

DEENDAYAL PORT AUTHORITY



TENDER DOCUMENTS FOR

STRENGTHENING OF BERTHING JETTY AT OFF-SHORE OIL TERMINAL, VADINAR

PORT OFFICE

Executive Engineer (Civil)

Off-Shore Oil Terminal Department,
Administration Office Building,
Deendayal Port Authority,

Vadinar - 361010, Gujarat.

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Email: eecivil.oot@deendayalport.gov.in

kptootcivilame@gmail.com

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DEENDAYAL PORT AUTHORITY

DC : 1

COMPETITIVE BIDDING

BID NO :OOT/Civil/414/SBJOOTVDR/2024

Name of work: "Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar"

PERIOD OF DOWNLOADING OF BID DOCUMENTS

FROM	: DATE 13.12.2024
TO	: DATE 02.01.2025 TIME 16:00HRS.
LAST DATE AND TIME FOR RECEIPT OF BIDS	: DATE 02.01.2025_TIME 16:00HRS
TIME AND DATE OF OPENING OF BIDS	: DATE 02.01.2025 TIME 16:15HRS.
PLACE OF OPENING OF BIDS	: OFFICE OF Executive Engineer (Civil) Off-Shore Oil Terminal Department Administration Office Building, Deendayal Port Authority, Vadinar – 361010 , Gujarat.

OFFICER INVITING BIDS	:	Executive Engineer (Civil) DEENDAYAL PORT AUTHORITY
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DEENDAYAL PORT AUTHORITY

NOTICE INVITING TENDER

Tender No. OOT/Civil/414/SBJOOTVDR/2024

ONLINE TENDERING (E- Tendering)

NAME OF WORK: Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar

E/Online Tenders are invited by Executive Engineer (Civil), DPA, OOT - Vadinar for the above work as per the details given in the table below.

Work Description	Tender Fee (In Rs.)	Estimated cost (In Rs.)	EMD (In Rs.)	Date of Pre-Bid Meeting	Last Date and time of online Submission of bid documents	Date and time of online opening
Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar	5900/- (INCLUDING GST @ 18 %) to be paid in digital mode of payment. Details are mentioned below: - Account no.: 325310100002572 IFSC Code: BKID0003253 Bank of India, Vadinar Branch	Rs.6,72,45,448	Rs. 6,72,454/- in the form of Bank Guarantee issued by any Nationalized/ scheduled bank except co-operative bank having its branch at Jamnagar as per format in the tender documents.	Dt: _____ @ 16:00 Hrs. at A.O. Building, Deendayal Port Authority, Vadinar, Dev Bhoomi Dwarka - 361010, Gujarat (not applicable)	Up to 16:00 hours on Dt. 02.01.2025	Dt. 02.01.2025 @ 16:15 Hrs.

Detailed tender notice along with complete tender documents can be downloaded from website <https://tender.nprocure.com> from Dt. 13.12.2024 to 02.01.2025 @ 16:00 Hrs. Tender Notice is also available on www.deendayalport.gov.in. Technical Bid will be opened on Dt. _____ /2025 @ 16:15 Hrs. Date of opening of price bid shall be notified after scrutiny & evaluation of Technical Bid. For further details and general enquiries prospective bidders may contact **Executive Engineer (Civil) DEENDAYAL PORT AUTHORITY** Civil Division, Off-Shore Oil Terminal Department, First Floor, AO Building, Vadinar – 361010, Gujarat during working hours before the last date and time of downloading of tender documents.

**EXECUTIVE ENGINEER (Civil)
DEENDAYAL PORT AUTHORITY**

DEENDAYAL PORT AUTHORITY.

NOTICE INVITING ON LINE TENDER

Details about E/Online tender:

Department Name	Off-Shore Oil Terminal Department
Circle/ Division	CIVIL DIVISION
Tender Notice No.	: OOT/Civil/414/SBJOOTVDR/2024
Name of Work	Strengthening of Berthing Jetty at Off- Shore Oil Terminal, Vadinar
Estimated Contract Value (INR)	Rs. 6,72,45,448/-
Period of Completion (in Months)	12 Months
Bidding Type	Open
Bid Call (Nos.)	One
Tender Currency Type	Single
Tender Currency Settings	Indian Rupee (INR)
Minimum Pre-Qualifying / Eligibility Criteria :	<ol style="list-style-type: none">1. Average annual financial turnover during the last three years ending 31st March 2024, should be at least Rs. 201.74 Lakhs. as certified by the Chartered Accountant.(Financial turnover document to be CA Certified with CA's stamp, signature and UDIN no./ membership no. along with profit & loss statement for verification of turnover failing which the bid will be treated as non-responsive)2. Experience of having successfully completed similar works during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following: Three similar completed works, each work costing not less than Rs. 268.98 Lakhs. Or Two similar completed works, each work costing not less than Rs. 336.23 Lakhs. Or One similar completed work, costing not less than Rs.537.96 Lakhs. "Similar Works" means "Construction or repairing & strengthening of marine structure viz., Jetties/ Quay/ wharf "

If the similar work is executed as sub-contractor, The contract experience shall be considered for pre-qualification only, if same is carried out in Govt./semi Govt./Autonomous body working under GOI / Public sector Undertakings subject to submission of sub contract permission issued by the respective authority, prior to execution of the work, Further if sub contract is not authenticated, the respective party shall be debarred for participation in tenders of DPA for min. 2 years. The decision taken by DPA shall be final. It is mandatory to upload the sub-contract permission letter obtained from the respective authority. Also the completion certificate/form 3A authenticated by concern respective authority shall be uploaded along with TDS certificate deducted from that particular work issued by the competent authority shall be submitted along with bid submission.

3. Joint Venture

- i. In case of JV, to qualify experience in similar works, merging of work order value executed by two or more of its member of JV either as a whole or as member of JV shall not be permitted to qualify eligible works in terms of similar completed works. Only No. of work orders completed works by member of JV shall be merged to evaluate the experience
- ii. Lead partner should have executed at least one similar work costing **Rs.268.98** lakhs as per Minimum Eligibility Criteria.
- iii. The works reckoned for the above purpose are those executed by the tenderer as prime contractor or proportionately as member of joint venture or as a sub-contractor, authorized and approved by the Employer of the work(s) against which the tenderer has claimed his experience.
- iv. In case of Bid submitted by JV/Consortium, the lead partner of the JV shall meet the minimum Eligibility criteria of Financial Turnover.
- v. Bid Security required shall be furnished by lead member of JV.

4. Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under:

Assessed Available Bid capacity= $A \times N \times 2 - B$, Where, "N" = Number of years prescribed for completion of the subject contract.

"A" = Maximum value of works executed in any one year

during last seven years (at current price level)
 "B" = Value at current price level of existing commitment s
 and ongoing works to be completed in the next 'N' years.
 The Bidder shall furnish statements showing the value of
 existing commitments and ongoing works as well as the
 stipulated period of completion remaining for each of the
 works preferably countersigned by the Nodal Office or his
 nominee-in- charge.

5. Integrity Pact Agreement (**Annexure I**).

- I. The potential bidders shall download and print the IP Agreement signed by the Employer and their witness and affix his/her signature on the IP Agreement in the presence of a witness from his/her side, who shall also affix his/her signature thereof. Having completed the signing procedure, the potential Bidder shall upload the duly filled and signed IP Agreement on n-procure portal.
- II. The procedure mentioned above regarding signing of Integrity Pact Agreement by both the parties (Employer and Potential bidders) shall be completed online. However, in case of any technical glitch due to which if any potential bidder is unable to upload the IP Agreement, then he/ she shall submit the Hard Copy of the dully filled, signed IP Agreement, to the Department concerned of DPA within a period of seven days and prior to opening of the Technical Bid, failing which Bid of potential Bidder shall be treated as disqualified.
- III. In case of JV firm, IP agreement is to be filled and submitted in the name of the JV firm only otherwise the bid will not be considered for further evaluation.

Joint Venture

Applicable

Rebate

Applicable (Unconditional rebate submitted online before due date of submission of bid)

Bid Document Fee :

Rs. 5900/- (including GST) to be paid through digital mode of payment. The details are as under;

Account no.: - 325310100002572

IFSC Code: - BKID0003253

Bank of India, Vadinar Branch

BID Security

Rs. 6, 72,454/- (in the form of Bank Guarantee, issued by any Nationalized/scheduled (except co-operative) bank having branch at Jamnagar as per format provided in the tender documents.

Bid Document
Downloading Start Date

13.12.2024

Bid Document
Downloading End Date

02.01.2025 up to 16:00 Hrs.

Date & Place of Pre Bid
Meeting

- _____/2024 @ 16:00 Hrs. at A.O. Building, Deendayal Port
Authority, Vadinar, Dev Bhoomi Dwarka -361010, Gujarat.

Last Date and Time for Receipt of Online Bids **02.01.2025 @16:00 Hrs.**

Bid Validity Period 120 Days

Condition Tender Fees by digital mode of payment in **Account no:** 325310100002572, **IFSC code:** BKID0003253 Bank of India, Vadinar Branch. The proof for transfer of funds to be submitted in preliminary bid stage.

