MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT
FACE SHEET TO ACCOMPANY THE TENDER DOCUMENTS

A.  1. Name and full address of the Contractor to whom the Tender Documents are issued. :

2. Whether registered with Engineering (Civil) Department, if so, class of registration. :

3. If not registered, reference to the letter of the Chief Engineer authorising issue of the tender Documents. :

4. Date of issue of Tender Documents. :

Asst. Engineer (Accts)

B.  1. Name of work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

2. Cost of each set of Tender Documents : Rs.2,000/-

3. Date of Sale of Tender Documents :
   To 19.05.2016 upto 15.00hrs.

4. Date of receipt of tender and time :
   20.05.2016
   Upto 15.00hrs

5. Amount of E.M.D. : Rs.28,400/-

6. Date of opening of tender and time :
   On 20.05.2016 at 15.30 hours.

7 a) Whether E..M.D. received : Yes/No.
   b) if so, in which shape : Demand Draft

8. Form of contract : Item Rate

9. Whether tender received in duplicate : Yes/No

10. Whether rates have been quoted in the tenders both in words and figures. : Yes/No

11. Total No. of Tenders received for the work :

Sr. AO (CWC) EXECUTIVE ENGINEER (P&C)
MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/37/2016

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

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Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

F I R S T   C O V E R

(TO BE SUBMITTED IN SEPARATE SEALED ENVELOPE / COVER)

Architects

Wadia Techno Engineering Services Limited.
Mumbai.
NOTICE INVITING TENDER

TENDER NOTICE NO.: CE/N-37/2016

TENDER No.: CE/37/2016

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

Item Rate tenders in the prescribed form in sealed covers super scribing the Tender No. and due date and time are invited by the Chief Engineer for the above work as per the details given in the table below:

<table>
<thead>
<tr>
<th>Cost of tender document</th>
<th>Estimated cost</th>
<th>Tender Sale From/To</th>
<th>Submission on</th>
<th>Opening on</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMD</td>
<td>Completion Time</td>
<td>Pre-Bid Meeting</td>
<td>28.04.2016</td>
<td>20.05.2016</td>
</tr>
<tr>
<td>Rs.2,000/- (Rupees Two thousand only)</td>
<td>Rs.18,92,900/- (Rupees Eighteen lakhs ninety two thousand nine hundred only)</td>
<td>28.04.2016 to 19.05.2016</td>
<td>20.05.2016 Upto 15.00 hrs.</td>
<td>20.05.2016 at 15.30 hrs. Technical Bid (Cover No.I)</td>
</tr>
<tr>
<td>Rs.28,400/- (Rupees Twenty eight thousand four hundred only)</td>
<td>Four (4) Months</td>
<td>06.05.2016 at 15.30 hrs.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Detailed tender notice along with complete tender documents can be downloaded from our website [www.mptgoa.com](http://www.mptgoa.com) on or before the last date of sale of tender document. Tenders are also available for sale at the Civil Engineering Department of Mormugao Port Trust.

For further details and general enquiries, prospective bidders may contact the Executive Engineer (Planning), telephone No. 0832 2594611, mobile 09764006075, during working hours before the last date and time of sale of tender document.

[sd/-]  
Chief Engineer
MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/37/2016

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

i) - UNDERTAKING BY THE TENDERER

To,
The Trustees of the PORT OF MORMUGAO,

I/We, M/s _______________________________________________ have gone through the tender document carefully and hereby confirm as under:

The complete tender set i.e. First Cover and Second Cover in sealed cover separately and together in a separate cover is returned WITHOUT any defacement, addition, alternation or interpolation. All details have been indicated separately in our tender covering letter with all the relevant Annexures and Proformae duly filled in.

I/We have submitted our tender alongwith Earnest Money Deposit separately enclosed in the Envelop. I/We have not indicated anywhere in the first cover the amount of our Price Bid.

I/We have not made any counter stipulation and conditions and I/We agree that in the event of any such counter conditions my/our tender will be summarily rejected and such offer will not be evaluated and considered at all by you. Percentage Rate quoted by me/us in the schedule of quantities along with other submission will remain valid for the period of 180 days from the submission of the tender.

I/We hereby declare that, all information furnished by me/us with this tender is true to best of my/our knowledge, belief and in case, if it is found that, the information furnished is not true or partially true or incorrect, I/We agree that, my/our tender shall be summarily rejected without prejudice to the right of the Board of Trustees of PORT OF THE MORMUGAO to take further action into the matter.

Witness's Signature : ____________________
Name : ____________________
Designation : ____________________
Address : ____________________
Tel. No. : ____________________
Date : ____________________

Tenderer's Signature : ____________________
Name : ____________________
Designation : ____________________
Address : ____________________
Tel. No. : ____________________
Date : ____________________
ii) DETAIL NOTICE INVITING TENDER

TENDER NOTICE NO.: CE/N-37/2016

TENDER No. CE/37/2016

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

1. SALE OF TENDER COMMENCES: On all working days between 28.04.2016 to 19.05.2016 from 9.30 hrs. to 12.00 hrs. and 14.00 hrs. to 15.00 hrs.

2. LAST DATE FOR SALE: Upto 15.00 hrs. on 19.05.2016

3. LAST DATE FOR SUBMISSION OF TENDER (DUE DATE): Upto 15:00 hrs. on 20.05.2016

4. OPENING DATE FOR FIRST COVER (Technical Bid): At 15:30 hrs. on 20.05.2016

5. Pre-Bid Meeting: At 15:30 hrs. on 06.05.2016

Note: Any clarification on the bid document bidders may contact the Executive Engineer (Planning), telephone No. 0832 2594611, mobile 09764006075, during working hours before the pre-bid meeting. Port’s website www. mptgoa.com.

MORMUGAO PORT TRUST
Civil Engineering Department, Administrative Office Building
Headland – Sada. 403804, Tel: 0832 252 1160

CHIEF ENGINEER
MORMUGAO PORT TRUST
DETAIL TENDER NOTICE

1. INVITATION

1.1 Mormugao Port Trust (MPT) invites *sealed* Item rate tenders in original under two cover bidding procedure and to the MPT's designs, drawings, relevant I.S. codes and specifications contained and referred directly/indirectly in this tender document and on Item basis for the work of "Providing HVAC System for Cruise Terminal Building at Mormugao Harbour."

* "Sealed" shall means sealed with wax or closed with gum, to the satisfaction of authority opening the tender.

1.2. Minimum Eligibility Criteria for tendering will be as follows:

(A) **Financial Criteria**

i) The average annual financial turnover during the last three years ending 31\textsuperscript{st} March 2015 of the tenderer should be at least Rs.5.68 lakh.

Note: The above information shall be submitted along with documentary proof i.e. Income Tax Returns acknowledgement, Audited Statement of Accounts duly certified by the Statutory Auditors of the firm.

(B) **Technical Criteria**

(ii) The firm shall have experience of successfully completing the “similar works” during last seven years ending March, 2015, in either of the following:

(a) Three similar works each costing not less than Rs.7.58lakh.

OR

(b) Two similar works each costing not less than Rs.9.47lakh

OR

(c) One similar work costing not less than Rs.15.15 lakh

Note :  (i) “Similar works” means Supply, Installation, Testing and Commissioning of any type of AC units or Split units or Hi-wall split units, including supply and installation of ductable split AC units. The contractor should clearly specify name of client and copy of orders & value of works handled.
1.2.1 The Tenderer should have executed similar works in the Railways/ Public Sector Govt. Undertakings/ State Governments / Private Sector/ Port Authorities.

1.2.3 **Mode of Selection of Contractor:**
Tenderer shall have to satisfy minimum Financial and Technical eligibility Criteria mentioned in the tender at 1.2 above. Only those tenderers who satisfy minimum Financial and Technical eligibility Criteria will be pre-qualified for opening of Cover No.2 (Price Bid). Lowest Price offer is the sole criteria for award of work among qualified tenderers. During scrutiny of Price offer, lowest price offer will be considered.

1.2.4 The tenderer shall furnish relevant information in respect of their firm, etc. to ascertain their financial and technical capabilities and work experience in Proformae 1 to 4.

1.2.5 Offers received from the tenderer with counter stipulation and conditions will be summarily rejected and such offers will not be evaluated and considered at all.

1.2.6 The Port reserves the right to get any information from the tenderer before opening of the Price offer.

1.3 **Scope of the Work :**

1.3.1 The proposed work comprises of Schedule of Works covered in “Providing HVAC System for Cruise Terminal Building at Mormugao Harbour”.

1.4 The tenderer will have to work in close co-ordination with the other contractors employed, if any.

1.5 The quantities provided in the tender are approximate and may vary. The tenderers are strongly advised to inspect the site of work and acquaint themselves with the site conditions and quantum of works involved etc. so that they are fully aware of the nature and scope of the works to be carried out before tendering. No claim will be entertained due to variations in the quantities.

1.6 **The tenderers will be prequalified based on the information furnished by them. The Second Cover of the only those qualified tenderers will be opened on the date which will be intimated to them.**

2. **PROCEDURE FOR OBTAINING TENDER DOCUMENTS**

2.1 The tender documents can be obtained in person from the Office of the Chief Engineer, Mormugao Port Trust, Administrative Office Building, Headland Sada, Mormugao, 403804. Telephone No.0832 2594628 during working hours from 9.30 hours to 12.00 hours & 14.00 hours to 15.00 hours on any working day upto the last day stipulated for the sale of tender documents, on submission of an application in writing on the firm's letterhead and on payment of the prescribed charges set out below:
For the complete set including drawings : Rs.2,000/- per Set

The above charges are NON-REFUNDABLE.

