	120	150	185	240	300
1	5	165	260	415	725	895	1300	1925	2360	3065	3555	4300	5770	6460
2	10	80	130	205	360	450	650	960	1180	1530	1775	2150	2885	3230
3	15	55	85	140	240	300	430	640	785	1020	1185	1430	1920	2155



4	20	40	65	100	180	225	325	480	590	765	890	1075	1440	1615
5	25	30	50	80	145	180	260	385	470	610	710	860	1150	1290
6	30	25	40	70	120	150	215	320	390	570	590	715	960	1075
7	40	20	30	50	90	110	160	240	295	380	445	535	720	805
8	50	-	25	40	70	90	130	190	235	305	355	430	575	645
9	60	-	-	35	60	75	110	160	195	255	295	355	480	535
10	70	-	-	30	50	65	90	135	165	215	255	305	410	460
11	80	-	-	-	45	55	80	120	145	190	220	265	360	405
12	90	-	-	-	40	50	70	105	130	170	195	235	320	360
13	100	-	-	-	35	45	65	95	115	150	175	215	290	320
14	110	-	-	-	-	40	60	85	105	140	160	195	260	290
15	120	-	-	-	-	35	55	80	95	125	145	180	240	270
16	130	-	-	-	-	-	50	75	90	115	135	165	220	250
17	140	-	-	-	-	-	45	70	80	110	125	150	205	230
18	150	-	-	-	-	-	-	65	75	100	115	140	190	215
19	160	-	-	-	-	-	-	60	70	95	110	130	180	200
20	170	-	-	-	-	-	-	55	70	90	105	125	170	190
21	180	-	-	-	-	-	-	50	65	85	100	120	160	180
22	190	-	-	-	-	-	-	-	60	80	90	110	150	170
23	200	-	-	-	-	-	-	-	60	75	90	105	145	160
24	225	-	-	-	-	-	-	-	-	65	80	95	125	145
25	250	-	-	-	-	-	-	-	-	-	70	85	115	130
26	275	-	-	-	-	-	-	-	-	-	-	80	105	115
27	300	-	-	-	-	-	-	-	-	-	-	70	95	105

Glands: As per specification (CB-GL)**Lugs:** As per specification (CB-CL/AL, CB-CL/CU)**Saddles:** Saddles fabricated from GI sheet of required gauge and size depending on dia of cable either galvanized or painted with superior quality enamel black paint with necessary shearing mechanical strength, semicircular shaped with extended piece having suitable holes for fixing.**G I Strip:** 22 g x 25 mm width G I Strip.**Clamps:** MS Clamps fabricated of required length and shape, having the size of 3/6 mm thick mild steel having 25/50 mm width (as per size of cable), rounded ends with wooden / resin cast grip for holding the cable.



Identification tags: For identifying root, connection position GI strip with identification mark / name embossed / painted with arrangement to tie should be fix on cable or arrangement of ferrules to be done.

Hardware: Sheet Metal (SM) screws of required sizes, plugs / wooden gutties, etc. the cable in the bent portion, shall be buried along the route of cable in the trench made for laying the cable. For clear visibility, the Cable indicator plate shall be buried in such a manner that the plate should be minimum 200 mm above the ground level and shall be provided at every 15-25 metre in straight run, at both ends of road crossing and immediate before and after turning point of cable.

5.5 Mode of Measurement:

Executed quantity will be measured on meter basis.

6. REMOVAL OF ELECTRICAL ACCESSORIES:

The existing electrical accessories such as switch gears, point wiring, mains, sub mains, cables, fixtures, pumps, poles, panels etc. shall be removed without damaging the accessories, walls, ceilings etc. in neat manner with good workmanship. The holes/patches etc. shall be made good and painted to match surrounding surface. Dust and dirt sprayed due to work of removal/ re fixing shall be removed and the premises shall be cleaned properly. The removed material shall be handed over to the MDL as it is.

7. LABLING:

All installed electrical accessories to be labeled with stick able Talley plates according to as fitted drawings.

8. SUBMISSION OF AS FITTED ELECTRICAL DRAWINGS.

Upon completion with successful testing and commissioning all electrical, telephone, data work 04 Sets of as Fitted Electrical Drawings needs to be submitted.

LIST OF PREFERED MAKE OF MATERIALS



Unless otherwise mentioned specifically only the following approved make / brands of various electrical accessories will be used. In case, there are two types of product under one brand name, then product having I.S.I mark shall be used. In case, the approved brands are not available in the market then, equivalent product conforming to relevant standards, as approved by the Engineer in charge shall be used.