1. The bid/tender shall be accompanied by Payment through Digital mode (Account no 325310100002572 I F S C code:, BKID0003253 Bank of India, Vadinar branch towards Bid Security (EMD).
2. The bid/Tender not accompanied with Tender fee and EMD in Preliminary Bid shall not be considered responsive, and their technical and price bid will not be opened.
3. In case of Micro and Small Enterprise (MSEs) holding valid certificate issued by any agencies/organization under,

Level	Description
Section – F	Construction
Division – 42	Civil Engineering
Group – 429	Construction of Other civil engineering projects
Class – 4290	Construction of Other civil engineering projects
Sub Class – 42902	Construction of waterways, harbours and river works ,dredging of waterways

The Ministry of Micro, Small and Medium Enterprises indicating the list of activity related to the subject tender as per National Industrial Classification-2008 mentioned in the table above only shall become eligible for exemption from payment of Tender fee/EMD. Such bidder shall upload the scanned copy of valid certificate in preliminary bid. Such bidder shall upload in technical proposal a scanned copy of valid certificate, as well as duly filled in and signed '**Bid Securing Declaration**' as per format provided in the tender document (**Annexure II**), failing which the bid shall be disqualified: -

Remarks

Submission of E.M.D., Integrity Pact, Tender Fee and other Documents during office hours: upto by R.P.A.D /Speed post or in person in the chamber **Executive Engineer (Civil), Civil Division DEENDAYAL PORT AUTHORITY at A.O.BUILDING, Vadinar – 361010, Dev Bhoomi Dwarka.**

Bid Opening Date

Technical Bid will be opened on _____ / **2025 @ 16:15 Hrs.** Date of opening of Price Bid shall be notified after scrutiny & evaluation of Technical Bid to qualified bidders.

Documents required to be submitted by scanning through online

- a. Documents in support of fulfilling qualifying criteria as indicated above.
- b. EMD in the form of Bank Guarantee, issued by any Nationalized/scheduled (except co-operative) bank having branch at Jamnagar as per format provided in the tender documents.
- c. Tender fee to be paid through digital mode of **Payment through Digital Mode in Account no 325310100002572 IFSC code:, BKID0003253** Bank of India, Vadinar branch
- d. As indicated in clause 1.4 of section 1 – Instructions to bidders.
- e. Integrity Pact agreement (**Annexure –I**)
 - I. The potential bidders shall download and print the IP Agreement signed by the Employer and their witness and affix his/her signature on the IP Agreement in the presence of a witness from his/her side, who shall also affix his/her signature thereof. Having completed the signing procedure, the potential Bidder shall upload the duly filled and signed IP Agreement on n-procure portal.
 - II. The procedure mentioned above regarding signing of Integrity Pact Agreement by both the parties (Employer and Potential bidders) shall be completed online. However, in case of any technical glitch due to which if any potential bidder is unable to upload the IP Agreement, then he/ she shall submit the Hard Copy of the dully filled, signed IP Agreement, to the Department concerned of DPA within a period of seven days and prior to opening of the Technical Bid, failing which Bid of potential Bidder shall be treated as disqualified.
 - III. In case of JV firm, IP agreement is to be filled and submitted in the name of the JV firm only otherwise the bid will not be considered for further evaluation.

Officer- Inviting Bids: EXECUTIVE ENGINEER (Civil),
DEENDAYAL PORT AUTHORITY

Bid Opening Authority: EXECUTIVE ENGINEER (Civil),
DEENDAYAL PORT AUTHORITY

Address: EXECUTIVE ENGINEER (Civil),,
CIVIL DIVISION,
DEENDAYAL PORT AUTHORITY,
A.O.BUILDING, VADINAR-
361010, DEV BHOOMI DWARKA.

Contract Details: Mobile – +91 9742501353

EXECUTIVE ENGINEER (Civil),
DEENDAYAL PORT AUTHORITY

Note:

In case bidders need any clarifications or if training is required to participate in online tenders, they can contact (n)Procure Support team at following address: -

(n)code Solutions – A division of GNFC Ltd.,
(n)Procure Cell,
403, GNFC Infotower, S.G. Road,
Bodakdev, Ahmedabad – 380054 (Gujarat).

Contact Details :

Airtel : +91-79-40007501, 40007512, 40007516, 40007517, 40007525
BSNL : +91-79-2684511, 26854512, 26854513 (EXT: 501, 512, 516, 517, 525)
Reliance : +91-79-30181689
Fax : +91-79-26857321, 40007533
E-mail : nprocure@gnvfc.net

TOLL FREE NUMBER : 1-800-233-1010 (EXT: 501, 512, 516, 517, 525)

For further details, amendments or extension of time , if any, please visit
<https://tender.nprocure.com> OR www.deendayalport.gov.in

SECTION -1

INSTRUCTIONS TO BIDDERS

a. GENERAL

1.1 Scope of Bid

The Deendayal Port Authority, invites bids by E- Tendering for the work of **“Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar”** detailed in the table given in NIT. The bidders shall submit on-line bids for the work detailed in the table given in NIT.

The successful bidder will be expected to complete the works by the intended completion date specified in the contract data.

1.2 Source of Funds

1.2.1 The employer has arranged the funds from internal resources and will have sufficient funds in Indian currency for execution of the works.

1.3 Eligible bidder.

1.3.1 The invitation for Bids is open to all eligible bidders meeting the eligibility criteria as defined in clause no.1.4.3.

1.3.2. All bidders shall provide in Section-2 form of Bid and Qualification Information, a statement that the Bidder is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design, specifications, and other documents for the Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the works, and any of its affiliates, shall not be eligible to bid.

1.3.3. Government-owned enterprises may only participate if they are legally and financially autonomous, operate under commercial law and are not a dependent agency of the Employer subject to fulfillment of Minimum Qualifying criteria.

1.3.4. Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the employer.

1.4 Eligibility Criteria

- 1.4.1.
- a. Experience of similar works executed during the last seven years, and details like monetary value, clients, and proof of satisfactory completion.
 - b. Documentary evidence of adequate financial standing and proof from client for satisfactory completion of works.
 - c. Deleted. **(Refer Clause no.5.95 of Sec-5)(Not applicable-N.A.)**
 - d. Equipment requirement/schedule. **(Refer Clause no.5.95 of Sec-5)(N.A.)**
 - e. Managerial/Manpower requirement. **(Refer Clause no.5.95 of Sec-5)(N.A.)**
 - f. Project Planning and Quality Control procedure to be adopted.
 - g. Information regarding projects in hand, current litigation, orders regarding exclusion, expulsion or black listing, if any.
 - h. Trained & Certified workmen proposed to be employed at the work site of the project. The Contractor must undertake to employ of certified worker to the extent of 20% of total strength. Valid certificates by a recognized University, technical Board, or Ministry of Government of India would only be taken cognizance of. **(Refer Clause no.5.95 of Sec-5)(N.A.)**
- 1.4.2. If the Employer has not undertaken pre-qualification of potential bidders, all bidders shall include the following information and documents with their bids.
- a. Copies of original documents defining the constitution or legal status, place of registration, and principal place of business, written power of attorney of the signatory of the Bid to commit the Bidder.
 - b. Total monetary value of construction work performed for each of the last five years.
 - c. Experience in works of a similar nature and size for each of the last five years, and details of works underway or contractually committed, and Employers who may be contacted for further information on those contracts.
 - d. Major items of construction equipment available with the bidder.
 - e. Qualifications and experience of key technical site management and technical personal proposed for the contract.
 - f. Reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years.

- g. Evidence of adequacy of working capital for this contract (access to line(s) of credit and availability of other financial resources).
 - h. Authority to seek references from the Bidder's bankers.
 - i. Information regarding any litigation, current or during the last five years, in which the Bidder is involved, the parties concerned, and disputed amount.
 - j. Proposal for subcontracting components of the works amounting to more than 10 percent of the Bid Price (for each qualification should attached); and **(Refer Clause no.5.95 of Sec-5)(N.A.)**
 - k. The methodology and program of construction, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures and completion of the work as per technical specifications within the stipulated period of completion as per milestones.
 - l. PAN, Registration with Service Tax (GST), Provident Fund Authorities, etc.
 - m. Bid Security in approved form as prescribed under Clause No. 1.16.
- 1.4.3 To qualify for award of the contract, bidders are advised to note the minimum qualification criteria specified below.
- i. Average annual financial turnover during the last three years ending 31st March 2024 should be at least **Rs. 201.74** Lakhs. as certified by the Chartered Accountant.(Financial turnover document to be CA Certified with CA's stamp, signature and UDIN no./ membership no. along with profit & loss statement for verification of turnover failing which the bid will be treated as non-responsive)
 - ii. Experience of having successfully completed similar works during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following.
 - a. Three similar completed works each work costing not less than **Rs. 268.98** Lakhs.
 - or**
 - b. Two similar completed works each work costing not less than **Rs.336.23** Lakhs.
 - or**
 - c. One similar completed work costing not less than **Rs. 537.96** Lakhs.

"Similar Works" means "Construction or repairing & strengthening of marine structure viz., Jetties/ Quay/ wharf"

If the similar work is executed as sub-contractor, the contract experience shall be considered for pre-qualification only, if same is carried out in Govt. / Semi Govt. / Autonomous Body working under GoI / Public Sector Undertakings subject to submission of sub-contract permission issued by the respective authority prior to execution of the work. Further, if sub-contract is not authenticated, the respective party shall be de-barred for participation in tenders of DPA for min. 2 years. The decision taken by DPA shall be final. It is mandatory to upload the sub-contract permission letter obtained from the respective authority. Also, the completion

Certificate / Form 3A authenticated by concern respective authority shall be uploaded along-with TDS certificate deducted from that particular work issued by the competent authority shall be submitted along-with bid submission.