2.2 The interested firms may alternatively download the tender documents from the Mormugao Port Trust web site www.mptgoa.com. The payment of Rs.2,000/- (Rupees Two thousand only) will have to be made in that case, before the time of submission of the offers and evidence of payment made shall be enclosed or disclosed during opening of Technical cover. Volume I containing the General Conditions of Contract can also be downloaded from the Port’s website. Volume – I shall also form the part of Cover No. I.

2.3 The above prescribed charges should be paid in cash or by Demand Draft drawn in favour of “FA & CAO”, M P T on any branch of a Scheduled Bank within the jurisdiction of State of Goa.

2.4 Tender sets will not be sent by Post OR Courier Service.

2.5 The tender documents are NOT TRANSFERABLE.

3. EARNEST MONEY TO BE DEPOSITED FOR THIS TENDER:

The Earnest Money to be deposited in respect of this tender is Rs.28,400/- (Rupees Twenty eight thousand four hundred only) shall be in the form of Demand draft of any Nationalised or Scheduled Bank within the jurisdiction of State of Goa payable at Vasco.

4. NUMBER OF COPIES OF TENDER TO BE SUBMITTED:

The tenderer shall submit only one (original) copy in each of First cover and Second cover separately.

5. RELEASE OF SITE:

5.1 The site will be released after the work is awarded. Contractor shall commence the work immediately and same shall have to be complete in all respect within a period of Four (4) months. It shall be the responsibility of the contractor not to cause any hindrance to other contractors working at site. All the contractors shall work in close coordination and shall not obstruct the daily routine works in the vicinity. The dust, dirt and debris resulted at the site shall be controlled properly and removed regularly. The complaints received in this respect will be viewed seriously and the cost of resultant damages, if any will be recovered without any reference. The Tenderer should take all these aspect into account while quoting for the tender and to complete the work within stipulated completion period.

6. TIME FOR COMPLETION OF THE WORK:

6.1 The total completion period for the work is Four (4) months and period completed as 7days from the date of receipt of acceptance letter or from the
date of release of site or part thereof, whichever is later.

6.2 Contractor shall commence the work immediately for building and same shall have to be complete in all respect within a period of **Four (4) months including monsoon**.

6.3 Time is essence of the contract. If the tenderer stipulates a completion period longer than the one stipulated above, the same is liable for rejection.

6.4 Tenderer's specific attention is invited to the conditions of the proposed work site. The site will be released after the work is awarded. The site for building being close to road and parking of vehicles. Accordingly, contractors are required to plan their construction activities accordingly without causing any hindrances to the road traffic and other activities of MPT contractor operating / working in the area.

6.5 Proposed work site of building is not within Port operational area, hence contractor is not required to make Harbour Entry Permit (HEP) for all labour and materials. However, contractor shall safe guard its building materials at their own cost. Port is not responsible to any damage or shortfall to building materials.

7. **LIQUIDATED DAMAGES AND PENALTY:**

7.1 Liquidated damages for delay in completion of the works are 1/2 percent (0.5 %) of the Contract Price of work for delay of each week or part of a week subject to a maximum ceiling of 5 percent of the Contract Price. However, if the work is delayed by more than 25% of the contracted completion period, the contract is liable to be terminated and the balance works are liable to be got completed by Mormugao Port Trust through some other agency at the risk and cost of the defaulting Contractor.

8. **PROGRAMME OF WORKS:**

Every tenderer must prepare and submit with his tender detailed CPM network based programme or Bar Chart and list of control milestones for the execution of the work, keeping in mind the site conditions and the possible hindrances due to monsoon, etc. duly signed and dated in accordance with Clause 15 of General Conditions of Contract & the Instructions for Preparation and Submission of Tenders. The Bar Chart and list of control milestones will form part of the tender.

9. **MAINTENANCE PERIOD:**

The Guarantee period offered shall be for 1 (one) year from date of taking over of the equipment as certified by the Chief Engineer.

10. **FACILITIES TO THE CONTRACTOR:**

Tenderers are advised to price their bids after taking into account, among other provisions of the tender documents:
a) MPT will not supply any material for the work.
b) MPT will supply water for construction purpose subject to availability as per the Special Condition of Vol. I Clause No.9.19. In the event water is not supplied by MPT, the contractor will have to make his own arrangements for water which shall be from an approved source (Refer Appendix – II).
c) It is possible to give electric supply by MPT subject to availability during building construction as per Special Conditions of contract Vol.I, Clause No. 9.20. The contractor will have to make his own arrangements for drawing the electricity which shall be approved by MPT. Contractor has to maintain generator set of the adequate capacity for the electrical supply in case of emergency at his own cost (Refer Appendix – II).

11. **FACILITIES NEED TO BE PROVIDED BY THE CONTRACTOR:**

Tenderers are advised to price their bids after taking into account the facilities need to be provided by them free of cost to the Employer, which shall include following facilities.

a) The contractor shall have to submit electrical contractors licence and electrical supervisors licence before execution of work.
b) Contractor shall have to submit necessary test reports of testing of material at his cost at site or has to conduct all the required tests from approved laboratory as directed by Engineer.
c) Stamp Duty on the Contract Agreement will be borne by the contractor.

12. **EXPENSES INCURRED BY THE TENDERER:**

Mormugao Port Trust will not reimburse any costs or expenses incurred by the tenderer in connection with the preparation or delivery of this tender, including costs and expenses related to visit the site.

13. **INSPECTION OF SITE:**

Tenderers are strongly advised to inspect the site of work and acquaint themselves with the site conditions and quantum of work involved, etc. before tendering. Access to the site for inspection will be arranged by Executive Engineer, Engineering Civil Department, Mormugao Port Trust, Administrative Office Building, Headland Sada, Mormugao Vasco, Goa - 403804, Telephone No. 0832 2594611. Mobile: 09764006075.

14. **RIGHT OF ACCEPTANCE / REJECTION OF ANY TENDER :**

The Board of Trustees of the Port of Mormugao reserves the right to reject any or all tenders or to accept any tender in part or whole and does not bind itself to accept the lowest or any tender.

15. **DEADLINE FOR RECEIPT AND OPENING OF TENDER:**

15.1. The tenders duly completed in accordance with the "Instructions for preparation and submission of tenders" contained in this tender document should be placed in the tender box (marked “Tender No. CE/372016”) kept outside the cabin of the Asst. Engineer (Accts), Civil Engineering Department, Mormugao Port Trust, upto due date as indicated in face sheet.
The First Cover – Technical Cover will be opened at 15.30 hrs. on the due date in the presence of such of the tenderers who may wish to remain present.

15.2 The tenders whether sent by Courier/ Post or by hand delivery must reach this office on or before the due date and time. OFFERS RECEIVED LATE WILL NOT BE CONSIDERED EVEN THOUGH POSTED BEFORE THE DUE DATE AND TIME.

15.3 Offers sent by telex/telegram/fax will not be considered.

15.4 Unsigned tenders will not be considered.

16. **PROCEDURE FOR SUBMISSION OF TENDERS:**

The tenders are required to be submitted in accordance with procedure set out at Clause No.4 of Instructions for Preparation and Submission of tenders.

17. Further to provision to this contract the other recoveries shall also include deduction of Income Tax at source, works contract tax, cess, etc. as may be applicable as per the prevailing rules and regulations.

18. Tax at source will be applicable on the value of works contract in terms of Section 28 of Goa Value Added tax (Act) 2005. The present rate of such tax is 5% on the value of the work contract will be deducted from the bill(s) payable to the contractor. The contractor should indicate the registration number with all the applicable statutory authorities regarding Service Tax, VAT, Sale tax (LST & CST).

19. The tenderers are requested to obtain Certificate of Registration under Rule No.24 of the Building and other Construction Workers Central Rules, 1998 from the office of the Asst. Labour Commissioner, Mormugao.

20. The contractor should comply the provisions of the Building and Construction Workers (Regulations of Employment and Conditions of Services) Act, 1996. The Act envisages that every Contractor shall obtain registration certificate from the Registering Officer, if he engages 10 or more workers for the work.

21. Tenderers are requested to submit Audited Balance sheets along with their tender and quote their Permanent Account Number (PAN) / Employment Provident Fund No (EPF) and ESI No. In the absence of this information, The Board of Trustees of the Port of Mormugao will be at the liberty not to consider their tender, which will be deemed to be void. The tenderers who have applied for fresh EPF/ESI registration should submit proof of the same.
22. **VALIDITY OF THE TENDER:**

   The tenders shall remain valid for a period of 180 days from the date of submission of Bid offer.

   CHIEF ENGINEER
   MORMUGAO PORT TRUST
   MORMUGAO – GOA

   Mormugao, Headland Sada.
   Dated:
iii - FORM OF TENDER

I/We __________________________________________________ do hereby offer to execute the work comprised in the annexed Tender Notice “Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.” in strict accordance with the Instructions to Tenderers, General Conditions of Contract (GCC), Specifications, etc. at the rate entered in the attached Schedule of Quantities and Rates.

2. I/We undertake to complete the work included in the Schedule of Quantities and Rates in Part – I within Four (4) months from the date receipt of work order or date of release of site whichever is later. I/We also agree that this tender will remain open for acceptance until disposed off by the Trustees of Port Mormugao. I/We have independently considered the question of the amount of loss or damage likely to result to the Trustees from the delay on my/our part in the performance of the contract and I/We agree that the Liquidated damages at the rate of 0.5% of the contract price per week or part thereof delay in work subject to a maximum ceiling at 5% of the contract price represents a fair estimate of the loss likely to result from the delay.

3. I/We enclose herewith a sum of Rs.28,400/- (Rupees Twenty eight thousand four hundred only) towards earnest money deposit in the form of Demand draft as proof of my/our willingness to enter into the contract if my/our tender is accepted.