SR.NO.	ITEM	STANDARD MAKE
1	LT PANEL	APJ ELECTRICAL / ABAK ENGG / ZENITH ENGG.
2	DISTRIBUTION BOARDS	LEGRAND / HAGER / SCHNEIDER / C&S Electric/HAVELLS
3	MEDIUM VOLTAGE CABLE	POLYCAB / FINOLEX / RRKABLE/HAVELLS/KEI
4	CABLE TRAY	INDIANA / OBO BETTERMAN / LEGRAND/PROFAB
5	UPS / INVERTER	APC / DELTA / EATON
6	LT SWITCHGEAR (ALL RANGE)	SIEMENS / SCHNEIDER ELECTRIC / Lauritz & Knudsen Electrical(L & T) / ABB/LEGRAND
7	LT MCCB	SIEMENS / SCHNEIDER ELECTRIC / Lauritz & Knudsen Electrical(L & T) / ABB / LEGRAND
8	LT MCB, ELCB, RCBO	SIEMENS / SCHNEIDER ELECTRIC / HAGER /LEGRAND/ Lauritz & Knudsen Electrical(L & T)
09	LT SFU	SIEMENS / SCHNEIDER ELECTRIC / Lauritz & Knudsen Electrical(L & T) / ABB
10	LT CONTACTORS	SIEMENS / SCHNEIDER ELECTRIC / Lauritz & Knudsen Electrical(L & T) / ABB
11	CHANGE OVER SWITCH	ASCO / SOCOMEC / ABB/ Lauritz & Knudsen Electrical(L & T)/ SIEMENS / SCHNEIDER ELECTRIC
12	METERS (DIGITAL)	ENERCON / Lauritz & Knudsen Electrical(L & T) / TRINITY
13	LOAD MANAGER	ENERCON / Lauritz & Knudsen Electrical(L & T) / TRINITY
14	RELAYS	SIEMENS / SCHNEIDER ELECTRIC / GE / Lauritz & Knudsen Electrical(L & T)
15	INDICATING LAMPS	SIEMENS / SCHNEIDER ELECTRIC / Lauritz & Knudsen Electrical(L & T) / ABB
16	ELECTRIC TIMER	SIEMENS / Lauritz & Knudsen Electrical(L & T) / EAPL
17	SELECTOR SWITCH	KEYCEE / SALZER / AE
18	APFC RELAY	ELMEC / Lauritz & Knudsen Electrical(L & T) / TRINITY



SR.NO.	ITEM	STANDARD MAKE
19	LT CAPACITORS	Lauritz & Knudsen Electrical(L & T) / EPCOS / SEIMENS
20	LUGS	DOWELL'S / JAINSON / COMET
21	CABLE GLAND	JAINSON / COMET / DOWELL'S
22	PVC CONDUITS AND ACCESSORIES	PRECISION / DIAMOND / POLYCAB / ASTRAL
23	CASING CAPING	PRECISION / DIAMOND / LEGRAND
24	M.S. CONDUIT AND ACCESSORIES	AKG / BEC / STEELCRAFT
25	MODULAR SWITCHES, SOCKETS & OTHER ACCESSORIES	LEGRAND / MK - HONEYWELL / PANASONIC /STANDARD/ Lauritz & Knudsen Electrical(L & T)
26	METAL CLAD SOCKET WITH MCB	MDS-LEGRAND / SIEMENS / SCAME
27	PVC JUNCTION BOX	SINTEX / CLIPSAL / SPELSBERG
28	WIRES FOR INTERNAL WIRING	POLYCAB / FINOLEX / RRKABLE/KEI/HAVELLS
29	FLEXIBLE WIRE	POLYCAB / FINOLEX / RRKABLE/KEI/HAVELLS
30	TELEPHONE CABLE	DELTON / POLYCAB / FINOLEX/KEI/ RRKABLE
31	COAXIAL TV CABLE	DELTON / POLYCAB / FINOLEX/ RRKABLE/KEI
32	CAT 6	MOLEX/ D-LINK/Digi sol/POLYCAB/FINOLEX/RRKABLE/KEI
33	MULTICORE FLEXIBLE CABLE	POLYCAB / FINOLEX / RRKABLE/KEI/HAVELLS
34	CONNECTORS (COLOURS AS PER PHASE & NEUTRAL)	SALZER / ELEMEX / CONNECTWELL
35	LIGHT FIXTURES	HAVELLS / WIPRO / Crompton /BAJAJ/PHILIPS/HALONIX
36	LIGHTING CONTROLLER	DYNALITTE / ANCHOR / LEGRAND
37	CEILING FAN / EXHAUST FAN/WALL MOUNTED FAN	CROMPTON / ORIENT / HAVELLS/ATOMBERG/BAJAJ/USHA/HALONIX
38	FLOOR TRUNKING	LEGRAND / OBO / MK
39	NETWORK SWITCH	CISCO/ HP Aruba/Juniper
40	NETWORK RACK	PENDUIT / RITAL / PRESIDENT



SR.NO.	ITEM	STANDARD MAKE
41	NETWORK ACCESSORIES	PENDUIT / D-LINK / MOLEX
42	HDMI CABLE	POLYCAB / FINOLEX / D-LINK/KEI/RRKABLE
43	Access Control System	MATRIX / SPECTRA / HONEYWELL



C. SCOPE OF WORK & TECHNICAL SPECIFICATION

AC INSTALLATION WORKS at South Yard

1. GENERAL:

The scope of work under this tender shall comprise of the following:

- (a) Supply, installation, testing and commissioning of Four-way Inverter Cassette Air conditioner (5-star rating) at South Yard Maintenance, GF, South Block 2, SY, MDL, Mumbai comprising of indoor units, outdoor units, cordless remote controllers with batteries, remote control holder, adequate length of power supply cables along with connecting pin & accessories. The preferred makes for the air-conditioners are **Mitsubishi/O'General/Daikin**.
- (b) Fabrication and installation of M.S stands, Grills, other structural work as per site requirements for installation of A.C outdoor units.
- (c) Copper refrigerant piping with insulation/nitrile rubber sleeves including clamping/supporting arrangement including making precise holes in the walls with core cutting m/c, providing sleeves and proper finishing for connectivity from indoor to outdoor units. The preferred makes for Insulation are **Superlon/K-Flex/Armacell**.
- (d) Supply and fixing of suitable L-shaped brackets duly painted/powder coated along with necessary bush and fasteners for mounting outdoor units, wherever necessary, and as directed by MDL engineer.
- (e) Supply and installation of ISI mark UPVC plumbing grade condensate drain pipe & fittings along with insulation and necessary supports & clamps etc. all complete for taking out condensate drain water from AC units up to the Ground Level. The preferred makes for UPVC pipes are **Prince/Astral/Supreme** and those for Insulation are **Superlon/K-Flex/Armacell**.
- (f) Supply and laying of 2.5 Sq mm 4 core Electrical cable for Inverter split AC & Four-way Inverter Cassette Air conditioner (from indoor units to outdoor units) all complete.
- (g) Purging with suitable **eco-friendly** gas for flushing before leak test, leak testing of copper piping & first charge of pre-filled **eco- friendly** refrigerant gas considering lengths of copper piping & A.C unit's capacity etc. all complete.
- (h) Scaffolding work is required for the above work shall be arranged by the Contractor.
- (i) The contractor shall arrange free of cost servicing to be carried out (**3 dry and 1 wet service**) by OEM's authorized Service Engineer/Technical for the completed works including indoor unit, outdoor unit, copper tubing etc. all complete at the interval of **every three months** during Defect liability period.

2. DRAWINGS AND DOCUMENTATION

- (a) Bidders are advised to visit the site and familiarize himself with the site conditions before submission of the bid. Clarifications, if any, may be discussed with the MDL Engineer-in-charge during the site visit.
- (b) After award of contract, Contractor is required to submit the **print of installation/working drawings in A3 size in 04 sets** for the above scope of work and get it approved from MDL before starting up the work. Drawings (plan and elevation) should indicate the exact locations of AC indoor units, outdoor units, capacities of the



ACs, copper tubing layout from indoor to outdoor units and its size, condensate drain UPVC piping layout along with size and its looping/routing from A.C indoor units to the nearest drain point. **Drawing shall contain tabulation of all measurable items of Equipment/Materials/works.**

- (c) Installation/Working drawings shall be submitted for approval sufficiently in advance of installation of any material to allow MDL Engineer ample time for scrutiny. No claims for extension of time shall be entertained because of any delay in the work due to his failure to produce installation/working drawings at the right time, in accordance with the approved program.
- (d) When MDL Engineer makes any amendment in the above drawings, the contractor shall supply 02 fresh sets of drawings with the amendments duly incorporated, for approval. The contractor shall submit further 02 sets of installation/working drawings to the Engineer for the exclusive use by the MDL Engineer.
- (e) **4 sets of prints of approved drawings in A3 size to be submitted by the Contractor to MDL.**
- (f) Where drawings are approved, said approval does not mean that the drawings supersede the contract requirements, nor does it in any way relieve the Contractor of the responsibility or requirement to furnish material and perform work as required by the Contract.
- (g) **After completion of work, Contractor shall submit the handing over documents consisting of Handing over report, Commissioning report, Warranty report, Escalation Matrix, DOs & DONTs, Test certificate, Manual and as build drawing in A3 size in a bound book form (04 sets).**

4. MATERIALS, DESIGNS, INSTALLATIONS, TESTING & COMMISSIONING

- (a) Inverter split A.C units & Four-way Inverter Cassette Air conditioner shall be factory assembled, wired and tested. It shall comprise of Indoor and Outdoor Units along with all the accessories. Copper Refrigerant Piping interconnecting evaporator and Condensing Unit shall be charged with **eco-friendly** gas and be provided with suitable length of Copper Refrigerant Piping with insulation and cabling to be provided per Evaporator Unit.
- (b) Condensing Unit shall be suitable for outdoor installation with weather proof enclosure and shall be field serviceable.
- (c) **Contractor to select the model from the preferred list of manufacturers of the Inverter Split AC units & Four-way Inverter Cassette AC units considering the climatic conditions prevailing through the year at MDL Mumbai site.**
- (d) Copper refrigerant piping of suitable diameter compatible with the refrigerant gas & air conditioner model with insulation/nitrile rubber sleeves (19 mm thick), end connections to be installed true to line and level, jointing by brazing & adequately supported intermittently at uniform distance with appropriate clamps / support arrangement including making precise holes in walls with core cutting m/c, providing sleeves & proper



finishing for connectivity from indoor to outdoor unit etc all complete as directed by MDL engineer. The alignment of copper piping in horizontal and vertical direction to be maintained.