- 1.4.4.** In addition to above, the criteria regarding satisfactory performance of the work, Personnel, establishment, plant, equipment, etc. may be incorporated according to the requirement of the project. To qualify for a package of contracts made up of this and other contracts for which bids are invited in the NIT, the bidder must demonstrate having experience and resources sufficient to meet the aggregate of the qualifying criteria for the individual contracts. **(Refer Clause no.5.95 of Sec-5)(N.A.)**
- 1.4.5.** The Subcontract experience shall be considered for pre-qualification only if same is carried out in Govt./Semi Govt./Public Limited companies subject to submission of sub contract permission issued by the respective authority prior to the execution of the work. Further, if sub contract permission is not authenticated, the respective party shall be debarred for participation in tenders of DPA for minimum 2 years. The decision taken by DPA shall be final. **(Refer Clause no.5.95 of Sec-5)(N.A.)**
- 1.4.6** Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under:

Assessed Available Bid capacity = $A \times N \times 2 - B$, Where

"N" = Number of years prescribed for completion of the subject contract. "A"

= Maximum value of works executed in any one year during last seven years (at current price level)

"B" = Value at current price level of existing commitments and ongoing works to be completed in the next 'N' years.

Note: To calculate the value of works to current level, following multiplying factors shall be applicable with reference to escalation based on WPI. This is only for arriving the Bid Capacity and not for work experience & turnover.

Financial Year	2023-24	2022-23	2021-22	2020-21	2019-20	2018-19	2017-18
Index	151.4	152.5	139.4	123.4	121.8	119.8	114.90
Multiplying factor	1.00	0.99	1.09	1.23	1.24	1.26	1.32

The Bidder shall furnish statements showing the value of existing commitments and ongoing works as well as the stipulated period of completion remaining for each of the works preferably countersigned by the Nodal Officer or his nominee – in – charge.

- 1.4.7** Even though the bidders meet the above qualifying criteria, they are subject to be

disqualified if they have:

- Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- Record or poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc., and/or

1.5 One Bid per Bidder

1.5.1. Each bidder shall submit only one bid for one package. A bidder who submits or participates in more than one bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.

1.5.2 Joint Venture

Companies/Contractors may jointly undertake contract/contracts. The number of Partners in JV/Consortium shall be limited to maximum of three. Each entity would be jointly and severally responsible for completing the task as per the contract, however declaration of the Lead member to be indicated by bidders, however JV has to designate in their MOU. The firms with at least 26% equity holding each be allowed to jointly meet the eligibility criteria.

Note: JVs/ Consortia be allowed in all contracts of estimated cost of more than Rs. 5 **crores**. However, there shall be no limit on the number of partners.

1.5.3 The works reckoned for the above purpose are those executed by tenderer as prime contractor or proportionately as member of Joint venture or as a sub-contractor, authorized and approved by the Employer of the work(s) against the tenderer has claimed his experience.

1.6 Cost of Bidding

1.6.1. The bidder shall bear all costs associated with preparation and submission of his bid, and the Employers will in no case be responsible and liable for those costs.

1.7 Site Visit

1.7.1 The bidder, at the Bidder's own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidders' own expense.

b. Bidding Documents

1.8 Content of Bidding Documents

1.8.1 The set of bidding documents comprises the documents listed in the table below and addenda issued in accordance with Clause 1.10:

- DC 1 : Bid Reference
- NIT : Invitation for Bids
- SECTION 1 : Instruction to Bidders
- SECTION 2 : Forms of Bid, Qualification Information
- SECTION 3 : Conditions of Contract
- SECTION 4 : Contract Data
- SECTION 5 : Specifications and Special Conditions
- SECTION 6 : Technical Specification
- SECTION 7 : Drawing
- SECTION 8 : Bill of Quantities
- SECTION 9 : Forms of Securities and other Formats

1.8.2 One set of the bidding documents will be issued to the bidder. The document should be completed and returned with the bid. (Refer Clause no. 5.95, Not applicable)

1.8.2.1 Bidding documents shall be downloaded. The documents should be compiled filled and submitted through on-line tendering process on website <http://tender.nprocure.com>

1.8.3 The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, technical specifications, bill of quantities, forms, drawings, annexure in the bid document. Failure to comply with the requirements of the bid document shall be at the bidder's own risk. Pursuant to clause 1.26 hereof, bids which are not substantially responsive to the requirements of the bid documents shall be rejected.

1.9 Clarifications of the Bidding Documents

1.9.1 A prospective bidder requiring any clarification of the bidding documents may notify the employer in writing or by electronic form and be confirmed by hard copy at the Employer's address indicated in the invitation to bid. The employer will respond to any

request for clarification which he received earlier than days (Suggested 7 days) prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all purchasers of the bidding documents, including's a description of the enquiry but without identifying its source.

1.9.2 Pre – bid meeting

- 1.9.2.1 The bidder or his official representative is invited to attend a pre-bid meeting, which will take place on _____/2024 @ 16:00 Hrs. at , A.O. Building, Deendayal Port Authority, OOT - Vadinar 361010 ,Dev Bhoomi Dwarka , Gujarat.
- 1.9.2.2 The purpose of the meeting will be to clarify issues and to answer question on any matter that may be clarified at that stage. But written comments/ reply is prevail. Quarries raised after Pre-Bid meeting shall not be entertained.
- 1.9.2.3 The bidder is requested to submit any questions in writing or by cable to reach the Employer on or before the meeting.
- 1.9.2.4 Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be uploaded on website <http://tender.nprocure.com> without delay. Any modification of the bidding documents listed in Sub-Clause 1.8.1 which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 1.10 and not through the minutes of the pre- bid meeting.
- 1.9.2.5 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

1.10. Amendment of Bidding Documents

- 1.10.1 Before the deadline for submission of bids, the Employer may modify the bidding documents by using addendum.
- 1.10.2 Any addendum thus issued shall be part of the bidding documents and shall be communicated by uploading online on <http://tender.nprocure.com> Prospective bidders shall acknowledge receipt of each addendum by cable to the Employer.
- 1.10.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend as necessary the deadline for submission of bids, in accordance with Sub- Clause 1.20.2below.

c. Preparation of Bid

1.11 Language of the Bid

1.11.1 All documents relating to the bid shall be in the English language.

1.12 Documents comprising the Bid

1.12.1 The bid submitted by the bidder shall comprise the following:

A) Technical Bid

- i) Bid Security and tender fee.
- ii) Qualification Information Form and Document (Pursuant to clause 1.4 hereof) and any other materials required to be furnished and submitted by the bidder in accordance with these instructions. The documents listed under Sections 2, 4 and 7 of Sub-Clause 1.8.1 shall be filled in without exception.

B) Financial Bid

- i) Contractor's Bid
- ii) Bill of Quantity dully filled and digitally signed by the Bidder.

1.13 Bid Prices

1.13.1 The contract shall be for the whole works as described in Sub-Clause 1.1 based on the priced Bill of Quantities submitted by the Bidder.

1.13.2 The bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items for which no rate or price is entered by the bidder will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities.

1.13.3 All duties, taxes, and other levies payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Bid price submitted by the Bidder.

1.13.4 The rates and prices quoted by the bidder are subject to adjustment during the performance of the contract. In accordance with the provisions of clause 3.47 of the conditions of contract.

1.14 Currencies of Bid and payment

The Unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees.

1.15 Bid Validity

1.15.1 Bids shall remain valid for a period not less than 120 days after the deadline date for bid submission specified in clauses 1.20. A bid valid for a shorter period shall be rejected by

the Employer as non-responsive.

- 1.15.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of bid validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be permitted to modify his bid. If bidder accept the request to extend the period of bid validity, he should accordingly extend the validity of the BG submitted for EMD without any claims.

1.16 Bid Security

- 1.16.1 Earnest money Deposit (EMD) shall be 1% of the Estimate cost put to tender, subject to maximum Rs. 50 Lakhs.
- 1.16.2 The EMD of Rs. 5 Lakhs be payable via digital mode of payment in **Bank of India, Vadinar Branch Account No. 325310100002572 IFSC Code: - BKID0003253**. The proof for transfer of funds to be submitted in preliminary bid stage. EMD beyond Rs. 5 lakhs be payable in form of Bank Guarantee for the entire amount from any Nationalized Scheduled Bank (except Co-operative Banks) having its branch at Gandhidham/Jamnagar. Bank Guarantee submitted as Earnest Money shall be valid for 28 days beyond the validity of the bid/tender. Bank Guarantee shall be verified independently by the Port with the bank before finalization of technical offer. In the event of lack of confirmation of issue of the Bank Guarantee by the Bank, the bid shall stand disqualified.
- 1.16.3 EMD of unsuccessful bidders other than L1 will be refunded immediately after ranking of price bids.
- 1.16.4 EMD is refunded suo-motto with/without any application from the bidders.
- 1.16.5 The bid security of the successful bidder will be discharged (refunded after he has signed the Agreement and furnished the required Performance security).
- 1.16.6 The Bid security may be forfeited, if
- a) The bidder withdraws the bid after bid opening during the period of bid validity.
 - b) The bidder does not accept the correction of the Bid price, pursuant to any arithmetic errors or
 - c) The successful bidder fails within the specified time limit to
 - (i) Sign the Agreement or
 - (ii) Furnish the required Performances security.
 - (iii) In case the contractor fails to commence the work within stipulated time.

The forfeiture of the bid security is entirely discretion of employer. No any claims in this regards shall be entertained.

“In case of Micro and Small Enterprise (MSEs) holding valid certificate issued by any agencies/organization under The Ministry of Micro, Small and Medium Enterprises indicating the list of activity related to the subject tender ONLY shall become eligible for exemption from payment of Tender fee/EMD. Such bidder shall upload in preliminary bid a scanned copy of valid certificate. Such bidder shall upload in technical proposal a scanned copy of valid certificate, as well as duly filled in and signed ‘Bid Securing Declaration’ as per format provided in the tender document (Annexure II), failing which the bid shall be disqualified: -

NIC codes regarding similar work is mentioned below: -

Level	Description
Section – F	Construction
Division – 42	Civil Engineering
Group – 429	Construction of Other civil engineering projects
Class – 4290	Construction of Other civil engineering projects
Sub Class – 42902	Construction of waterways, harbours and river works ,dredging of waterways

1.17 Alternative proposals by bidders

1.17.1 Conditional offer or Alternative offers will not be considered further in the process of tender evaluation.

1.18 Format and signing of bid

1.18.1 The Price Bid to be submitted on-line shall be signed digitally by a person or persons duly authorized to sign on behalf of the Bidder.