4. In the event of my/our tender being accepted, I/We agree to enter into a contract in the prescribed form with such alterations or additions thereto which may be necessary to give effect to the acceptance of this tender and such contract shall contain and give full effect to the specifications, Schedule of Quantities and Rates attached to this tender.

5. I/We also agree, if awarded the contract that the earnest money lodged with this tender will be retained by the Trustees towards part of the Security Deposit and to make further deposit by cheque/demand draft of a Bank Guarantee, within seven days or such extension of the period permitted by the Chief Engineer, in writing, after receipt of information that my/our tender has been accepted by the Port Trust.
6. I/We further agree, if awarded the contract, to lodge the Retention Money equivalent to 5% of the contract price of my/our tender by way of deductions from my/our bills at the rate of 10% of the gross value of work certified in each bill till the amount of 5% of the contract price is accumulated.

7. Should this tender be accepted, I/we hereby agree to abide by and fulfil all the terms and conditions of the said tender annexed hereto, so far as applicable or in default thereof to forfeit and pay the Board of Trustees and/or its assignees, the sum of money mentioned in the said conditions and to execute and agreement in the prescribed form with the Mormugao Port Trust within 30 days of the award of the contract, or in default thereof, to forfeit the Earnest Money deposited by me/us. Unless and until, a formal agreement is prepared and executed, this tender together with your written acceptance thereof shall constitute a binding contract between us.

8. I/we undertake, if our tender is accepted, to commence the work within 7 days of receipt of the Chief Engineer’s orders to commence and to complete and deliver the whole of the work comprised in the contract within the time allowed for the work.

9. A sum of Rs.28,400/- (Rupees Twenty eight thousand four hundred only) has been deposited by me/us with the Financial Adviser and Chief Accounts Officer of Mormugao Port Trust as Earnest Money, the full value of which is to be absolutely forfeited to the Board of Trustees without prejudice to any other rights or remedies of the said Board, should I/we fail to commence the work specified in the above mentioned memorandum, otherwise the said sum of Rs.28,400/- (Rupees Twenty eight thousand four hundred only) shall be detained by the Port Trust as a part of the Security Deposit as aforesaid.

10. I/we agree to abide by this tender to be valid for the period of six months from the date fixed for receiving/opening the same and it shall remain binding upon me/us and may be accepted any time before the expiration of that period.

11. I/we further agree that if I/we withdraw the tender before the expiration of this period of six months, or fail to execute an agreement in the form aforesaid within 30 days from the date of award of contract, the Earnest Money deposited shall be forfeited to the Board.

12. I/we understand that the Board is not bound to accept the lowest or any tender you may receive and may reject the same (the lowest) or any other tender without assigning any reason therefore.

13. “I have read and understood the General conditions and specification of the work which are printed in Volume – I supplied to me by the Department which will form a part of tender and this shall remain binding on me”.

14. I/We have enclosed herewith the following completed documents as required under instructions to tenderers:-
   a) Organisation Chart.
   b) List of similar works carried out by me/us.
   c) Bar Chart/ CPM Chart.
d) List and description of main plant and equipments proposed to be used on this work and Proforma 1 to 4.

15. I/We have inspected the site and I am /we are fully aware of the work to be carried out while tendering for the contract.

16. (A) Mine is a proprietary firm and I am sole proprietor of the firm. My firm is/is not registered with Registrar of firms.
   Name: ____________________________  Age ________ Years

   (B) Ours is a partnership firm and the names of all major partners are given below:

<table>
<thead>
<tr>
<th>NAME</th>
<th>AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
</tbody>
</table>

   We understand and confirm that if our offer is accepted, the contract will be entered into with the above mentioned partners only and the Trustees will not recognize or deal with any minor partners of their guardians.

   (C) Ours in a company with liability and a copy of our Memorandum and Articles of Association will be sent for perusal upon acceptance of our offer.

   Proposed contract is intended to be signed by a duly constituted Attorney and original power of Attorney is his favour will be submitted for perusal immediately on acceptance of the tender.

17. The name and address of our Banker is ** ____________________________

18. My/our permanent Income Tax Accountant No. is ____________________.

Witness’s Tenderer’s
Signature________________________  Signature __________________________

Name __________________________  Name __________________________
Address __________________________ Address __________________________
NAME AND ADDRESS OF TENDERER:-

________________________________________

________________________________________  SIGNATURE OF TENDERER

________________________________________

Witness: - __________________________

Date: __________ Day of __________ 2016

Witness: - __________________________

Witness: - __________________________
iv) APPENDIX TO THE TENDER NOTICE

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

**APPENDIX- I**

The following Clauses shall be read in conjunction with respective Clauses of General Conditions of Contract (GCC)

<table>
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<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Amount of Initial Security and Time.</td>
<td>11(1)</td>
<td>Five percent of the contract price and 22 months.</td>
</tr>
<tr>
<td>2.</td>
<td>Period for commencement from the Chief Engineer’s orders to commence.</td>
<td>38</td>
<td>7 days</td>
</tr>
<tr>
<td>3.</td>
<td>Period of Completion</td>
<td>40</td>
<td>4 (Four) months</td>
</tr>
<tr>
<td>4.</td>
<td>Amount of liquidated damages.</td>
<td>43</td>
<td>Calculated at 0.5% value of the contract per week of seven days, or part thereof subject to a ceiling of 5% value of the contract.</td>
</tr>
<tr>
<td>5.</td>
<td>Free Maintenance Period.</td>
<td>45(1)</td>
<td>12 (Twelve) months</td>
</tr>
<tr>
<td>6.</td>
<td>Percentage of retention from each running account bill</td>
<td>54(1)</td>
<td>10%</td>
</tr>
<tr>
<td>7.</td>
<td>Limit of Retention Money</td>
<td>54(1)</td>
<td>5% value of the contract</td>
</tr>
<tr>
<td>8.</td>
<td>Total initial Security Deposit and Retention Money.</td>
<td>11(1)</td>
<td>10% value of the contract</td>
</tr>
<tr>
<td>9.</td>
<td>Minimum amount of interim Certificate</td>
<td>54(1)</td>
<td>Rs.7,00,000/-</td>
</tr>
<tr>
<td>10.</td>
<td>Time within which payment to be made after contractor's submission of the bill based on joint measurement.</td>
<td>54(1)</td>
<td>100 % within 15 working days</td>
</tr>
<tr>
<td>11.</td>
<td>Mobilisation Advance</td>
<td>N.A</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>12.</td>
<td>Interest rate on mobilization advance.</td>
<td>N.A</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>13.</td>
<td>Mode of recovery of Mobilisation Advance</td>
<td>N.A</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>14.</td>
<td>Variation in price of labour and materials.</td>
<td>70</td>
<td>Not Applicable to this contract.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>15.</td>
<td>Arbitration Clause</td>
<td>66</td>
<td>Not Applicable to this contract.</td>
</tr>
<tr>
<td>16.</td>
<td>Minimum amount of third party Insurance.</td>
<td>Cl. No.13 to 15 of Special Instructions</td>
<td>5% of the tendered amount.</td>
</tr>
<tr>
<td>17.</td>
<td>Lease rent.</td>
<td>Cl. No.9 to 11 of Special Instructions</td>
<td>Refer Appendix III</td>
</tr>
</tbody>
</table>

Dated this ---------------------- day of ---------------------- 2016

Signature ---------------------- in the capacity of ________________________

---------------------- duly authorised to sign tender for and

on behalf of ________________________________

( IN BLOCK LETTERS )

ADDRESS: ________________________________

                  ________________________________

Witness: ________________________________

                  ________________________________

Occupation: ________________________________

                  ________________________________
iv) APPENDIX- II

MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/37/2016

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

MATERIALS TO BE SUPPLIED BY THE DEPARTMENT FOR THE WORK

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Description of materials</th>
<th>Approx. qty. to be supplied</th>
<th>Unit</th>
<th>Rate in Figures/Words</th>
<th>Place of Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Water</td>
<td>--</td>
<td>Cubic Metre</td>
<td>Rs.37.5/m3 (Rupees thirty five only)</td>
<td>Ref. Clause No.9.19 of Special Conditions – Vol.I</td>
</tr>
<tr>
<td>2.</td>
<td>Electric Power</td>
<td>----</td>
<td>KWH</td>
<td>Electric supply as per the relevant rate applicable and supply point will be indicated by the CME’s Department.</td>
<td>Ref. Clause No.9.20 of Special Conditions – Vol.I</td>
</tr>
</tbody>
</table>

________________________________________
SIGNATURE OF THE CONTRACTOR
iv) APPENDIX- III

MORMUGAO PORT TRUST
ENGINEERING (CIVIL ) DEPARTMENT

TENDER No. CE/37/2016

ESTATE RENTAL CHARGES

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Description</th>
<th>Rate* Rs.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Licence fees on Port land for maintenance office buildings and other structures.</td>
<td>Rate will be charged as per Scale of Rates prevailing during period of contract.</td>
<td>Payment shall be made to CDC Section, Finance Dept based on the recovery advice.</td>
</tr>
</tbody>
</table>

NOTE : Location of suitable area subject to the availability shall be decided by the Chief Engineer.

* Rate per 10 sq. m. or part thereof per calendar month or part thereof.

----------------------------------------------------------------------------------------------------------------------------------

___________________________________
SIGNATURE OF THE TENDERER
MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/37/2016

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

EXECUTION OF SIMILAR WORK CARRIED OUT AS PRINCIPAL CONTRACTOR DURING EACH OF LAST SEVEN YEARS ENDING 31ST MARCH 2015.