- (e) Reputed make of ISI mark UPVC plumbing grade condensate drain pipe & fittings to be used for taking out condensate drain water from AC Units up to the Ground Level including looping/routing. The joints shall be properly sealed so that there is no water leakage. Proper grouping of condensate drain pipes & gradient to be maintained for the easy flow of condensate drain water from the A.C units to the ground level. UPVC pipelines to be adequately supported intermittently at uniform distance with clamps, pipe supports with proper alignment in horizontal and vertical direction.
- (f) Unless otherwise specified and approved, all materials and designs shall comply with the current issue of the relevant Indian or International Standard Specifications and their installation shall comply with the relevant current Indian/International Standard Codes of Practices.
- (g) Materials, designs and installations shall comply with the building regulations, local authority regulations and by-laws, Gas Safety Regulations, National Electric Codes for the Electrical Equipment of buildings, insurance company requirements and other statutory rules. All equipment and materials shall be products, which shall meet with the acceptance of authorities having jurisdiction over the work.
- (h) Each item of Equipment/Material shall be a standard catalogue product of an established manufacturer strictly from the manufacturers listed in the list of preferred makes.
- (i) All equipment and materials required for installations shall be new and without blemish.
- (j) The contractor shall raise inspection call to MDL for the works undertaken at below mentioned stages –
 - (i) After delivery of material at site before starting of installation works
 - (ii) After testing & commissioning of the completed works.
- (k) All the works under or in course of execution or executed in pursuance of the contract shall at all times be open to inspection & supervision of the MDL engineer / executives & the contractor at all times during the usual working hours offer assistance for the inspection of work.
- (l) The contractor shall submit supporting documents such as delivery challan(s), Test reports / certificates, packing lists, Invoice, Performance guarantee certificates & other technical documentation in requisite sets as relevant along with the invoice for the purpose of certification by MDL engineer.

5. PROTECTION OF MATERIALS AND WORK

- (a) Copper tubes stored on site shall be supported clear of the ground and kept separate from all other stored ferrous materials & shall be suitably protected against the weather.
- (b) All equipment and materials, fixed or unfixed shall be protected against ingress of dirt or moisture into working parts by means of Polythene covers or other equivalent measures.



- (c) Precautions against mechanical damage by other trades shall be provided.
- (d) Precautions shall be taken and all necessary protection provided to safeguard the work during bad weather.
- (e) The inlet and discharges of all fan coils, and other terminal units shall be kept covered until all local Plastering, Purging, etc. is completed and the units are ready to run.
- (f) Equipment and material damaged shall be replaced by contractor at the discretion of the MDL engineer. Equipment and materials are subject to rejection and replacement, if in the opinion of the MDL Engineer, or in the opinion of the manufacturer's engineering department, the equipment has deteriorated or been damaged to the extent that its immediate use is questionable, or that its normal life expectancy has been curtailed.
- (g) The contractor shall be solely responsible to protect all the delivered materials from the time of delivery at site till satisfactory completion & handing over of the completed works from any mode/type of damage/loss that may occur during this period.

6. INSTALLATION LIAISON

- (a) The Contractor is responsible for the co-ordination of all installation work on site. The Contractor shall plan his installation before the work is commenced and to ensure correct installation to the design intent during the course of construction. Any work, which has to be re-done due to negligence in this respect, will not constitute an extra work & also shall not be entitled for Extension of Time to the Contract.
- (b) Contractor has to depute experienced and knowledgeable engineer/supervisor in the field of HVAC who can co-ordinate, execute the work and take site decisions without any delay.
- (c) Particular care shall be taken to obtain uniform and tidy arrangements of wall mounted indoor and outdoor units.
- (d) Where the work of the Contractor has to be installed in co-ordination with work of other trades, he shall assist in working out space conditions to make a satisfactory adjustment.

7. OPERATION & MAINTENANCE MANUAL

- (a) Upon practical completion of the works, 04 copies of operation & maintenance manual shall be provided. The manual shall contain full operating and maintenance instructions presented in a form to deal systematically with AC units. The manual may contain manufacturer's standard operating and maintenance instructions and leaflets where these are applicable.
- (b) The contractor shall furnish Guarantee / warrantee certificate(s) of each Air Conditioner Unit, duly signed & stamped by the authorised dealer/bidder manufacturer, effective from the date of satisfactory completion & acceptance of the completed works by MDL.