1.18.2 The Bid shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the bidder in which case such corrections shall be initialed by the person or persons signing the bid.

D Submission of bids

1.19 Sealing and marking of bids.

- 1.19.1 (A) The bidder shall put Bid security document as per clause No.1.16, hereof in one envelope and properly seal and mark as "Bid Security". The bidder shall put documents mentioned in clause No: 1.12.1.A (ii) in separate envelope and properly seal and mark as "Technical Bid".

The bidder shall seal "Financial Bid" as per Clause No: 1.12.1. (B) Here of, in separate envelope duly marking the envelope as "Financial Bid". These envelopes than be put inside one outer envelope and sealed, duly marking the outer envelope as "Technical Bid and Financial Bid". (Refer Clause no. 5.95 Not applicable)

(B) Bidders who wish to participate will have to procure/ should have legally valid Digital Certificate, as per Information Technology Act-2000, using which they can sign their electronic bids. The bidders can procure the Digital Certificate from (n) code solutions a division of GNFC Ltd, who are licensed certifying authority by Government of India. All bids should be digitally signed. For details regarding Digital signature certificate and related matters, the below mentioned address should be contacted: (n) code Solutions, A Division of GNFC, 304 GNFC Info tower, Bodakdev, Ahmedabad. Tel. +91 79 26857316/17/18 Fax: +91 79 26857321 E-mail: nprocure@ncode.in Toll Free Number: 1-800-233-1010

The accompaniments to the tender documents as described under Clause 1.22 shall be Scanned and submitted On-Line along with Tender documents. However, the originals/ attested hard copies shall have to be forwarded subsequently so as to reach the office of Executive Engineer (C-I) within 07 days of opening of the tenders,

- 1.19.2 The envelopes shall (Refer Clause no.5.95,Not applicable)

(a) **Be addressed to Nodal Officer/Employer at the following address.**

{Insert address of office for bid submission}, and

(b) **bear the following identification:**

Bid for **"Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar"**

Bid reference no P:01/2024

DO NOT OPEN BEFORE (time and date for opening, per Clause 1.23)

Name and address of the bidder.

The tender complete in all respect should be put in the tender box (marked tender No



OOT/____: /2024) in the office of The Executive Engineer (Civil) up to-____p.m. On due date and open at____on the same date in presence of such of the tenderers who may wish to be present.

- 1.19.3 In addition to the identification required in Sub-Clause 1.19.2, the inner envelopes shall indicate the name and address of the bidder of to enable the bid to be returned unopened in case it is declared late, pursuant to Clause 1.21, or the bid is declared non- responsive. If the outer envelopes are not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the technical bid and financial bid. (Refer Clause no. 5.95, Not applicable)

1.20 Deadline for submission of the Bids

- 1.20.1 Bids must be received by the Employer at the address specified above not later than in the event of the specified date for the submission of bids being declared a holiday by the Employer. The bids will be received up to the appointed time on the next working day (Refer Clause no. 5.95 ,N.A.)

- 1.20.2 The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 1.10, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

- 1.20.3 In case of tender document being downloaded from the web site, at the time of submission of (the hard copy of) the tender document. The tenderer shall give an undertaking that no change has been made in document. He shall be issued a printed set of document under acknowledgment with a condition that the printed version of the port tender document will be treated as authentic tender and if any discrepancy is noticed at any stage between the Port's tender document and the one submitted by the tenderer, the conditions mentioned in the Port's printed document

Insert time and date; this should be the same as those given in the invitation for Bids Clause No.1.20.

1.21 Late Bids

- 1.21.1 Any bid received by the Employer after the deadline prescribed in Clause 1.20 will be considered as non-responsive.

1.22 Modification and Withdrawal of Bids

- 1.22.1 Bidders may modify or withdraw their bids before the deadline prescribed in Clause 1.20.
- 1.22.2 Each Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with Clauses 1.18 & 1.19, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL" as appropriate.(Refer Clause no. 5.95 ,N.A.)
- 1.22.3 No bid may be modified after the deadline for submission of bids.
- 1.22.4 Withdrawal or modification of a Bid between the deadline for submission of bids and the expiration of the original period of bid validity in Clause 1.15.1 above or as extended pursuant to Clause 1.15.2 may result in the forfeiture of the Bid security pursuant to Clause1.16.
- 1.22.5 Tenders with any condition, including conditional rebate shall be rejected. However, tenders with unconditional rebate will be accepted.

E. BID OPENING AND EVALUATION

1.23 Bid opening

- 1.23.1 On the due date and appointed time as specified in clause 1.20, the Employer will first open Technical bids (Online bid Opening) of all bids received (except those received late) including modifications made pursuant to clause 1.22 in presence of the bidders or their representative who choose to attend. In the event of the specified date for Bid opening being declared a holiday by the Employer, the bids will be opened at the appointed time and location on the next working day.
- 1.23.2 Envelopes marked "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 1.22 shall not be opened. Bidder's name, withdrawals, modifications of technical bid, the presence of bid security and such other details, as the Employer may consider appropriate will be announced by the Employer at the opening.(Refer Clause no. 5.95 ,Not applicable)
- 1.23.3 If all Bidders have submitted unconditional Bids together with requisite bid security, then all bidders will be so informed then and there. If any Bid contains any deviation from the Bids documents and/or if the same does not contain Bid security in the manner prescribed in the Bid documents, then that Bid will be rejected and the Bidder informed accordingly. The sealed financial bid containing priced BOQ will be returned to him without opening. All valid financial bids whose technical bids have been determined to be substantially responsive in accordance with Clause 1.26 hereof, shall be opened on the

Specified date from declaring the results of the Technical Bid, in presence of the bidders or their representatives who choose to attend. The Bidder's name, the Bid prices, the total amount of each Bid and of any alternative Bid (if alternatives have been requested or permitted), any discounts, Bid modifications and withdrawals, and such other details as the Employer at the opening. Any bid price,

Discount, or alternative Bid price which is not read out and recorded at Bid opening, will not be taken into account in Bid evaluation.(Refer Clause no. 5.95 ,Not applicable)

- 1.23.4 The Employer shall prepare minutes of the Bid opening, including the information disclosed to those present in accordance with sub clause 23.3 and the minutes shall form part of the contract.(Refer Clause no. 5.95 , – N.A.)

1.24 Process to be confidential.

Information relating to the examination, clarification, evaluation and comparison of the bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced.

1.25 Clarification of Bids

To assist in the examination and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdown of unit rates. The request for clarification and the response shall be writing or by cable, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to conform the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with Clause 1.27.

Subject to above para, no Bidder shall contact the Employer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, he should do so in writing.

Any effort by the Bidder to influence the Employer's bid evaluation, bid comparison or contract award decisions, may result in the rejection of his bid.

1.26 Examination of Bids and Determination of Responsiveness

- 1.26.1 Prior to detailed evaluation of Bids, the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Clause 1.4 (b) has been properly signed by an authorized signatory (accredited representative) holding power of Attorney in his favor.

The Power of Attorney shall inter alia include a provision to bind the Bidder to settlement of disputes clause; (c) is accompanied by the required Bid security and; (d) is responsive to the requirements of the Bidding documents

1.26.2 A substantially responsive Technical and Financial Bid is one which conforms to all the terms, conditions and specification of the Bidding documents, without material

Deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality or performance of the works; (b) which limits in any substantial way, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting responsive Bids.

1.26.3 If a Technical Bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

1.26.4 The envelope marked as financial bid of those bidders whose technical bid has been determined to be non-responsive shall not be opened and will be returned unopened.(
[Refer Clause no. 5.95](#) , – not applicable)

1.27 Correction of Errors. .([Refer Clause no. 5.95](#) , – not applicable)

1.27.1 Bids determined to be responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

(a) Where there is a discrepancy between the rates in figures and in words, the rate in words will govern; and

(b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.

1.27.2 The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding up on the bidder. If the bidder does not accept the corrected amount the Bid will be rejected, and the Bid security may be forfeited in accordance with Sub-Clause1.16. F. (B).

1.28 NIL

1.29 Evaluation and Comparison of Bids

1.29.1 The Employer will evaluate and compare only the bids determined to be responsive in accordance with Clause1.26.

- 1.29.2 In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- (a) Making any correction for errors pursuant to Clause 1.27;
 - (b) Making appropriate adjustments to reflect discounts or other price modification offered in accordance with Sub Clause 1.22.5
- 1.29.3 The estimated effect of the price adjustment conditions under Clause 3.47 of the conditions of contract, during the period of implementation of the Contract, will not be taken into account in Bid evaluation.
- 1.29.4 If the Bid of the successful Bidder is seriously unbalanced in relation to the Nodal Officer or his nominee's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities.

F. AWARD OF CONTRACT

1.30 Award Criteria

- 1.30.1 The Employer will award the Contract to the Bidder whose Bid has been determined to be responsive to the Bidding documents and who has offered the lowest evaluated Bid Price, provided that such Bidder has been determined to be (a) eligible in accordance with the provisions of Clause 1.3, and (b) qualified in accordance with the provisions of Clause 1.4. The second bidder (i.e. L2) shall be kept in reserve and may be invited to match the bid submitted by the (L1) bidder in case such bidder withdraws or is not selected for any reason.