(Rs. in lakhs)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tender No.</th>
<th>Name of the work</th>
<th>Employer</th>
<th>Amount Received Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

NAME, SIGNATURE & SEAL OF TENDERER:

DATE:
MORMUGAO PORT TRUST  
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/37/2016

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

EXECUTION OF SIMILAR WORK IN PROGRESS AS PRINCIPAL CONTRACTOR TILL DATE.

(Rs. in lakhs)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tender No.</th>
<th>Name of the work</th>
<th>Employer</th>
<th>Amount Received Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

NAME, SIGNATURE  
& SEAL OF TENDERER:

DATE:
MORMUGAO PORT TRUST
ENGINEERING (CIVIL ) DEPARTMENT

TENDER No. CE/37/2016

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

LIST OF MAJOR TOOLS, PLANT AND MACHINERY, SURVEY EQUIPMENTS, TESTING APPARATUS IN WORKING CONDITION AND OWNED BY THE TENDERER
(USE CONTINUATION SHEET IF REQUIRED)

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>DESCRIPTION</th>
<th>NO. OF UNITS</th>
<th>YEAR OF PURCHASE</th>
<th>PRESENT CONDITION</th>
<th>PRESENT LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAKE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAPACITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

NAME, SIGNATURE
& SEAL OF TENDERER:

DATE:
Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

**LIST OF PROFESSIONALS TO BE DEPUTED FOR THE SUBJECT WORK**
(USE CONTINUATION SHEET IF REQUIRED)

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>NAME OF PERSON</th>
<th>AGE</th>
<th>PROFESSIONAL EXPERIENCE DETAILS</th>
<th>POSITION HELD IN THE FIRM</th>
<th>SINCE WHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

NAME, SIGNATURE & SEAL OF TENDERER:

DATE:
Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

(vi) - INSTRUCTIONS FOR PREPARATION AND SUBMISSION OF TENDER

1. EARNEST MONEY DEPOSIT (EMD):

1.1 The Earnest Money shall be lodged by the tenderer on the understanding that in the event of the tenderer withdrawing his tender before the expiry of the tender validity period stipulated in the Tender Notice, the Earnest Money deposited by the tenderer shall be forfeited.

1.2 Earnest Money Deposit will be accepted only in the form of Demand Draft issued from any Nationalised or Scheduled Banks having office in the State of Goa. The same shall be drawn in favour of “FA&CAO/MPT” and payable at Vasco -de- Gama. EMD in cash or in the form of Bank Guarantee will not be accepted.

1.3 For Two cover bidding procedure i.e. one is Technical Bid and other is Financial Bid, the E.M.D. should be placed in a third cover. All the three covers shall be placed in fourth cover properly sealed. The inner envelopes should be separately marked “EMD”, “Technical bid” and “Financial Bid”. The outer envelope should bear identifications such as (i) Tender No., (ii) Description of work, (iii) Bidders Name and Address and (iv) Time and Date of Bid opening.

1.4 Bids if not accompanied by the requisite Earnest Money Deposit (EMD) and in the manner described at 1.2 and 1.3 above is liable to be rejected at the discretion of the Port.

1.5 Proper receipt for having received the Earnest Money Deposit (EMD) shall be issued to the bidders after opening the bids.

1.6 Refund of Earnest Money Deposit:
Mormugao Port Trust will return, generally within 10 days of the opening of the Price Covers of the tenders; the Earnest Money Deposits lodged by all tenderers except for those whose offers are ranked as the first three lowest acceptable tenders. Such tenderers are requested to contact the Asst. Engineer (Accts), Engineering (Civil) Department in the Head Office for claiming the same.
1.7 E.M.D. of other tenderers, i.e. two among the first three lowest tenderers will be refunded to them only after acceptance of work order by successful tenderer. E.M.D. of successful Contractor will be retained as part of Initial Security Deposit (I.S.D.)

1.8 The return of Earnest Money will be effected through e-payment mode. Tenderers are therefore requested to submit details in Vendor Registration Form. The Mormugao Port Trust will not be responsible for reimbursing to the tenderers the Banker’s commission.

2. **INSPECTION OF SITE**
   Tenderers are advised to inspect the site before tendering and fully acquaint themselves about the nature and scope of the works to be carried out and other factors relating to the performance of the contract as no claims or complaint/s will be entertained after award of the contract in this context.

3. **PROCEDURE FOR PREPARATION OF TENDERS BY TENDERERS:**

   3.1 The tenderer shall complete the annexed Tender, Schedule of Quantities and Rates and insert all the information called for therein, sign and date them. Unsigned tenders will not be considered. The tenderer shall furnish with the tender a notorized xerox copy of the Power of Attorney, or other acceptable authorisation of the person/s signing the tender, unless such copy is already registered with the Mormugao Port Trust.

   3.2 Tenderers must return the complete tender set. The tender documents shall not be defaced or detached. Additions and alterations or interpolations shall not be made in the tender document.

   3.3 Unless otherwise stipulated in the Tender Notice, the tenderer shall submit his tender strictly based on the official design and specifications.

   3.4 All the tenderers shall submit/furnish along with the tender the followings:-

      (a) List of similar works executed by the tenderer.

      (b) Detailed CPM network based programme for execution of the work for Part I. He has to plan all his activities in such a manner that work will be completed in the stipulated period.

      (c) All tenderers must furnish complete information in accordance with this document alongwith Proformae 1 to 4.

      (d) Check list and Vendor Registration Form duly filled in.

4. **SUBMISSION OF TENDER:**
   The tenderer is required to submit his tender in the manner described below.

4.1 **Tenders invited under Two cover system:**
4.1.1 The tender is required to be submitted in Two cover system and First cover shall contain:

(a) All the tender document including the required information of the tenderer's along with the Proformae duly filled in excluding Preamble to Schedule of Quantities and Rates, Schedule of Quantities and Rates and Form of Tender which is required to be sealed separately in second cover.

(b) All the accompaniments set out in Clause 4.4 above

(c) The First sealed cover shall be superscribed with the Tender Number, Name of Work, Due Date and with the words “TECHNICAL BID (Cover No.1) – To Chief Engineer” and should bear in the bottom left corner, the Name of Tenderer.

(d) Duly executed power of attorney in the name of Bidders authorised representatives to act on behalf of Bidder in case of Firms/ Partnership duly authenticated by a Notary Public.

(e) All Technical Certificates and Financial Statements shall be certified by the Statutory Auditors of the firm or self attested.

4.1.2 The Second sealed cover shall contain Preamble to Schedule of Quantities and Rates, Schedule of Quantities and Rates for Part I and Form of Tender in the form as described in Clause No.4.1.1(a) above as the case may be. The Second sealed cover shall be superscribed with the Tender Number, Name of the work, Due date and with the words “FINANCIAL BID – (Cover No.2)” and should bear in the bottom left corner, the Name of the Tenderer.

4.1.3 The Tenderer must ensure that his tendered amount or rates are not mentioned, either directly or indirectly in any of the papers enclosed in the First cover. If any such mention is made there, the tender is liable to be treated as invalid and will not be considered.

4.1.4 The EMD shall be placed in “Third cover” marked as “EMD” and all the three covers shall be placed in “Fourth cover” properly sealed which shall be superscribed with the Tender Number, Name of the work, Due date and with the words “Complete Tender” and shall be addressed to the Chief Engineer, Mormugao Port Trust. The Name of Tenderer shall appear in the bottom left corner of the cover. Tenderer should also write on this cover whether the tender is submitted against EMD lodged with the tender or against Permanent Earnest Money Deposit.

4.2 Delivery of Tenders

4.2.1 The tenders duly completed in accordance with the "Instructions for preparation and submission of tender" contained in this tender document should be placed in the Tender Box (marked “Tender No.CE/37/2016”) kept outside the cabin of the Asst. Engineer (Accts), Civil Engineering Department, Administrative Office Building, Mormugao Port Trust, Headland Sada, Mormugao, 403804, Tel: 0832
upto 3.00 pm on due date as indicated in face sheet and First cover
Chief Engineer, Mormugao Port Trust offers will be opened at 3.30 p.m. on the
same date in the presence of such of the tenderers who may wish to be present.

4.2.2. The tenders addressed to the Chief Engineer/MPT whether sent by post or by
hand delivery must reach the office of the Asst. Engineer (Accts), Civil
Engineering Department, Mormugao Port Trust, Administrative Office Building,
Headland-Sada, Mormugao, 403804, on or before the due date and time.
OFFERS RECEIVED LATE WILL NOT BE CONSIDERED EVEN THOUGH
POSTED BEFORE THE DUE DATE AND TIME.

4.2.3. Offers sent by Telex/Telegram/FAX will not be considered.

4.2.4. Unsigned tenders will not be considered.

5. OPENING OF TENDERS:

5.1 The tender will be opened at the time and date notified in the Tender Notice, in
the presence of such of the tenderers who may wish to be present.

5.2 In the case of Two cover tenders, only the First cover marked to Chief Engineer,
(MPT) will be opened at the time and date notified in the Tender Notice.

5.3 The Second cover i.e. “Financial Bid” of non-qualified bidders will be retained
unopened and no correspondence on this decision will be entertained. The
Second covers of only those tenderers, who are found to be eligible, will be
opened later. The date and the time of opening the Second cover will be notified
to the concerned tenderers and the Second cover will be opened in the
presence of such of those tenderers who may wish to be present.

6. VALIDITY PERIOD OF TENDERS

The validity period of the tender shall be 180 days after the submission of the
Bid Offer. Tenders with a shorter validity period shall be rejected.