8. GENERAL INSTRUCTIONS:

- (a) The Bill of Quantities must be read with the scope of work, Conditions of Contract,



Drawings and the Specifications and the Contractor shall be deemed to have examined the Scope of Work, Drawings, Specifications, Conditions of Contract and to have visited the Site and acquainted himself with the Works to be done and the way in which they are to be carried out and all factors affecting the execution of the Works and the Costs thereof including temporary works if required to complete the works.

- (b) All work shall be measured net as it is finished and/or fixed in the Works and no allowance shall be made for wastage notwithstanding any general or local custom. Any items of work not covered in the scope shall be measured as per specifications for works methods laid down in relevant Indian Standards or as decided by the MDL Engineer.
- (c) The quantities set down against the items in the Bill of Quantities are an approximate estimate of the quantity of each kind of work included in the tender and are given for the convenience of forming a common basis for tendering. They are not to be taken as a guarantee that the quantities scheduled will be carried out or required or that they will not be exceeded. MDL reserves the right to delete any item indicated in the bill of quantities at any time.
- (d) The quantities shall therefore not be considered as representing the final measurements, it being the intention of the Contract (except where otherwise specifically stated) that the actual quantities of work ordered and carried out shall be jointly measured on completion by the MDL Engineer or his authorised representative and the Contractor and valued and paid for at such prices and rates entered by the Contractor in the Bill of Quantities.
- (e) The rates and prices set down against the items are to be the full inclusive value of the finished work shown on the Drawing and/or described in the Specifications or which can reasonably be inferred there from and to cover the cost of every description of Temporary Works executed or used in connection therewith (except those items in respect of which specific provision has been separately made in the Bill of Quantities) and all the Contractor's obligations under the Contract including testing, giving samples and all matters and things necessary for the proper execution, completion and maintenance of the Works. No claim for additional payment shall be allowed for any error or misunderstanding by the Contractor of the work involved.
- (f) The Specifications and the various Sections in the Bill of Quantities are intended to cover the supply of all the materials and the execution of all works necessary to complete the Works. Should there be any details of Materials or Construction which have not been referred to in the scope of work, specifications, Bill of Quantities or the Tender Drawings, but the necessity for which may reasonably be implied or inferred there from, or which are usual, or essential to the completion of all works in all trades, the same shall be deemed to be included in the rates and prices quoted in the Bill of Quantities. The rates and prices shall cover the items as described in the scope of work, Bill of Quantities, tender drawings and other terms and conditions of the contract.
- (g) The Contractor's unit rates and prices in the BOQ shall include
 - (i) All equipment, apparatus, material, indicated in the BOQ, Scope of Work, Drawings, Specifications in connection with the item in question and also associated labour as well as any additional equipment, apparatus, material, consumables usually necessary to complete the system even though not



- specifically shown, described or otherwise referred to and also associated labour.
- (ii) It also includes delivering the material, item to the specified storage area at Site. Installation of the same in the specified location as per Drawing & as specified, testing and commissioning as per Specification and direction of the Engineer' at Site.
 - (iii) The unit price shall be deemed to include everything necessary to complete the work covered by this item in accordance with the scope of work, BOQ description, Specifications and Drawings.
 - (iv) The sum total of all the individual item prices shall represent the total price of the installation ready to be handed over.
 - (v) All equipment, machinery, apparatus and materials required as well as the cost of any tests which the Engineer may request in addition to the tests generally required to prove quality and performance of A.C units. Further, if any equipment, machinery, apparatus and materials found to not comply/fulfil satisfactory performance/duty during such testing, then cost of replacing such materials.
 - (vi) Use of any tools, equipment, machinery, lifting tackle, ladders consumables etc. required by the Contractor to carry out his work.
 - (vii) All the necessary measures to prevent the transmission of vibration. Storage and insurance of all plant and equipment, apparatus and materials.

9. **MEASUREMENTS:**

- a) **UNITS OF MEASUREMENT:** The units of measurement used in this Bill of Quantities are in metric units as follows:
- (i) **Linear:** Linear metre, centimetre or millimetre abbreviated to 'RM', 'cm' or 'mm' respectively.
 - (ii) **Numbers:** Numbers abbreviated to No's or No.

- b) **INVERTER SPLIT AIR CONDITIONER & FOUR WAY INVERTER CASSETTE AIR CONDITIONER:** For measurement and certification of work for Supply & Delivery of wall mounted Inverter Split Air conditioner & Four-way inverter cassette at site, Contractor & MDL engineer will jointly verify the quantities by opening the boxes/package and verify the same with technical details furnished, damage due to transportation and handling etc. before starting the installation work.

Contractor to make all the arrangement for opening and closing of boxes/packages and store the same in proper manner after inspection.

- c) **REFRIGERANT PIPING:** Copper piping shall be measured in running meters as actually installed along the centre line of the pipe line including pipe fittings.

Copper piping work for refrigerant would be measured in running meters in one direction from indoor unit up to outdoor unit considering **suction & discharge tubing as one combined set** & excluding the length of copper pipe supplied by the Air conditioner manufacturer as part of the AC unit package. Suction & discharge piping will not be measured separately one from another for certification of work done.