1.31 Employer's Right to accept any Bid and to reject any or all.

Notwithstanding clause 1.30, the Employer reserves the right to accept or reject any bid and to cancel the bidding process and reject all bids, at any time prior to the award of contract, without thereby incurring any liability to the affected bidder or bidders on the grounds for Employer's action.

1.32 Notification of Award and Signing of Agreement

- 1.32.1 The Bidder whose bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the Conditions of Contract called the

"Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion and maintenance of the works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

- 1.32.2 The notification of award will constitute the formation of the Contract subject only to the furnishing of a performance security in accordance with the provision of Clause 1.33.
- 1.32.3 The Agreement will incorporate all correspondence between the Employer and the successful bidder. It will be signed by the employer and sent to the successful Bidder (within 28 days of award of work for global tender and within 14 days for domestic tender) following the notification of award along with the Letter of Acceptance. Within (28 days for global tender and within 21 days for domestic tender) of receipt, the successful Bidder will furnish the performance security and sign the Agreement with the Employer.
- 1.32.4 Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

1.33 Performance Security

Security Deposit shall consist of two parts; a) Performance Guarantee to be submitted at award of work, and b) Retention money to be recovered from Running Bills.

Security Deposit shall be 10% of Contract price of which 5% of contract price should be submitted as Bank Guarantee/ fixed deposit/ online transfer in DPA account within 21 days of receipt of Letter of Acceptance and balance 5% recovered as Retention Money from Running Bills. Recovery of 5% of Retention Money to commence from the first bill onwards @ 5% of bill value from each bill. Retention Money be refunded within 14 days from the date of payment of final bill. Balance SD to be refunded immediately not later than 14 days from completion of defect liability period. (Subject to fulfilment of clause no 5.18).

Failure of the Successful Bidder to comply with the requirements as mentioned above shall constitute sufficient grounds for cancellation of the award of work and forfeiture of bid security and/or the bidder can be disqualified from bidding for any contract with DPA for a period of three years from the date of notification."

Bank Guarantee of Nationalized/ scheduled bank (except Co-operative) Banks having its branch at Gandhidham/Jamnagar/Khambhalia".

1.34 Advance Payment (Refer Clause no. 5.95, Not Applicable)

1.34.1 The Employer will provide an Advance payment on the Contract Price as stipulated in the Conditions of Contract, subject to maximum amount, as stated in the Contract Clause 3.51.

1.35 Conciliator (Refer Clause no. 5.95, Not Applicable)

1.35.1 The Employer proposes that CIDC – SIAC Arbitration Centre be appointed as Conciliator under the contract as provided in sub-clause 3.24.1 of condition of contract. If the bidder disagrees with this proposal, the bidder should so state in the bid.

1.36 Corrupt or Fraudulent Practices

1.36.1 The Employer requires that Bidders/Suppliers/Contractors under this contract, observe the highest standard of ethics during the procurement and execution of this contract. In pursuance of this policy, the Employer:

- (a) Defines, for the purpose of these provisions, the terms set forth below as follows:
 - (I) "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
 - (II) "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- (b) Will reject a proposal for award of work if he determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.
- (c) Will declare a Bidder ineligible, either indefinitely for a stated period of time, to be awarded a contract/contracts if he at any time determines that the Bidder has engaged in corrupt or fraudulent practices in competing for or in executing, the

contract.

1.36.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 3.59.2 of the conditions of Contract.

Contractor

**Executive Engineer (Civil)
Deendayal Port Authority**

SECTION: 2

FORMS OF BID, QUALIFICATION INFORMATION

TABLE OF FORMS

- 1. FORM OF BID**
- 2. CONTRACTOR'S BID**
- 3. PRE-QUALIFICATION OF BIDDERS**
- 4. LETTER OF ACCEPTANCE**
- 5. NOTICE TO PROCEED WITH THE WORK**
- 6. AGREEMENT FORM**

SPECIMEN FOR FORM OF BID
(To be executed on bidder's letter head)

Name of Work: "Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar"
To
The Chief Operations Manager,
Deendayal Port Authority,
Off-Shore Oil Terminal,
Vadinar -361010.

We, the undersigned,
declare that:

- (a) We have examined and have no reservations to the tender documents, including addenda and clarifications issued
- (b) We offer to execute the work in conformity with the tendering documents and in accordance with the delivery schedules specified in the schedule of requirements in accordance with the tender document
- (c) The total price of our tender, excluding any discounts offered in item(d) below, is [insert the total tender price in words and figures, indicating the various amounts and the respective currencies]; [in case of techno-commercial offer it shall be mentioned that 'as filled in the price bid'] **(Refer Clause no.5.96 of Sec-5) (N.A)**
- (d) The discounts offered and the methodology for their application are: **Discounts**. If our tender is accepted, the following discounts shall apply. **Methodology of application of the discounts**. The discounts shall be applied using the following method: **(Refer Clause no.5.96 of Sec-5) (N.A.- not applicable)**
- (e) our tender shall be valid for the period of time specified in **[ITB Sub-clause 1.15.1]**, from the date fixed for the tender submission deadline in accordance with **[ITB Sub-clause 1.20.1]**, and it shall remain binding upon us and may be accepted at any time before the expiration of that period or any extended period accordance with **[ITB Sub-clause 1.15.2]**;
- (f) If our tender is accepted, we commit to submit a performance guarantee in accordance with [insert relevant clause no., ITB Sub-clause 1.33] for the due performance of the contract, as specified in specimen form for the purpose.

- (g) We, including any subcontractors or contractors for any part of the contract, (Refer **Clause no.5.96 of Sec-5) (N.A.- not applicable)**)
- (h) We have no conflict of interest in accordance with **[ITB Sub-clauseno1.3.2]**
- (i) Our firm, its affiliates or subsidiaries- including any subcontractors or contractors for any part of the contract – has not been declared ineligible by the port, under laws of India or official regulations in accordance with **[ITB Sub-clause no.1.3.4]**
- (j) We understand that this tender, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract agreement is prepared and executed in accordance with **[ITB Sub-clause 1.32]** and as per specimen from the purpose;
- (k) We understand that you are not bound to accept the lowest evaluated tender or any other tender that you may receive.
- (l) We also make specific note clauses of [ITB, NIT] under which the contract is governed.
- (m) In case of out station firms, having a branch in India for liaison purposes, please mention the name of the contact person and Tel. no., Fax. no., and Mail-Id and also the complete postal address of the firm.
- (n) We understand that the communication made with the firm at (m), by the port shall be deemed to have been done with us.

Signed: [insert signature of person whose name and capacity are shown]

In the capacity of [insert legal capacity of person signing the form of tender]

Name: [insert complete name of person signing the form of tender]

Duly authorized to sign the tender for and on behalf of: [insert complete name of tenderer]

Dated on ____ day of _____, _____ (insert date of signing)

CONTRACTOR'S BID

Description of the works: -**"Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar"**

BID

TO

----- (The employer)

Address

GENTLEMEN,

We offer to execute the works described above in accordance above with the conditions of Contract accompanying this bid for the contract price of _____ (in figures) _____ (in letters). The advance payment required / not required as per rule. We accept appointment of _____ as the conciliator's letter.

Or

This bid and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any bid you receive. We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "prevention of corruption act 1988"

We hereby confirm that this bid complies with the bid validity and security required by the bidding documents.

We attach herewith our copy of permanent account number (PAN)

Yours faithfully,

Authorized Signature:

Name& title of signatory

Name of Bidder

Address

Notes:

To be filled in by the bidder, together with his particulars and date of submission at the bottom of the form of bid.

PRE-QUALIFICATION OF BIDDERS

The information to be filled in by the bidder in the following pages will be used for purposes of pre-qualification as provided for in the instructions to tenderers.

1. Only for individual bidders

Constitution or legal status of bidder (attach copy)

- Place of registration
- Principal place of business
- Power of attorney of signatory of bid (Attach)

2. Turnover of the firm/JV

YEAR	TURN OVER
2021-22	
2022-23	
2023-24	
Average	

Attachments: Financial reports for the last three years; balance sheets, profit and loss statement, auditors reports (in case of companies/ corporation) etc., list them below and attach copie. Note: The Financial Turnover shall be certified by chartered accountant. Financial turnover document to be CA Certified with CA's stamp, signature and UDIN no./ membership no. along with profit & loss statement for verification of turnover failing which the bid will be treated as non-responsive)

3. Similar works

Particulars	Year	No. of works	Value
Total value completed similar work as defined in the tender document during last 7 years	2017-18		
	2018-19		
	2019-20		
	2020-21		
	2021-22		
	2022-23		
	2023-24		

Attachments: Supporting documents, viz., successful completion certificates from clients, other documentations to substantiate the similarity of work as per definition of "similar work" employers reserve the right to verify the information;

4. Information on bid capacity (works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

(A) Existing commitments and on-going works.

Description of work	Place & state	Contract no. & date	Name & address of port or Dept.	Value of contract Rs	Stipulated Period of completion	Value of remaining to be completed	Anticipated date of completion
1	2	3	4	5	6	7	8

(B) Works for which bids already submitted

Description of work	Place & state	Name & address of port or Dept.	Value of contract Rs	Stipulated Period of completion	Date when decision is expected	Remarks if any
1	2	3	4	5	6	7

Attach certificates from the nodal officer or his nominee(s)-in-charge.