7. Tenderers should not send revised or amended offer after the closing day and
the time of tender.

8. The contractor shall take special care to protect and support at their own cost
the underground service like electrical cables, telephone cables, water-mains,
drainage pipelines and other services lines etc. coming in the way of works.
Damages if any will be at tenderer’s cost.

9. Further clarification, if any, can be obtained from the Executive Engineer, (P&C
Section) Engineering Civil Department, Mormugao Port Trust or by contacting
the officer designated in the Tender Notice.
10. The tenderers are not allowed to fill in the tender or seal the tender in the MPT premises.

Mormugao, Headland Sada.
Dated:

CHIEF ENGINEER
MORMUGAO PORT TRUST
MORMUGAO – GOA
THIS AGREEMENT made this day of two thousand sixteen BETWEEN the Board of Trustees of the Port of Mormugao, a body corporate under the Major Port Trusts Act. 1963 (herein under referred to as “the Board” which expression shall unless repugnant to the context or meaning thereof mean and include their successors and assigns) of the ONE PART of M/s. ________________________________, having their registered office at _______________ ____________ (hereinafter referred to as “the contractor”, which expression shall unless repugnant to the context or meaning thereof, mean and include their heirs, executors, administrators, representatives and assignees or successors in office) of the OTHER PART.

WHEREAS the Board is desirous of executing the work of “_________________________________” on the terms and conditions stipulated in the contractor’s tender dated _______________ and read with the conditions contained in the tender documents attached to the above mentioned tender.

AND WHEREAS the contractor by their above mentioned tender has offered to execute, complete and maintain such work, which tender has been accepted by the Board and such tender with correspondence, specifications, schedule. Amendments and acceptance thereof will constitute abiding contract between the Board and the contractor.

AND WHEREAS the contractor has furnished to the Board, a Bank Guarantee No. ______________ dated ______________ for a sum of Rs.________________________ (Rupees ___________________________
as Initial Security for the due performance and observance by the contractor of the terms and conditions of this Agreement.

**NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:**

01. In this agreement words and expressions shall have the same meaning as are respectively assigned to them in the conditions of contract herein after referred to.

02. The following documents shall be deemed to form and be read and construed as part of this agreement.

(A) **COVER No. - I**

a. Contents of Tender Document

b. Undertaking by the Tenderer

c. Tender Notice

d. Clause of General Conditions of Contract.

e. Appendix I

f. Appendix II (Materials to be supplied by Department)

g. Appendix III (Estate Rental)

h. Proforma 1, 2, 3 & 4.

i. Instructions for preparation and submission of tender.

j. Additional special instructions.

k. Scope of Work

l. Form of Bank Guarantee for EMD and Security Deposit and Form of Agreement (Annexures I & II)

m. Indicative Drawing No.

n. A printed set containing Instructions to tenderers, General and special conditions of contract. (VOLUME –I).

(B) **COVER No. II**

i) Preamble to Schedule of Quantities and Rates
ii) Schedule of quantities and rates

iii) Tender Form

iv) Contractor’s acceptance letter No. _______________ dated ______.

iv) Any other relevant correspondence exchanged up to the issue of work order which has not been specifically mentioned above.

v) All additional drawings, specifications and written Instructions when issued by or approved in writing by the Chief Engineer as per clause No.9 of the General Conditions.

03. The contractor hereby convenants with the Board to construct, complete and maintain the work in conformity in all respects with the provisions of the contract.

04. The Board hereby convenants to pay to the contractor the contract price in consideration of the construction, completion and maintenance of the work, at the times and in the manner prescribed by the contract.

05. IN WITNESS WHEREOF THE PARTIES HAVE placed their hand and seals, the day, month, year first above written

THE COMMON SEAL OF THE TRUSTEES OF

THE PORT OF MORMUGAO HAS HEREUNTO AFFIXED AND THE CHAIRMAN THEREOF CHIEF ENGINEER HAS HEREUNTO SET HIS HAND IN THE PRESENCE OF

1. 

2.

SIGNED AND SEALED BY THE CONTRACTOR IN THE PRESENCE OF

1. 

2.
FORM OF BANK GUARANTEE FOR SECURITY DEPOSIT

In consideration of the Board of Trustees of the Mormugao Port Trust (hereinafter called “The Board”) having offered to accept the terms and conditions of the proposed agreement between _______ and ________ (hereinafter called “the said Contractor(s)”) for the work ____________(hereinafter called "the said agreement") having agreed to production of an irrevocable Bank guarantee for Rs. ______ (Rupees _______ only) as a security/guarantee from the Contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

1. We ___________ (hereinafter referred to as the “Bank”) hereby undertake to (indicate the name of the Bank) pay to the Board an amount not exceeding Rs. ___________ (Rupees __________________ only) on demand by the Board.

2. We____________________ do hereby undertake to pay the amounts due and payable (indicate the name of the Bank) under this Guarantee without any demur, merely on a demand from the Board stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs. ___________ (Rupees ______________ only).

3. We, the said Bank, further undertake to pay to the Board any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder, and the Contractor(s) shall have no claim against us for making such payment.
4. We _____________ further agrees that the Guarantee herein contained shall (indicate the name of the Bank) remain in full force and effect during the period that would be taken for the performance of the said agreement, and it shall continue to be enforceable till all the dues of the Board under or by virtue of the said agreement have been fully paid, and its claims satisfied or discharged, or till the Engineer-In-Charge, on behalf of the Board, certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s), and accordingly discharges this Guarantee.

5. We _________ further agree with the Board that the Board (indicate the name of the bank) shall have the fullest liberty without our consent, and without effecting in any manner our obligations hereunder, to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Board against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement, and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the Board or any indulgence by the Board to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s).

7. We __________ lastly undertake not to revoke this Guarantee except with (indicate the name of the Bank) the previous consent of the Board in writing.

8. This Guarantee shall be valid upto _______ unless extended on demand by the Board. Notwithstanding anything mentioned above, our liability against this Guarantee is restricted to Rs. _____ (Rupees ____________ only), and unless a claim in writing is lodged with us within six months of the date of expiry or extended date of expiry of this Guarantee all our liabilities under this Guarantee shall stand discharged.

Dated the _____________ day of ___________ For ____________________________

(indicate the name of the Bank)
**MORMUGAO PORT TRUST**  
**ENGINEERING (CIVIL) DEPARTMENT**

**TENDER No. CE/37/2016**

**Name of Work:** Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

**(ix). SCOPE OF WORK**

The work comprises of supply, installation, testing & commissioning of Hi-Wall type of split units for the Air conditioned areas as listed below conforming to the specifications and in accordance with the requirements as per equipment.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Descriptions</th>
<th>Serving Area</th>
<th>Configuration of A.C. Equipment</th>
</tr>
</thead>
</table>
| 1       | Ground Floor | a] Waiting Lounge  
b] Cambio  
c] security | a ] 1 X 1.5 Tr. Hi-wall type split Unit with one number outdoor unit  
b ] 1 x 1.00 Tr. Hi wall type split unit with one number outdoor unit  
c ] 1 x 1.00 Tr. Hi wall type split unit with one number outdoor unit |
| 2       | Mezzanine Floor | a ] Admn. office  
b ] Admn. | a ] 1 x 1.50 Tr. Hi -wall type split unit with one number outdoor unit  
b ] 2 x 1.50 Tr. Hi-wall type split unit with one number outdoor unit |
| 3       | First Floor | Entertainment Room | a ] 2 x 11.00 Tr. Ceiling suspended ductable air cooled split units with 2 nos. 11.00 Tr. outdoor units |
| 4       | First Floor | Proposed shop | b] 1x 1.50 tr. Hi-wall type split unit with one outdoor unit |
| 5       | First Floor | Proposed shop | c ] 1x 2.00 tr. Hi-wall type split unit with one outdoor unit |
| 6       | Second floor | Cafeteria | a ] 2 x 11.00 tr. Ceiling suspended ductable air cooled split units, with 2 nos. 11.00 Tr. outdoor units. |
| 7       | Terrace floor | Cafeteria | 1x 3000 cmh. Supply air fan for kitchen |
|         | Terrace floor | Cafeteria | 1 x 3500 cmh. Exhaust Air Fan |
The Hi-Wall type mounted split units will be mounted in the areas to be air-conditioned and their outdoor condensing units will be mounted on the G.I. bracket in the external wall of the building. The operation of this unit will be from the external where the indoor unit will be installed with cordless remote control. The A.C. unit with permanent Hydrophobic, Anti-corrosive treatment for outdoor unit.
MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/37/2016

Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

(x) ADDITIONAL SPECIAL INSTRUCTIONS

1. Tenderers are required to sign with date the Schedule of Quantities and Rates and the form of tender and fill in all the particulars and details called for therein. Unsigned tenders, without the details called for are liable for rejection.

2. Measurements
The quantities provided for in the Schedule of Quantities and Rates are only approximate and are given to provide a common basis for tendering. The actual quantity may differ from those provided for in the Schedule in view of the special and complex nature of the work. Payments will be made according to the actual quantities of work ordered and carried out, jointly measured by the representative of Chief Engineer and the contractor.

3. Rates and Prices to be inclusive.
The rates entered in the Schedule of Quantities by the tenderer shall include the provision of all supporting special equipment, labour of required skill, supervision, materials, overheads and profits, watch and ward, insurance charges, during execution and every incidental and contingent costs and charges, whatsoever, including sales tax on works contracts, Entry tax, etc. if any, for compliance with conditions of contract and specification. Service tax is applicable as per relevant provisions of the act time to time and shall be paid extra.

4. The tenderer shall inspect the site and fully study the work involved vis-à-vis the specifications etc. before tendering for the work.

5. Any damage to the property of Port should be made good or compensated by the contractor.

6. After completion of the days, work / contract period the contractor shall clean, clear the work site to the satisfaction of the Chief Engineer or his site representative.