- d) **UPVC PIPING FOR CONDENSATE DRAIN:** UPVC piping shall be measured in running meters as actually installed along the centre line of the pipe line including pipe fittings.

10. Technical Specification

Capacity	2.0 TR (Inverter Cassette AC type)
Star rating	5 star
Type of AC	Inverter Cassette
Refrigerant	R32 Eco friendly
Condenser	Copper
Power Supply	230V/50HZ/single phase



Enclosure-22

HINDRANCE REGISTER

1. Name of the Work:
2. Contract Agreement No. :
3. Date of Commencement:
4. Stipulated Date of Completion:
5. Extended Date of Completion, if applicable:
6. Name of the Supplier / Contractor:.....

Sr. No.	Nature of Hindrance	Activity of work affected	Date of notification by contractor	Name & Signature		Date of removal of hindrance	Name & Signature	
				Contractors Representative	Site Executive of MDL		Contractors Representative	Site Executive of MDL



Enclosure-23

**To,
OTS Department
OTS-TS SECTION
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

Mazagon Dock Shipbuilders Ltd.

Loss of Pass - Contractor/Vendors.

1. Penalties will be imposed towards loss of passes/ non-renewal of passes apart from warning as deemed necessary for contractors, vendors & their workers. This is in addition to cost of the pass prescribed from time to time.

Loss:

- | | |
|------------------|---------------------------------------|
| a) First loss - | Rs. 250/- |
| b) Second loss - | Rs. 500/- |
| c) Third loss - | Rs. 1000/- and permanent cancellation |

Non-Renewal:

- | | |
|----------------------|-----------------------------|
| a) Upto 4 days- | No Penalty |
| b) 5-10 days- | Rs. 5/- per day |
| c) 11 days & beyond- | Rs. 50/- + Rs. 10/- per day |

2. Procedure for duplicate pass due to loss:

The loss has to be immediately reported to the concern Police Station. Thereafter a statement narrating circumstances of the loss, countersigned by the contractor and EIC shall be submitted to security office along with the prescribed penalty.



Enclosure-24



माझगांव डॉक शिपबिल्डर्स लिमिटेड
बाह्यस्तोत-तकनीकी सेवाएँ विभाग
INVOICE CERTIFICATION

HOD (OTS)

Ref No.:

Date:

Firm's Name: M/s. _____ RA Bill No: _____

A. Contract Details:

- Subject: _____
- MDL P.O. No: _____ dated: _____ Value: _____
- PO Original Delivery date: _____ Extended Delivery Date (if any): _____
- Contractor All Risk Policy vide No. _____ date.: _____
for an amount of Rs _____ Valid till
dated _____
- Performance Bank Guarantee/ Security Deposit vide No. _____ dated: _____
Rs. _____ Valid till _____
- Stamp Duty Paid vide Challan No. _____ Rs. _____

B: Invoice Details:

- Firms Invoice No: _____ dated _____
- Period of Work: From _____ To _____

S.N.	Description	Amount in Rs.
1.	RA Bill Amount	
2.	Price Variation Amount	
3.	Total	

C. Certification Details:

The following have been appended along with the GST Tax Invoice:

- MDL service entry sheets duly signed attached : Yes/ Not Applicable
Service Entry Sheet No _____
EMB No. _____
- Consultant's Certificate (if applicable) : Yes/ Not Applicable
Reference No. _____ Dated: _____
- E-invoice/Vendor's Self Declaration: Yes/ Not Applicable
- No Claim Certificate (applicable for Final Invoice only) : Yes/ Not Applicable
- Vendor rating (applicable for Final Invoice only): Yes/ Not Applicable
- Actual Local Content Certificate (applicable for Final Invoice only) : Yes/Not Applicable
- Price indices & Price Variation sheet (if price variation is included) : Yes/ Not Applicable
- Bank Guarantee against Waterproofing/ Leakages (applicable for Final Invoice only)
: Yes/ Not Applicable
- The following deductions to be made from the invoice:
 - Liquidated Damages as per purchase order : To be levied/Not Applicable
Details of LD to be levied (if applicable): _____
 - Other Deductions (if any): _____
 - Release of Provisional Retained Amount (if any): _____



Engineer in Charge/HOD (Comm)
(Sign & Stamp with date)
with Date)

Consultant
(Name, Sign & Stamp with Date)

Contractor
(Name, Sign & Stamp

Enclosure-25

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

EXTRACT OF PROVISIONS OF THE OFFICIAL SECRETS ACT, 1923

SECTION 2(B) : “PROHIBITED PLACE”

It is defined as the place of any work of Defence Dockyard and other so belonging or occupied and used for the purpose of building, repairing, making or storing any ammunitions of war.

For the purpose of the above definition, sketch includes any photograph or other mode of representing any place or thing.

SECTION 3 : “PENALTIES FOR SPYING”

If any per unlawfully -

- a) approaches, inspects, passes over or is in the vicinity of any clear place; or
- b) make any sketches intended to be directly or indirectly useful to an enemy;
or
- c) obtains, collects, records or communicates to any other person any secret official code.