5. The list of equipment available with bidder. The bidder should list all information requested below.

Item of equipment	Requirement no. capacity	Owned/leased/ to be procured	Nos./ capacity	Age/condition	Remarks
1	2	3	4	5	6

6. Qualification and experience of key personnel available with the bidder. Attach biographical data.

Position	Name	Qualification	Years of experience (general)	Years of experience in the proposed position
Project manager				
Discipline specialist etc.,				

7. Proposed sub-contracts and firms involved. (Refer **Clause no.5.96** of Sec-5- not applicable)

Sections of the works	Value of sub-contract	Sub- contractor (name and address)	Experience in similar work

8. Information on litigation history in which the bidder is involved.

Other party(ies)	Port / Dept.	Cause of dispute	amount	Remarks involved showing present status

9. Additional information bidder may like to submit.

Duly authorized to sign this authorization on behalf of (insert complete name of tenderer)

Dated on _____ day of _____ [insert date of signing]

LETTER OF ACCEPTANCE

(On letterhead paper of the port)

_____ (date)

TO: _____
(Name and address of the contractor)

Dear Sirs,

Tender no. OOT/_____/_____: _____/2024

Sub: **"Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar"**

Ref: Your bid dated and [list the correspondence with the bidder]

This is to notify you that your bid dated _____ for execution of the _____ (name of the contract and identification number, as given in the instructions to bidders) for the contract price of rupees _____ (amount in words and figures as corrected and modified) in accordance with the tender document is hereby accepted by the employer/Board.

You are hereby requested to furnish performance security, in the form detailed in tender document for an amount of Rs. _____ within {_____} days of the receipt of this letter of acceptance valid up to 28 days from the date of completion obligations expiry of taking over certificate subject to removal of defects period i.e up to and also sign the contract agreement within {_____} days of the receipt of this letter of acceptance, failing which action as stated in the tender document will be taken.

Detailed letter of acceptance will follow. Please acknowledge receipt.

Yours faithfully

Authorized signature

ISSUE OF NOTICE TO PROCEED WITH THE WORKS
(Letterhead of the Port)

_____Dated

To
(Name and address of the contractors)

Dear Sirs,

Sub.: Tender for "**Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar**"

Ref: Letter of acceptance no. dated

Pursuant to your furnishing the requisite security as stipulated in [clause of general conditions of contract] and signing of the contract for execution of the_____ you are hereby instructed to precede with the execution of the said works in accordance with the contract documents. It is hereby notified that the [site] is being handed over to you for execution of work in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of
Signatory authorized to sign on
Behalf of employer/board)

SPECIMEN CONTRACT AGREEMENT

(To be executed on Rs.100 non-judicial stamp paper)

[The successful tenders shall fill in this form in Accordance with the instructions indicated]

THIS CONTRACT AGREEMENT is made

The [insert: number] day of [insert: month], [insert: year]

Between

(1) The Authorities of Deendayal port of Kandla, an autonomous body of the Ministry of Shipping of the Government of INDIA, incorporated under the major port Authority Act, 2021 as amended thereafter, under the laws of India and having its principal place of business at A.O. Building, Post Box No.50, Gandhidham–(Kutch), Gujarat State, India (hereinafter called "the port"), and

(2) [insert name of the contractor], [incorporated under] the laws of [country of contractor] and having its place of business at [insert: address of contractor] (hereafter called "the contractor")

WHEREAS the employer board invited tenders against tender no.[number] for execution of [tender title and brief description] and has accepted a tender by the contractor in accordance with the supply/delivery schedules, in the sum of [insert contract price in words and figures, expressed in the contract currency (ies)] (hereafter called "contract price")

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this agreement words and expressions shall have the same meanings as per respectively assigned to them in the conditions of contract refer to.
2. the following documents shall constitute the contract between the employer/ board and the contractor, and each shall be read and construed as an integral part of the contract:

- (a) This contract agreement;
- (b) Special conditions of contract;
- (c) General conditions of contract;
- (d) Technical requirements (including schedule of requirements and technical specifications, drawings);
- (e) Notice inviting tender;
- (f) Replies issued to the pre-bid queries, addenda if any issued [numbers and date];
- (g) The contractor's bid and original price and delivery schedules;
- (h) The employer/ board's notification of award;
- (i) [correspondence the employer/board has exchanged with the bidder till and after award of contract [specific letters and dates]
- (j) And [add here any other documents]

AND WHEREAS

EMPLOYER/BOARD accepted the bid of CONTRACTOR for the provision and the execution of WORK at the CONTRACT PRICE as indicated in CONTRACT upon the terms and subject to the conditions of contract. Now this CONTRACT AGREEMENT witness and it is hereby agreed and declared as follows:

3. In consideration of the payment to be made to CONTRACTOR for work to be executed by him. CONTRACTOR hereby covenants with EMPLOYER/ BOARD what CONTRACTOR shall and will duly provide, execute and complete work and things in CONTRACT, mentioned or described or which are to be implied there from or may be reasonably necessary for completion of work and the times and in the manner and subject to the terms and conditions or stipulations mentioned in CONTRACT.
4. In consideration of the due provision, execution and completion of work by the contractor in accordance with the terms of the contract, the employer/board

does hereby agree with contractor that employer /board will pay to contractor the respective amounts for the work actually done by him and approved by employer/board as per payment terms accepted in contract and payable to contractor under provision of contract at such manner as provided for in the contract.

5. In consideration of the due provision, execution and completion of work, contractor done hereby agree to pay such sums as may be due to employer/ board for the services rendered by employer/ board to contractor as set forth in contract and such other sums as may become payable to employer/ board towards loss, damage to the employer/ board's equipment, materials etc. and such payments to be made at such time and in such manner as is provided in the contract.

In witness where of the parties hereto have caused this agreement to be executed in accordance with the laws of [insert name of the contract governing law country] on the day, month and year indicated above.

For and behalf of the employer/ board

Signed: [insert signature]

In the capacity of [insert title or other appropriate designation]

In the presence of [insert identification of official witness]

For any behalf of the contractor

Signed: [insert signature of authorized representatives of the contractor]

In the capacity of [insert title or other appropriate designation]

In the presence of [insert identification of official witness]

SECTION 3

CONDITIONS OF CONTRACT

CONDITIONS OF CONTRACT

A. General

3.1 Definitions

- 3.1.1** Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings capital initials are used to identify defined terms.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.

Compensation Events are those defined in Clause 3.44

The Completion Date is the date of Completion of the Works as certified by the Nodal Officer or his nominee in accordance with Sub Clause 3.55.1

The Contract is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 3.2.2 below.

The Contract Data defines the documents and other information which comprise the Contract.

The Contractor is a person or corporate body whose Bid to carry out the Works has been accepted by Employer.

The Contractor's Bid is the completed Bidding documents submitted by the Contractor to the Employer.

The Contract Price is the stated in the letter of acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days, months are calendar months.

A Defect is any part of the Works not completed in accordance with the Contract. **The Defects Liability Period** is the Period named in the Contract Data and calculated from the Completion Date.

The Employer is the party who will employ the contractor to carry out the Works. **The Nodal Officer** or his nominee is the person named in the Contract Data (or any other Competent person appointed and notified to the contractor to act in replacement of the Nodal Officer or his nominee) who is responsible for supervising the Contractor, Administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the contract, awarding extensions of time and valuing the

Compensation Events.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The Initial Contract Price is the Contract Price listed in the employer's Letter of Acceptance.

The Intended Completion Date is the date on which it is intended that the Contractor shall complete the works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Nodal Officer or his nominee by issuing an extension of time.

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have mechanical, electrical, electronic or chemical or biological function.

The Site is the area defined as such in the Contract Data.

Site Investigation Reports are those which were included in the Bidding documents and are factual interpretative reports about the surface and subsurface conditions at the site.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Nodal Officer or his nominee.

The Start Date is given in the Contract Data. It is the date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Date.

A Subcontractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the site.

Temporary Works are works designed, constructed, installed and removed by the Contractor which are needed for construction or installation of the Works.

A Variation is an instruction given by the Nodal Officer or his nominee which varies the Works.

The Works are what the Contract requires the Contractor to construct, install and turn over to the Employer as defined in the Contract Data.

The Trained Work Person are those employed/proposed to be employed by the Contractor at the Project Site, who have participated and are in possession of a valid

Competency Certificate through a program run under the auspices of a University, State Technical Board, Ministry of Government of India.

Board – Board of Authorities of the Deendayal Port, a body corporate under the Major Port Authorities Act, 2021 as amended from time to time.

Chairman means the Chairman of the Board of Authorities of Deendayal Port.

“Engineer-in-Charge” means the Chief Engineer/Superintending Engineer/Executive Engineer of the Deendayal Port Authority.

3.2 Interpretation

In interpreting this Condition of Contract, singular also means plural, male also means female or neuter and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract instructions clarifying queries about the Conditions of Contract.

3.2.1 If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion date for the whole of the Works).

3.2.2 The documents forming the Contract shall be interpreted in the following order of priority:

1. Agreement
2. Letter of Acceptance and notice to proceed with Works Contractor's Bid.
3. Contract Data
4. Conditions of Contract including Special Conditions of Contract
5. Specifications
6. Drawings
7. Bill of quantities
8. Any other documents listed in the Contract Data as forming part of the Contract.

3.3 Language and Law

- 3.3.1** The language of the Contract and the law governing the Contract are stated in the Contract Data.

3.4 Nodal Officer or his nominee's Decisions

- 3.4.1** Except where otherwise specifically stated, the nodal officer or his nominee will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

3.5 Delegation

- 3.5.1** The Nodal officer or his nominee may delegate any of the duties and responsibilities to other people except to the Conciliator after notifying the Contractor and may cancel any delegation after notifying the Contractor.

3.6 Communications

- 3.6.1** Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act 1872).

3.7 Joint Venture

Companies/Contractors may jointly undertake contract/contracts. Each only would be jointly and severally responsible for completing the task as per the contract, however declaration of the Lead member to be indicated by bidders, however JV has to designate in their MOU. The firms with at least 26% equity holding each be allowed to jointly meet the eligibility criteria.