7. Permission for working beyond the normal working hours of the Port or on Sundays and Public Holidays as stipulated under Clause No.43 of the General Conditions of Contract, Volume – I of the tender document will be given to the contractor subject to his agreeing to bear the cost of overtime, if any, which may have to be paid to the Port’s supervisory staff.
8. Subject to the availability, land for construction of temporary sheds/stores/labour hutments, etc. will be given to the contractor in Port areas at Headland. The contractor shall clear away all the temporary structures built within a period of fourteen days after completion of the work and leave the whole of the site clean to the satisfaction of the Chief Engineer. In case the contractor fails to vacate the Port area / premises allotted to him for site office / store within the stipulated period after the completion of the work, the Board shall have the right to debar such defaulting contractors for future contracts of the Board by blacklisting him and shall also be charged penal lease rental at the prescribed rates.

9. Lease rent shall be charged to the contractors for the area allotted for construction of their temporary sheds for site office/store/labour hutments required in the contract works. The licence fee shall be as per Port’s scale of Rates vide item (i) and (ii) of Part - I (Appendix-III).

10. No temporary structures/sheds which are constructed to house the contractor’s office/store/labour hutments shall be permitted to be retained during the period of maintenance.

11. All the materials to be used in the structure shall be conforming to relevant ISI specifications or as specified in the Tender Schedule. Contractor shall undertake laboratory test as specified in the relevant I.S.I. at the discretion of Chief Engineer and only approved materials/approved brand of materials shall be used.

12. Electrical power and water required for the work shall be supplied as per the availability at the Port’s Scale of Rates vide Item No. I & II of Part - I (Appendix - II).

13. The contractor or his Authorized sub-contractor for supply of labour shall have EPF and ESI Registration No. of the firm and shall contribute towards Employees Provident Fund (EPF) and ESI schemes and submit the copy of the same along with the details in prescribed format while submitting bills. However in case the contractor deploys sub-contractors for supply of labour for principal parts of the works and for such others as the Chief Engineer may direct a legal document should be provided by the tenderer along with Technical Bid.

14. Contractor may submit the following information in order to refund the EMD’S, BG’S/SECURITY DEPOSITS/ RETENTION MONEY, payment of bill’s etc.
   a. NAME OF BANK
   b. PLACE
   c. ACCOUNT No.
   d. TYPE OF A/C No.
   e. MICR / RTGS / IFS No.
   f. Permanent Account Number
15. SITE REGISTERS:-

The contractor shall maintain following registers at Site, which shall be entered on day to day basis and produced on demand.

1. Progress of work Register
2. Hindrance Register
3. Site Instruction Book
4. Joint Record / Measurement Register.
5. Labour Register
6. Any other register required by the Chief Mechanical Engineer or his representative.

The Contractor shall keep all registers in safe custody.

16. All precautions to ensure safety of workmen must be taken while unloading & loading the materials during execution of work. Traffic rules should be strictly followed to avoid accidents & unforeseen incidents.

17. Before taking up any digging work, it is the responsibility of the contractor to get cable layout plan from Chief Mechanical Engineer or his representative of the work & arrange to demarcate at the same at the site. The contractor shall take special precaution while carrying out works at location where there is likelihood of any underground cables/OFc etc., & the work shall not be carried out without the presence of an authorized Port supervisor.

18. The Additional Special Instructions given above shall prevail over those stipulated elsewhere in the tender documents forming part of the contract. The volume containing the Instructions of Tenderers, the General conditions, Special conditions and Specifications forms an integral part of the tender document and the same shall be submitted along with the Volume - I of the tender documents all duly signed by the tenderer.
Name of Work: Providing HVAC System for Cruise Terminal Building at Mormugao Harbour.

(xi) ADDITIONAL SPECIFICATIONS

The work comprises of supply, installation, testing & commissioning of Hi-Wall type of split units for the Air conditioned areas as listed below conforming to the specifications and in accordance with the requirements as per equipment.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Descriptions</th>
<th>Serving Area</th>
<th>Configuration of A.C. Equipment</th>
</tr>
</thead>
</table>
| 1       | Ground Floor | a ] Waiting Lounge, b ] Cambio, c ] security | a ] 1 X 1.5 Tr. Hi-wall type split Unit with one number outdoor unit  
         |              |              | b ] 1 x 1.00 Tr. Hi wall type split unit with one number outdoor unit  
         |              |              | c ] 1 x 1.00 Tr. Hi wall type split unit with one number outdoor unit |
| 2       | Mezzanine Floor | a ] Admn. office, b ] Admn. | a ] 1 x 1.50 Tr. Hi-wall type split unit with one number outdoor unit  
         |              |              | b ] 2 x 1.50 Tr. Hi-wall type split unit with one number outdoor unit |
| 3       | First Floor | Entertainment Room | a ] 2 x 11.00 Tr. Ceiling suspended ductable air cooled split units with 2 nos. 11.00 Tr. outdoor units |
| 4       | First Floor | Proposed shop | b] 1x 1.50 tr. Hi-wall type split unit with one outdoor unit |
| 5       | First Floor | Proposed shop | c ] 1x 2.00 tr. Hi-wall type split unit with one outdoor unit |
| 6       | Second floor | Cafeteria | a ] 2 x 11.00 tr. Ceiling suspended ductable air cooled split unit, with 2 nos. 11.00 Tr. outdoor units. |
| 7       | Terrace floor | Cafeteria | 1x 3000 cmh. Supply air fan for kitchen |
|         | Terrace floor | Cafeteria | 1 x 3500 cmh. Exhaust Air Fan |
The Hi-Wall type mounted split units will be mounted in the areas to be air-conditioned and their outdoor - condensing units will be mounted on the G.I. bracket in the external wall of the building / The operation of this unit will be from the external where the indoor unit will be installed with cordless remote control. The A. C. unit with permanent Hydro phobic, Anti- corrosive treatment for outdoor unit.

**Air Distribution** :

The cooled and dehumidified air from the Indoor unit of the Hi-Wall type of Split units will be re-circulated into the room to be air conditioned.

**TECHNICAL SPECIFICATIONS** :

**COMPRESSORS**

Compressors shall be hermetic scroll or hermetic reciprocating type using refrigerant R - 22 or equivalent complete with safety controls oil heater and other accessories, main bearings shall be of generous size and self aligning type with lining of anti – friction bearing metal complete with forced feed type lubrication system comprising of reversible pumps, filters with by - pass relief valves, pressure and control valves as required.

**EVAPORATOR**

Evaporator coils shall have 10 to 15 mm dia. copper tubes with aluminium fins firmly bonded to copper tubes assembled in zinc coated steel frame. The centrifugal fan section shall be from heavy gauge steel with wheels of forward curved multi-blade type, to ensure smooth air flow into the fan. Housing shall be provided made of die-formed side sheets with streamlined inlet and guide vanes. The centrifugal fan shall have sufficient static pressure to throw the air through the grille of the evaporator grille.

**CONDENSER**

Condenser coil shall have 10 to 15 mm dia. copper tubes with aluminium fins bonded to copper tubes assembled in zinc coated steel frame. Condenser shall be complete with propeller fan and weather proof totally enclosed motor and other accessories as required.

**FILTERS**

Filters shall be washable of synthetic woven mesh having an efficiency of not less than 90% for particles down to 10 microns. Velocity across shall not be exceeding 2.5Meters per second.
REFRIGERANT PIPING

Piping shall be of soft drawn copper tubing of seamless variety with packed seated type brass valves. Brass strainer shall be provided with bronze screen and permanent magnet on upstream of controls and valves, with isolating valves.

CONTROLS

Safety controls shall consist of compressor high-low pressure stat and oil pressure safety switch suitable for manual resetting. Thermostat with tolerance of ± 1 Deg. C shall be provided. Interlocks shall also be provided for air flow to prevent compressor starting without air flow and crank case heater to be switched on when compressor stops.

MISCELLANEOUS

Each split unit shall include suitably designed housing in heavy gauge sheet steel and angle frame work treated for rust prevention and painted, to mount the components. It will have factory made supply air grilles to distribute the air evenly across large areas, if required. Full charge of refrigerant gas, as required to obtain and maintain design conditions and the required quantity of suitable grade lubricating oil. Sheet steel control panel for housing the controls and other operated items. Rubber vibration isolator pads or springs of 90% efficiency in preventing transmissions of tb vibration. Each unit shall include but not be limited to all the items listed in foregoing paragraphs and shall be complete as required. The refrigerant copper piping of the split unit shall be insulated with closed cell polyflex insulation (tubular type).

INSTALLATION AND TESTING

The outdoor unit shall be mounted on floor foundation. Necessary G. I. frame work for condenser unit, foundation bolts, levelling shims, etc. if required for mounting of the same shall be provided by the Contractor. G. I. frame work shall be designed to support the condensing units rigidly under all conditions and shall be painted with two coats of anti-corrosive treatment paint and two coats of enamel paint. The refrigerant piping and interconnecting wiring shall be concealed in high quality flexible PVC piping which shall be fixed with minimum of 2mm thickness of aluminium saddles, nuts and bolts, firmly on walls/structure. On installation, the refrigerant circuits and the connected equipment's and parts shall be thoroughly tested against leaks. The system pressure shall be reduced by a vacuum pump to within an absolute pressure of 7.5 mm HG and maintained at this level for (4) four hours. Thereafter the vacuum pumps shall be stopped and vacuum maintained for 24 hours with a pressure drop not exceeding 2.5 mm gas absolute. All instruments and switchgear shall be tested for proper functioning and set of design values. On completion of the installation and the above tests, unit shall be tested for performance. The capacity in tons shall be calculated from measurements of temperature difference and air flow rate. The power consumption shall be checked from current measurements of the motor. All instructions and personnel for tests shall be provided by the Contractor. After installation and commissioning of AC units Contractor has to submit test report, carried out at site.
Sheet Metal Ducting  Material

All duct work, dampers and accessories shall be fabricated out of galvanized steel sheets manufactured to IS:277/1992 and IS-655, 1963 conforming to Class VII/VIII (i.e. light coating of zinc 180 gms / m² on each side).