Shall be liable for imprisonment of 14 years in case of Defence Installation.

SECTION 4 : “COMMUNICATION WITH FOREIGN AGENTS”

If Any person has been in communication with or attempted to communicate with foreign agents regarding the vital information of any “PROHIBITED PLACE” would be guilty of violating the provisions of this Act.

SECTION 5 : “WRONGFUL COMMUNICATION OF INFORMATION”

If any person having in his possession or control any official document;

- a) Willfully communicates to any person, other than a person, who is authorised to communicate it.
- b) Used the information in his possession for the benefit of any foreign power.
- c) Retain in his possession when he has no power to retain it



d) Fails to take reasonable care of it.

Shall be guilty of an offence under this Act.

SECTION 6 : “UNAUTHORISED USE OF UNIFORMS”

If any person for the purpose of gaining admission or of assisting any other person to gain admission to a “PROHIBITED PLACE” wears uniforms without lawful authority shall be guilty of offence under this Section.

SECTION 7 : “INTERFERING WITH OFFICERS OF POLICE”

No person in the vicinity of any “PROHIBITED PLACE” shall obstruct any Police Officer engaged on guard, sentry or similar duty. If any person moves in the provisions of this section, shall be punishable with imprisonment, which may extend up to 3 years.

SECTION 8 : “DUTY OF GIVING INFORMATION”

It shall be duty of every person to give on demand to a superintendent of Police or any other Police Officer not below the rank of Inspector, any information in his power relating to an offence under this Act.

If any person fails to give such information, shall be punishable with imprisonment to 3 years or fine or with both.

SECTION 9 : “INCITEMENT”

Any person who attempts to commit or debate the commission of an offence under this Act shall be punishable with the same punishment and be liable to be proceeded against in the same manner as if he had committed such offence.

SECTION 10 : “PENALTY FOR HARBOURING SPIES”

If any person whom he knows or has reasonable grounds for supposing to be person who is about to commit or who has committed offence under this Act shall be guilty of offence under this Section.

SECTION 11 : “SEARCH WARRANTS”

If a presidency Magistrate, Magistrate First Class or Sub-Divisional magistrate is satisfied with the information that there is reasonable ground for suspecting that an offence under this Act has been or is about to be committed, he may grant search warrant to any Police Officer to enter at any time any premises to force to search premises or the places.

**Enclosure-
26**

**To,
OTS-TS SECTION
OTS DEPARTMENT
MAZAGON DOCK SHIPBUILDERS LIMITED.**

MDL Tender No. 1900000244

**CHECKLIST OF SUBMITTALS ATTACHED ALONGWITH ONLINE
TECHNICAL BID**

TENDER ENQUIRY No. 1900000224

Bidder to indicate Submitted/ Not submitted and Yes / No under relevant Column and Reasons for Non submissions if any

Sr. No.	Submittals (Scanned Copy)	Whether Submitted/ Not Submitted/ Not Applicable	Bidder to indicate the Reasons below for Non Submissions if any, or if they have indicated "NO" under relevant columns
1	Enclosure-1 viz Form of undertaking	Yes/ No	
2	Enclosure-2 viz TEF Acceptance Form	Yes/ No	
3	Enclosure-3 viz General Engineering Work Enclosure-3.1 viz Special condition of contract	Yes/ No	
4	Enclosure-4 viz GCC Acceptance Form	Yes/ No	
5	Enclosure-5 viz Deviation Form	Yes/ No	
6	CA certified Average Audited Annual financial turnover of Past 03 years ending 31 March 2025	NA	
7	Audit certified Balance Sheets of Past 03 years ending 31 March 2025	NA	
8	Audit certified Profit/Loss Accounts of 03 years ending 31 March 2025	NA	
9	a. Enclosure-6 & 7 viz Bidding Capacity	NA	
	b. Whether Enclosure-6 Certified by CA	Yes/ No	



Sr. No.	Submittals (Scanned Copy)	Whether Submitted/ Not Submitted/ Not Applicable	Bidder to indicate the Reasons below for Non Submissions if any, or if they have indicated "NO" under relevant columns
	c. Whether Enclosure 7 Certified by CA	Yes/ No	
	d. Whether PO Copies in respect of Projects mentioned in Enclosure 7 submitted		
10	Enclosure-8 viz Exp in Similar Projects		
	a. Work Orders along with Scope of work and BOQ		
	b. Completion Certificates issued / authenticated by Client		
	c. TDS Copy in case of Work Completion Certificate issued by Private firm		
11	Enclosure-9 viz Key Personnel for this Project		
12	i) Enclosure-10(A) viz. Declaration certificate for Local Content		
	a. Whether Tender Item Sr. No indicated at Col I of Para (d) of Enclosure	Yes/ No	
	b. Whether Local Content Percentage indicated at Col II of Para (d) of Enclosure	Yes/ No	
	c. Whether Location of Value addition indicated at Col III of Para (d) of Enclosure	Yes/ No	
	d. Whether Enclosure-10(A) viz. Declaration Certificate for Local Content has been signed by Authorized Signatory as indicated at Tender Clause No. 40.4(i)	Yes/ No	
	ii) Enclosure-10(E) viz Declaration in respect of restriction under Rule 144 (xi) of the General Financial Rules (GFRs), 2017	Yes/ No	
	iii) Enclosure-10(F) viz Declaration in respect of of debarred under Public Procurement Policy (PPP) Make In India (MII) order 2017	Yes/ No	
13	Enclosure-11 viz Declaration for Banned or delisted Tenderer	Yes/ No	
14	Enclosure-15 viz EMD Format	NA	
15	Enclosure-13 - Integrity Pact	NA	
16	a. Enclosure-14 viz RTGS Form	Yes/ No	