Note: JVs/ Consortia be allowed in all contracts of estimated cost of more than Rs. 5 crores. However, there shall be no limit on the number of partners.

3.8 Subcontracting

- 3.8.1** The Contractor may subcontract with the approval of the Nodal Officer or his nominee but may not assign the Contract without the approval of the Employer in writing. Subcontracting does not alter the Contractor's obligations. **(Refer Clause no.5.97 of Sec-5)**

3.8.2 Other Contractor

The Contractor shall co-operate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of other contractors. The Contractor shall as have referred to in the Contract Data, also provide facilities and services for them as described in the Schedule. The employer may modify the schedule of other contractors and shall notify the contractor of any such modification.

3.9 Personnel

3.9.1 The contractor shall employ the key personnel named in the schedule of key personnel as referred to in the contract Data to carry out the functions stated in the schedule or other personnel approved by the Nodal officer or his nominee. The Nodal Officer or his nominee will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal or better than those of the personnel listed in the schedule.

3.9.2 If the Nodal Officer or his nominee asks the Contractor to remove a person who is a member of the Contractor's staff of his work force stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connections with the work in the Contract.

3.10 Employer's and Contractor's Risks

3.10.1 The Employer carries the risks which this contract states are Employer's risks and the Contractor carries the risks which this Contract states are Contractor's risks.

3.11 Employers Risks

3.11.1 The Employers risks are

- (a) In so far as they directly affect the execution of the Works in the country where the Permanent Works are to be executed:
 - (i) War and hostilities (whether war be declared or not), invasion, act of foreign enemies;
 - (ii) Rebellion, revolution, insurrection, or military or usurped power, or civil war,
 - (iii) Ionizing radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste, from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
 - (iv) Pressure waves caused by aircraft or other aerial device starveling at sonic or upper sonic speeds; and
 - (v) riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Subcontractors and arising from the conduct of the Works;
 - (vi) floods, tornadoes, earthquakes and landslides
- (b) Loss or damage due to the use or occupation by the Employer of any Section or part of the Permanent Works, except as may be provided for in the Contract;
- (c) Loss or damage to the extent that it is due to the design of the Works, other than any

part of the design provided by the Contractor or for which the Contractor is responsible; and

(d) Any operation of the forces of nature (in so far as it occurs on the Site) which an experienced contractor:

- (i) could not have reasonably for seen, or
- (ii) Could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures.
 - A. Prevent loss or damage to physical property from occurring by taking appropriate measures, or
 - B. Insure against.

3.12 Contractor's risks

3.12.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

3.13 Insurance

3.13.1 The Contractor shall provide in the joint names of the employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles state in the Contract Data for the following events which are due to the Contractors risks.

- (a) Loss of or damage to the Contractors risks.
- (b) Loss of or damage to Equipment;
- (c) Loss of or damage property (except the Works, Plant, Materials and Equipment in connection with the Contract, and
- (d) Personal injury of death.

3.13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Nodal Officer or his nominee for the Nodal Officer or his nominee's approval before Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

3.13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may affect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the

Contractor or, if no payment of the premiums shall be a debt due.

3.13.4 Alternate to the terms of insurance shall not be made without the approval of the Nodal Officer or his nominee.

3.13.5 Both parties shall comply with all conditions of the insurance policies.

3.14 Site Investigation Reports

3.14.1 The Contractor, in preparing the Bid, shall rely on the Investigation Report referred to in the Contract Data, supplemented by any information available to the Bidder.

3.15 Queries about the Contract Data

3.15.1 The Nodal Officer or his nominee will clarify queries on the Contract Data.

3.16 Contractor to Construct the Works

3.16.1 The Contractor shall construct and install the Works in accordance with the Specification and Drawings.

3.17 The Works to Be Completed by the Intended Completion Date

3.17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the program submitted by the Contractor as updated with the approval of the Nodal Officer or his nominee, and complete them by the Intended Completion Date.

3.18 Approval by the Nodal Officer or his nominee

3.18.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Nodal Officer or his nominee, who is to approve them if they comply with the specifications and Drawings.

3.18.2 The Contractor shall be responsible for design of Temporary Works.

3.18.3 The Nodal Officer or his nominee's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

3.18.4 NIL

3.18.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Nodal Officer or his nominee before their use.

3.19 Safety

3.19.1 The Contractor shall be responsible for the safety of all activities on the Site.

3.20 Discoveries

3.20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The contractor is to notify the Nodal Officer or his nominee of such discoveries and carry out the Nodal Officer or his nominee's instructions for dealing with them.

3.21 Possession of the Site

The Employer shall give possession of all parts of the Site to the Contractor, free from encumbrances. If possession of a part is not given by the date stated in the Contract Data, the Employer is deemed to have delayed the start of the relevant activities. Operations work is being carried out from the jetty which has to be strengthened, therefore, The Employer shall not give possession of all area wall at a time to the Contractor. No claim dispute will be entertained on this account.

3.21.1 (Refer **Clause no.5.97** of Sec-5, NA)

3.22 Access to the Site

3.22.1 The Contractor shall allow the Nodal Officer or his nominee and any person authorized by the Nodal Officer or his nominee access to the Site to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured, fabricated and/or assembled for the works.

3.23 Instructions

3.23.1 The Contractor shall carry out all instructions of the Nodal Officer or his nominees who comply with the applicable law where the Site is located.

3.24 Disputes (**Clause no.5.97**, N.A.- not applicable)

3.24.1 If the Contractor believes that a decision taken by the Nodal Officer or his nominee was either outside the authority given to the Nodal Officer or his nominee by the Contract or that the decision was wrongly taken, the decision shall be referred to the conciliator within 28 days of the notification of the Nodal Officer or his nominee's decision. (Refer **Clause no.5.97** of Sec-5 N.A)

3.25 Settlement of Disputes (Refer **Clause no.5.97 of Sec-5) (N.A.- not applicable)**

3.25.1 If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with, or arising out of the Contract or the execution of the Works, whether during the execution of the Works or after their completion and whether before or after repudiation or after termination of the Contract, including any disagreement by either party with any action, inaction, opinion, instruction, determination, certificate or valuation of the Nodal Officer or his nominee, the matter in dispute shall, in the first place be referred to the Disputes Review Board [DRD] in case of contracts valuing more than Rs.5 crores and above, and for contracts valuing less than Rs. 5 crores, the disputes will firstly be settled by the Conciliator, failing which any party may invoke arbitration clause. Unless the Contract has already been repudiated or terminated or frustrated the Contractor shall in every case, continue to proceed with the Works with all due diligence and the Contractor and the Employer shall give effect forthwith to every decision of the Nodal Officer or his nominee unless and until the same shall be revised, as hereinafter provided, by the conciliator or in a Dispute Review Board recommendation / Arbitral Award.

3.25.2 Decision by Conciliator (Clause no.5.97**,N.A.- not applicable)**

- (i) The Conciliator shall give a decision in writing within 28day so receipt of a notification of a dispute.
- (ii) Conciliator shall be paid daily at the rate specified in the contract Data together with reimbursable expenses of the types specified in the contract data and the cost shall be divided equally between the Employer and the contractor, whatever decision is reached by the conciliator, either party may refer a decision of the conciliator within 28 days of the conciliator's written decision. If neither party refers the disputes to arbitration within 28 days, the conciliators decision will be final and binding.

3.25.3 Arbitration (Clause no.5.97**,N.A.- not applicable)**

Any dispute in respect of contracts where party is dissatisfied by the Conciliators decision shall be decided by arbitration as set forth below:

- (i) A dispute with Dispute review expert shall be finally settled by arbitration in

accordance with the Indian Arbitration and Conciliation Act, 1996, or any statutory amendment thereof. The arbitral tribunal shall consist of 3 arbitrators, one each to be appointed by the Employer and the Contractor, and the third to be appointed by the mutual consent of both the arbitrators, failing which by making a reference to CIDC-SIAC Arbitration Centre from their panel.

- (ii) Neither party shall be limited in the proceeding before such arbitrations to the evidence nor did arguments already put before the Nodal Officer or his nominee or the Board, as the case may be, for the purpose of obtaining said recommendations/decision. No such recommendations/decision shall disqualify the Nodal Officer or his nominee or any of the members of the Board, as the case may be, from being called as a witness and giving evidence before the arbitrators or any matter whatsoever relevant to the dispute.
- (iii) The reference to arbitration shall proceed notwithstanding that the works shall not then be or be alleged to be complete, provided always that the obligations of the Employer, the Nodal Officer or his nominee and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the works. Neither party shall have been titled to suspend the works to which the dispute relates, and payment to the contractor shall be continued to be made as provided by the contract.
- (iv) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause [i], within 14 days after receipt of the notice of the appointment of its arbitrator by the other party, then chairman of the nominated Institution shall appoint arbitrator within 14 days of the receipt of the request by the nominated institution. A certified copy of the chairman's order, making such an appointment shall be furnished to both the parties.
- (v) Arbitration proceedings shall be held at, and the language of the arbitration proceeding and that of all documents and communications between the parties shall be 'English'
- (vi) The decision of the majority of arbitrators shall be final and binding upon both parties. The expenses of the arbitrators as determined by the arbitrators shall be shared equality by the Employer and the Contractor. However, the expenses incurred by each party in connection with the preparation, presentation, etc. of its

case prior to, during and after the arbitration proceedings shall be borne by each party itself.

(vii) All arbitration awards shall be in writing and shall state the reasons for the award.

(viii) Performance under the contract shall continue during the arbitration proceedings and payments due to the contractor by the employer shall not be withheld, unless they are subject matter of the arbitration proceedings.