Fabrication Rectangular Ducting

All the ducting will be either Factory Fabricated on CNC machine or on lock former machine. Duct shall be rectangular in cross-section and fabricated in accordance with the following table:

<table>
<thead>
<tr>
<th>Max. Size mm (in.)</th>
<th>Min. thick mm. (GSS Sheet)</th>
<th>Transverse Joints mm (in.)</th>
<th>Reinforcement mm (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upto 400 (16&quot;)</td>
<td>0.63 (24 SWG)</td>
<td>25 mm (1&quot;) pocket/s Slip</td>
<td>Cross break</td>
</tr>
<tr>
<td>401 to 750 (16&quot; to 30&quot;)</td>
<td>0.63 (24 SWG)</td>
<td>25 mm (1&quot;) Pocket/s Slip</td>
<td>25 x 25 x 3.2 (1&quot; x 1&quot; x 1/8&quot;) Girth angles @ 1000 (40&quot;)</td>
</tr>
<tr>
<td>751 to 904 (30&quot; to 36&quot;)</td>
<td>0.80 (22 SWG)</td>
<td>40 x 40 x 3 (1-1/2&quot; x 1-1/2&quot; x 1/8&quot;) companion flanges.</td>
<td>25 x 25 x 3.2 (1&quot; x 1&quot; x 1/8&quot;) Girth angles @ 1000 (40&quot;)</td>
</tr>
<tr>
<td>905 to 1524 (36&quot; to 60&quot;)</td>
<td>0.80 (22 SWG)</td>
<td>40 x 40 x 3 (1-1/2&quot; x 1-1/2&quot; x 1/8&quot;) companion flanges.</td>
<td>40 x 40 x 3 (1-1/2&quot; x 1-1/2&quot; x 1/8&quot;) Girth angles and 760 (30&quot;)</td>
</tr>
<tr>
<td>1525 to 2250 (60&quot; to 90&quot;)</td>
<td>1.00 (20 SWG)</td>
<td>50 x 50 x 5 (2&quot; x 2&quot; 1/5&quot;) companion flanges</td>
<td>38 x 38 x 3.2 (1-1/2&quot; x 1-1/2&quot; x 1/8&quot;) Girth angles and 760 (30&quot;)</td>
</tr>
<tr>
<td>2250&amp; over (90&quot;&amp; over)</td>
<td>1.25 (18 SWG)</td>
<td>50 x 50 x 3.2 (2&quot; x 2&quot; 1/8&quot;) companion flanges</td>
<td>50 x 50 x 3.2 (2&quot; x 2&quot; x 1/8&quot;) Girth angles @ 610 (24&quot;)</td>
</tr>
</tbody>
</table>

Girth angles and companion flanges shall be metered and welded at corners and riveted to duct sheets at 75 mm (3") centres. Flanged joints shall be made with 9.5 mm. (3/8") G.I. bolts spaced at 15 cm. (6") centres and provided with 3.2 mm.(1/8") rubber or 6.00 mm.(1/2") felt gasket. All joints and seams shall be rendered air tight. Duct
panels are not to be cross broken if insulated. Longitudinal seams shall be inside groove or pits burgh type. Standard elbows with a R/D ratio of not less than 1.25 shall be used as far as possible. Where space restrictions do not permit use of standard radius elbows with lesser R/D ratio or square elbows with equally spaces double thickness vanes may be used. Splitter dampers shall be installed wherever branch split takes place. Louver dampers shall be provided in all branches. Any duct feeding more than two outlets shall be regarded as a branch. Capped airflow connections shall be provided as necessary for testing and balancing of air distribution. Air turning devices shall be provided at least for the first three outlet collars after the fan, one outlet collar after every elbows and at all non-split branch take-offs. Turning blades shall be fabricated out of 0.8 mm (22 SWG) thick G.S. sheets and equally spaced on side runners to be riveted / bolted to duct sheets Splitter dampers shall consist of double thickness air foil blade hinged at the downstream edge. The operating rod shall terminate outside of the duct and insulation with an airtight hub and locking set screw. Damper blade thickness shall be the same as the duct in which it is installed. Entire splitter damper shall be enclosed in a sheet steel ducting with flanges at both ends aligning with main run of ducting. The enclosure shall be made of sheets on size larger than the corresponding duct. Indication of position required. Louver dampers shall be multi - blade type with opposed blades or parallel blades of airfoil construction. Blades shall be 250 (10") maximum width and 1200 (4") maximum length mounted in a 50 (2") channel frame. Blades shall be connected with suitable linkage for gang operation by an operating rod extending beyond the frame and insulation and terminating in a locking quadrant with damper position indicator. Damper larger than 1200 (4'-0") in width shall be enclosed in sheet steel one size larger than the corresponding duct. Indication of Open / Closed shall be provided. 300 x 300(12" x 12") access panels stud bolted with a Neoprene/felt gasket shall be provided adjacent to splitter and multiple louver dampers.

Adequate fresh air shall be drawn from outdoor AC Unit and provide the AC ducts with dampers, cowl and bird-screens as shown in the drawing.
Duct supports shall be as follows:

<table>
<thead>
<tr>
<th>DUCT PERIMETER</th>
<th>SUPPORT DETAILS</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upto 1800 (72&quot;)</td>
<td>40 x 40 x 3 mm (1 1/2&quot; x 1 1/2 x 1/8&quot;) M.S. angle with 9 mm (3/8&quot;) tie rod.</td>
<td>At transverse Joints</td>
</tr>
<tr>
<td>Over 1800 to 2500 (72&quot; to 100&quot;)</td>
<td>40 x 40 x 6 mm (1 1/2&quot; x 1 1/2 x 1/4) M.S. angle with 9 mm (3/8&quot;) tie rod.</td>
<td>At transverse Joints</td>
</tr>
<tr>
<td>Over 2500 (100&quot;)</td>
<td>50 x 50 x 6 mm (2&quot; x 2&quot; x 1/4&quot;) M.S. angle with 9 mm (3/8&quot;) tie rod.</td>
<td>At transverse Joints</td>
</tr>
</tbody>
</table>

Square and rectangular outlet/intakes shall have flange flush with the ceiling/boxing into which it is fitted or be of anti-smudge type. The outlets shall comprise of outer shell with duct collar and removable diffusing assembly. These shall be suitable for discharge in one or more directions as required. The outer shell shall not be less than 1.6 mm aluminium and diffusing assembly not less than 0.80 mm mild steel sheet. Half diffuser shall be similar to full diffuser. All diffusers shall be provided with face operated volume control dampers. All diffusers shall be aluminium construction duly epoxy powder coated in a suitable shade approved by the consultant. The diffusers shall be fixed to the duct together with duct ring and neoprene sealing gasket. All grills shall be provided with extruded aluminium powder coat.

Testing and Balancing

All the ducting shall be cleaned after installation but before completion of false ceiling prior to running of Blowers. The entire air distribution shall be adjusted and balanced for delivery of design air quantities as required for achieving design space conditions. All dampers after adjustment shall be set and locked in position. Permissible duct leakage shall be not more than 2%.

Mode of Measurement

All Sheet Metal ducting complete with duct supports, turning vanes, girth angles, flanges and gaskets, access panels, turning vanes, erected in position shall be measured on the basis of the core area excluding margins and dampers. Assured externally and paid per unit area. All dampers shall be included in the duct area. Intake louvers with bird screen, sheet steel louvers and control damper, frame, erection etc. shall be measured on the basis of cross sectional area and paid per unit area. Side wall grilles / ceiling grilles shall be measured on the basis of the core area excluding the margins.

Duct Thermal Insulation

The thickness of Nitrile rubber shall be as shown in the schedule of quantity following
procedure shall be adhered to: Duct surfaces shall be cleaned to remove all grease, oil, dirt, etc. prior to carrying out insulation work. Measurement of surface dimensions shall be taken properly to cut closed cell elastomeric rubber sheet to size with sufficient allowance in dimension. Cutting of Nitrile rubber sheet shall be done with adjustable blade to cut 90 deg cut in thickness of nitrile rubber sheet. Hacksaws or blade are not acceptable tools for cutting the insulation. Material shall be fitted under compression and no stretching of material shall be permitted. A film of adhesive shall be applied on the back of insulating material sheet and then on the metal surface. When adhesive is tack dry, insulating material sheet shall be placed in position and pressed firmly to achieve a good bond. All longitudinal and transverse joints shall be sealed by providing 6mm thick 50mm wide nitrile rubber tape. The adhesive shall be strictly recommended by the manufacturer.