Sr. No.	Submittals (Scanned Copy)	Whether Submitted/ Not Submitted/ Not Applicable	Bidder to indicate the Reasons below for Non Submissions if any, or if they have indicated "NO" under relevant columns
	b. Whether RTGS form is duly authenticated by any Bank	Yes/ No	
17	a. Solvency Certificate	NA	
	b. Whether Solvency Certificate is issued within 1 Year from Tender date	NA	
	c. Whether Solvency is issued by a Scheduled Commercial (i.e. Indian or Foreign Banks included in the Second Schedule of Reserve Bank of India Act, 1934 excluding Co-operative banks or Regional Rural Banks).	NA	
18	GST Registration Certificate	Yes/ No	
19	PAN CARD	Yes/ No	
20	a. Shop & Establishment Registration Certificate or Certificate of Incorporation from Registrar of Companies or Registrar of firms registration certificate from Registrar of firms	Yes/ No	
	b. Whether Shop and Establishment Certificate is valid as on date of submission	Yes/ No	
21	Company Profile	Yes/ No	
22	ESIC , PF code	Yes/ No	
23	Working capital statement as on 31 March 2024 duly signed & Stamped by CA and all the partners/Owner.	NA	
24	Power of Attorney	Yes/ No	
25	Corrigendum, if any	Yes/ No	
26	Enclosure-29-Declaration in respect of Conflict of Interest among Bidders/ Agents	Yes/ No	

The Bidder hereby declares that in case any of the above submittals are **not submitted/ not appended** along with the tender bid or the bidder have indicated **"No"** against any of the above submittals, MDL reserves the right to disqualify their bid for incomplete submission of the documents without assigning any reasons. The bidder shall be responsible for the incompleteness of their bid.



COMPANY SEAL

DATE

SIGNATURE

NAME

DESIGNATION

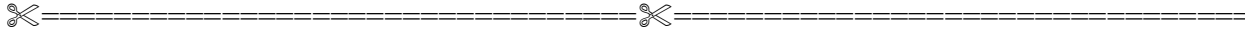
COMPANY



Enclosure-27

Address Label

Please cut & Affix Address label given below on the envelope for sending EMD and Integrity Pact



Sub: Renovation of Maintenance office at Ground Floor South Block-2
(Moghul House), South Yard MDL, Mumbai.

EMD & INTEGRITY PACT

Re

To,

Head of Department (OTS),
OTS Department,
OTS-TS Section
6th Floor, Service Block Bldg.,
NY.
Mazagon Dock Shipbuilders
Limited,
Dock Yard Road. Mumbai –



Enclosure-28



माझगांव डॉक शिपबिल्डर्स लिमिटेड

तकनीकी सेवाएँ विभाग

Certification for Disposal of Scrap/Debris

Sub: Renovation of Maintenance office at Ground Floor South Block-2 (Moghul House), South Yard MDL, Mumbai.

Ref: MDL Tender No. 1900000244

RA NO.:

This is to certify that there is no accumulation of scrap/debris at site in sizable quantum, in respect of the works carried out for the subject work, as on date.

The scrap/debris generated from the above work is disposed of as per extant procedure.

Engineer in Charge

(Name, Sign & Stamp with date)
with Date)

Contractor

(Name, Sign & Stamp



Enclosure-29

MDL Tender No. 1900000244

Declaration in respect of Conflict of Interest among Bidders/ Agents

We, hereby, declare that we do not have Conflict of Interest with other Bidders. We shall be disqualified if found having conflict of interest with other bidders.

We may be considered to have a conflict of interest with one or more parties in this bidding process, if:

- a) We have controlling partner(s) in common; or*
- b) We received or have received any direct or indirect subsidy/ financial stake from any of them; or*
- c) We have the same legal representative/ agent for purpose of this bid; or*
- d) We have relationship with each other, directly or through common parties, that puts us in a position to have access to information about or influence on the bid of another Bidder; or*
- e) We participate in more than one bid in this bidding process. Participation by us in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid.*
- f) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. We must proactively declare such sister/ common business/ management units in same/ similar line of business.*

SIGNATURE: _____

DATE:

Seal / Stamp of Bidder