**Duct shall be insulated to the following thickness:**

<table>
<thead>
<tr>
<th>DUCTING</th>
<th>THICKNESS (MM)</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) S.A. duct in R.A. Path</td>
<td>09 mm</td>
<td>Nitrile Rubber</td>
</tr>
<tr>
<td>iii) Both S.A. &amp; R. A. exposed</td>
<td>Both 25 mm</td>
<td>Both 25 mm</td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>i) supply air duct in non Air conditioned space</td>
<td>50</td>
<td>Resin bonded Fiberglass of 24 kg/m³ density with Aluminium foil.</td>
</tr>
<tr>
<td>ii) Supply air duct, Return air duct in Air-conditioning area &amp; Return air duct in non-Air-conditioning space</td>
<td>25</td>
<td>Resin bonded Fiberglass of 24 kg/m³ density with Aluminium foil.</td>
</tr>
</tbody>
</table>

**Method of Duct Insulation**

**Material**

Following materials shall be used:

A ] Nitrile Rubber Insulation: Closed cell Elastomeric Thermal conductivity not exceed Backed with aluminium 0.212 BTU/ [Hr. – ft² – F deg./inch] Density 40-60 kg./m³ Foil. Insulation material fire rated for class O as per BS 476 to fire propagation test and for class 1 OR

A ] Insulation: Resin bonded fibre glass of 24 kg/m³ density with factory backed(reinforced) aluminium foil
B ] Industrial Bitumen 85/40 OR 85/25 conforming to IS: 702/1988 OR Shalikote Type T.12

i. Supply air duct running in the non - a.c attic / space shall be insulated with 50mm thick resin bonded fibre glass.

ii. The fibre glass insulation shall be applied as follows:

iii. Clean the duct surface and apply hot bitumen at the rate of 1 Kg / sq.m

iv. Stick the insulation on to duct surface holding with 20 SWG G.I wires

v. Seal the joints with self adhesive aluminium tape ( 50 mm wide)

vi. Provide nylon stopping at 50 mm c/c on top insulation

vii. In case of resin bonded fibre glass the following modifications may be made:

viii. Blinding the insulation surface need not be done

Under-deck Insulation:

True Ceiling area or under-deck area should be thermally insulated with Twiga Insul, the Fiberglass Wool insulation conforming to IS 8183 having density 48 Kg / cu. m and thickness 50 mm so that the minimum Thermal resistance should be R-1.65sq.m.K/W at mean temp 25 Deg C. The insulation should conform to Non combustibility, Class P (not easily ignitable), Class 1 and Class 'O' as per fire standards BS 476 part 4, 5, 6, and 7. The one side of the insulation should have factory laminated Aluminium foil vapours barrier. The insulation should be applied with suitable adhesive and anchored with raw plug or dash fasteners (600mm c/c), G.I/ Aluminium channel runners system and GI. Lacing wire (placed diagonally to hold insulation).

Installation Guideline:

- The ceiling surface is thoroughly cleaned.
- Fix soffit / clamp to ceiling by means of raw plug/ dash fasteners.
- Fix approved C shaped GI channel runners or aluminium ones along the length of the room at 600mm spacing in one direction to the ceiling by raw plugs/dash fasteners.
- Apply any suitable adhesive to the ceiling and place slabs of Twiga Fiberglass insulation in between by spot sticking method. Hold the insulation slab in position by 22 SWG GI lacing wire placed diagonally.
- Apply 12 mm Gypboard or equivalent plaster board to cover up the insulation.

Mode of Measurement

Area of duct insulation finished as per specification shall be calculated on the basis of finished duct after insulation and paid for at unit area. IS-655 – 1999.
LIST OF APPROVED MAKES

The owner reserves the right to select any of the brands indicated in the LIST OF APPROVED MAKES. The tenderer shall quote his rates on the basis of prices of brands / make stipulated in the item of works as described in BOQ. And spécifications as well as in the list of approved makes

<table>
<thead>
<tr>
<th>No.</th>
<th>Détails of Material and Equipements</th>
<th>Name of Manufactures and Contracter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Air-conditioning unit</td>
<td>Daikin /Voltas / Blue Star/Hitachi.</td>
</tr>
<tr>
<td></td>
<td>Split Unit, Ductable unit [ Ceiling Mounted ]</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Fans – Propeller type</td>
<td>GEC / ABB / Kruger</td>
</tr>
<tr>
<td>3</td>
<td>Fans – Axial / Centrigugal</td>
<td>Kruger / Flakt / Nicotra</td>
</tr>
<tr>
<td></td>
<td>G.I. sheet / Grilles / Diffusers</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Sheet Metal</td>
<td>Tata / Sail / Nippon Denro Ispat Jindal</td>
</tr>
<tr>
<td>5</td>
<td>Grille Diffuser - Aluminium / S. S. 304</td>
<td>Air Tech / Air Master / Ravi star / Dynacraft</td>
</tr>
<tr>
<td>6</td>
<td>Duct damper / Fire Damper</td>
<td>Air Master / Flaktwood / Dynacraft</td>
</tr>
<tr>
<td></td>
<td>Insultions</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Expanded Polystyrène [ TF ]</td>
<td>Beardsell / BASF</td>
</tr>
<tr>
<td>8</td>
<td>Fibre glass</td>
<td>KCC [ Owen Corning ] U.P twiga / Kimmco</td>
</tr>
<tr>
<td>9</td>
<td>Phenotherm</td>
<td>Bakélite Hylam</td>
</tr>
<tr>
<td>10</td>
<td>Nitral Rubber</td>
<td>Armaflex,</td>
</tr>
<tr>
<td></td>
<td>Filtre</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Air – Filters, Fine – filters, Hepa Filter</td>
<td>Air Tech / Dyna Filter</td>
</tr>
<tr>
<td></td>
<td>Air Lock &amp; Air Shower</td>
<td></td>
</tr>
</tbody>
</table>
DATA SHEET

[ To be filled in by the Bidder ]

EQUIPMENT DATA

To be filled by tenderer and submitted along with the catalogues
<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manufacturer</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Model No.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Type of blower required : (Backward curved) : Confirm</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Capacity in M3/hr. &amp; R P M for each ventilation system</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Total static pressure of each blower in mm w.g and efficiency at operating point.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Blower motor – Make and frame size &amp; efficiency</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>RPM of motor (Each)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Type of Motor</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>BHP at operating point (Each)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>HP of motor (Each)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Type of bearing</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Material of construction of fans</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Casing</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Impeller</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Shaft</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Class of construction</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Accessories</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Pulleys, belt, belt guard, common base frame for motor rails, cushy foot mounts etc. confirm inclusion</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Efficiency of air filters</td>
<td></td>
</tr>
<tr>
<td>SR. No.</td>
<td>DESCRIPTION</td>
<td>REMARKS</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>1</td>
<td>Manufacturer</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Model No.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Capacity (CMH)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Total static pressure of each exhaust fans (mm) / enclose a chart for exhaust fans at roof level on each shop to be cooled.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Efficiency of fan at operating point</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Fan motor – Make and frame size</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>RPM of motor (Each)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Type of motor</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>BHP at operating point (Each)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>HP of motor (Each)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Type of bearing</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Material of construction of fans casing</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Class of construction</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Accessories (for direct drive)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Mounting frame</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Rain protection cowl</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Bird screen</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Operating weight / shipping weight [kg. s.]</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Overall dimensions [L x B x H] – m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grille / Diffuser / Damper</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Make</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Material</td>
<td></td>
</tr>
</tbody>
</table>
Name of Work: Providing HVAC System For Cruise Terminal Building at Mormugao Harbour.

### xiii. CHECK LIST FOR SUBMISSION OF TENDER

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Have you purchased / downloaded the tender document from internet for submission by your firm?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Have you submitted cost of tender document in the form of DD or cash receipt, in case you have downloaded from internet?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Have you submitted the tender in the Mormugao Port Trust's Form?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Have you furnished full postal address, telephone number/Fax number, email?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Have you kept your offer valid for 180 days as specified?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Have you submitted Demand Draft pertaining to Earnest Money? i. DD No. _____ dated drawn on bank ______________ payable at _____ amounting to Rs.28,400/-.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Have you submitted documents pertaining to status/ contribution of the firm, partnership deed and power of attorney?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Have you submitted Audited Statement of Accounts for last three (3) years ending 31.03.2015?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Have you submitted Copy of current Income Tax Return Acknowledgment?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Have you submitted document in support of the Technical System Qualifying Criteria (Eligibility Criteria)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Have you submitted list of works in progress along with copy of work orders?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Have you submitted Bar Chart/CPM chart?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Have you submitted Performa 1 to 4?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sr. No.</td>
<td>Particulars</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>14</td>
<td>Have you submitted EPF Number issued by Provident Fund Department?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Have you submitted ESI Number issued by Employees State Insurance Department?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Have you submitted Permanent Account Number issued by Income Tax Department?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Have you Signed and seal on every page of tender document submitted?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Have you attested all the corrections?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Have you submitted Financial Bid in separate Cover?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**
The above Checklist is not exhaustive. The tenderer must go through carefully the entire Booklet and submit the tender compliance of all the conditions/ provisions instructions mentioned therein irrespective of the fact that they have been highlighted in the Checklist or not.

Signature __________________
Name of the Tenderer

Seal:

Date:
MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/37/2016

Name of Work: Providing HVAC System For Cruise Terminal Building at Mormugao Harbour.

xiv. VENDOR REGISTRATION FORM

1. Name of the Organization : __________________________
2. Address (In Detail) : __________________________
3. Telephone Number : __________________________
4. E-Mail Id : __________________________
5. Permanent Account Number (PAN) : __________________________
6. Bank Name : __________________________
7. Bank Branch Address (In Detail) : __________________________
8. Bank Branch Code : __________________________
9. Bank Account Number : __________________________
10. Bank Account Type : __________________________
11. Magnetic Ink Character Recognizer (MICR) : __________________________
12. Tax Identification Number (TIN) : __________________________
13. Service Tax Registration Number : __________________________
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.</td>
<td>Service Tax Registration Code</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>CST Registration Number</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Employee Provident Fund (EPF) Registration Number</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Employee State Insurance Scheme (ESIS) Registration Number</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>IFSC Code</td>
<td></td>
</tr>
</tbody>
</table>