3.26 Replacement of Conciliator (Refer [Clause no.5.97 of Sec-5](#)) (N.A.- not applicable)

3.26.1 Should the Conciliator resign or die, or should the Employer and the Contractor agree that the conciliator is not fulfilling his functions in accordance with the provisions of the Contract, a new Conciliator will be jointly appointed by the Employer and the Contractor.

In case of disagreement between the Employer and the Contractor, within 30 days the Conciliator shall be appointed by the Appointing Authorities designated in the Contract Data at the request of either party within 14 days of receipt of such request.

B. TIME CONTROL

3.27 Program

3.27.1 Within the time stated in the contract data the contractor shall submit to the Nodal officer or his nominee for approval a program showing the general methods arrangements, order, and timing for all the activities in the works along with monthly cash flow forecast.

3.27.2 An update of the program shall be a program showing the actual progress achieved on the timing of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.

3.27.3 The contractor shall submit to the Nodal Officer or his nominees, for approval an updated program at intervals no longer than the period stated in the contract data. If the contractor does not submit an updates program within this period, the Nodal Officer or his nominee may withhold the amount stated in the contract data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue program has been submitted.

3.27.4 The nodal officer or his nominee's approval of the program shall not alter the contractor's

obligations. The contractor may revise the program and submit it to the nodal officer or his nominee again at any time. A revise program is to show the effect of variations and compensation events.

3.28 Extension of the intended completion date

The nodal officer or his nominee shall extend the intended completion date if a compensation event occurs or a variation is issued which makes it impossible for completion to be achieved by the intended completion date without the contractor taking steps to accelerate the remaining work and which would cause the contractor to incur additional cost. The nodal officer or his nominee shall decide whether and by how much to extend the intended completion date within 21 days of the contractor asking the Nodal Officer or his nominee for a decision up on the effect of a compensation event or variation and submitting full supporting information. If the contractor has failed to give early warning of a delay or has failed to cooperate in assessing the new intended completion date.

3.29 The Early Warning Provisions shall be as per clause 3.32

3.30 Delays Ordered by the Nodal Officer or his nominee

3.30.1 The Nodal Officer or his nominee may instruct the contractor to the start or Progress of any activity within the works.

3.31 Management Meeting

3.31.1 Either the Nodal Officer or his nominee or the contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

3.31.2 The Nodal Officer or his nominee shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the employer. The responsibility of the parties for actions to be taken is to be decided by the Nodal Officer or his nominee either at the management meeting or after the management meeting and state in writing to all attended the meeting.

3.32 Early warning

3.32.1 The contractor is to warn the Nodal Officer or his nominee at the earliest opportunity

of specific likely future events or circumstances that may adversely affect the quality of the work, increase the contract price or delay the execution of works. The Nodal Officer or his nominee may require the contractor to provide an estimate of the expected effect of the event or circumstances on the contract price and completion date. The estimates are to be provided by the contractor as soon as reasonably possible.

3.32.2 The contractor shall cooperate with the Nodal Officer or his nominee in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Nodal Officer or his nominee.

3.32.3 The Defect Liability period for the contract shall be **12months** from the date issue of completion certificate.

C. QUALITY CONTROL

3.33 Identify Defects

3.33.1 The Nodal Officer or his nominee shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Nodal Officer or his nominee may instruct the Contractor to search for a Defect and to uncover and test any work that the Nodal Officer or his nominee considers may have a Defect.

3.34 Tests

3.34.1 If the Nodal Officer or his nominee instructs the Contractor to carry out a test not specified in the specification to check whether any work has a Defect and the test shows that it does the Contractor shall pay for the test and any samples.

3.35 Correction of Defects

3.35.1 The Nodal Officer or his nominee shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

3.35.2 Every time notice of a Defect is given the Contractor shall correct the notified Defect within the length of time specified by the Nodal Officer or his nominee's notice.

3.36 Uncorrected Defects

- 3.36.1** If the Contractor has not corrected a Defect within the time specified in the Nodal Officer or his nominee's notice the Nodal Officer or his nominee will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

D. COST CONTROL

3.37 Bill of Quantities

- 3.37.1** The Bill of Quantities shall contain items for the construction, supply, installation, testing and commissioning work to be done by the Contractor.
- 3.37.2** The bill of quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item as jointly measured by both the representatives.

3.38 Changes in the Quantities

- 3.38.1** If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than + 25 percent provided the change exceeds + 10% of initial Contract Price, the Nodal Officer or his nominee shall adjust the rate (s), to allow for the change, in accordance with Clause 3.40.
- 3.38.2** The Nodal Officer or his nominee shall not adjust rates from changes in quantities if thereby the initial Contract Price is exceeded by more than 15 percent except with prior approval of the Employer.
- 3.38.3** If requested by the Nodal Officer or his nominee where the quoted rate (s) of any item(s) is/are abnormally high, the Contractor shall provide the Nodal Officer or his nominee with a detailed cost breakdown of such rate in the Bill of Quantities.

3.39 Variations

- 3.39.1** All Variations shall be included in updated programs produced by the Contractor.

3.40 Payment for Variations

- 3.40.1** Variation permitted shall not exceed +25% in quantity of each individual item, and +10% of the total contract price, within 14 days of the date of instruction for executing varied work, extra work or substitution, and before the commencement of such work, notice shall be given either (a) by the contractor to the Employer of his intention to

claim the extra payment or a varied rate or price, or (b) by the Employer to the contractor of his intention to vary rate or price.

3.40.2 For items not existing in the Bill of Quantities or substitution to items in the Bill of Quantities, rate payable should be determined by methods given below and in the order given below:

- 1) Rates and prices in Contract, if applicable plus escalation as per contract.
- 2) Rates and prices in the schedule of rates applicable to the contract plus ruling percentage.
- 3) Market rates of materials and labour, hire charges of plant and machinery used, plus 10% for overheads and profits of Contractors.

3.40.3 For items in the Bill of quantities but where quantities have increased beyond the variation limits, the rate payable for quantity in excess of the quantity in the Bill of Quantity plus the permissible variation should be:

- 1) Rates and prices in contract, if reasonable plus escalation, failing Which (ii) and (iii) below will apply.
- 2) Rates and prices in the schedule of Rates applicable to the contract plus ruling percentage,
- 3) Market rates of material and labour, hire charges of plant and machinery used plus 10% for overheads and profits of contractor.

3.40.4 If there is delay in the Employer and the contractor coming to an agreement on the rate of an extra item, rates as proposed by the employer shall be payable provisionally till such time as the rates are finally determined or till date mutually agreed.

3.40.5. If the Nodal officer or his nominee decides that the urgency of varying the work prevent a quotation being given and considers not delaying the work, no quotation shall be given and the variation shall be treated as a Compensation Event.

3.41 Cash flow forecasts

3.41.1 When the program is updated, the contractor is to provide the Nodal Officer or his nominee with an updated cash flow forecast.

3.42 Payment Certificates

3.42.1 The contractors shall submit to the Nodal Officer or his nominee monthly statements of the estimated value of the work completed less the cumulative amount certified Previously.

- 3.42.2** The Nodal Officer or his nominee shall check the Contractors' monthly statement within 14 days and certify the amount to be paid to the Contractor after taking into account any credit or debit for the month in question in respect of materials for the works in the relevant amount and under conditions set forth in sub clause 3.51.6 of the Contract Data (Secured Advance).
- 3.42.3** The value of work executed shall be determined by the Nodal Officer or his nominee.
- 3.42.4** The value of work executed shall comprise the value of quantities of the items in the Bill of quantities completed.
- 3.42.5** The value of work executed shall include the valuation of variations and Compensation Events.
- 3.42.6** The Nodal Officer or his nominee may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

3.43 Payments

3.43.1 Computerized Measurement Book

Engineer or his nominee shall, except as otherwise provided, ascertain and determine by measurement, the value of work done in accordance with the contract.

All measurement of all items having financial value shall be entered by the Contractor and compiled in the shape of the Computerized Measurement Book having pages of A-4 size as per the format of the department so that a complete record is obtained of all the items of works performed under the Contract.

All such measurements and levels recorded by the Contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the Contractor from the Engineer or his authorized representative as per interval or program fixed in consultation with Engineer or his authorized representative. After the necessary corrections made by the Engineer or his nominee, the measurement sheets shall be returned to the Contractor for incorporating the corrections and for resubmission to the Engineer for the dated signatures by the Engineer or his nominee and the Contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the Contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer- and/or his authorized representative. The Contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to the department a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer and/or his authorized representative would

thereafter check this MB, and record the necessary certificates for their checks/test checks.

The final, fair, computerized measurement book given by the Contractor, duly bound, with its pages machine numbered, should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the Contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the department. Thereafter, the MB shall be taken in the Divisional Office records, and allotted a number as per the Register of Computerized MBs. This should be done before the corresponding bill is submitted to the Division Office for payment. The Contractor shall submit two spare copies of such computerized MB's for the purpose of reference and record by the various officers of the department.

The Contractor shall also submit to the department separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its pages machine numbered along with two spare copies of the bill. Thereafter, this bill will be processed by the Division Office and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements.

The Contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

3.43.2 Bills shall be prepared and submitted by the Contractor, joint measurements shall be taken continuously and need to be connected with billing stage. System of 4 copies of measurements, one each for Contractor, Employer and Nodal Officer or his nominee, and signed by both Contractor and Employer shall be followed.

3.43.3 75% of bill amount shall be paid within 14 days of submission of the bill. Balance amount of the verified bill should be paid within 28 days of the submission. (Refer **Clause no.5.97 of Sec-5**) (N.A.- not applicable)

3.43.4 For delay in payment beyond the periods specified in 3.43.2 above, interest at a pre- specified rate (suggested rate **SBI PLR + 2%**) p.a as on due date of payment) should be paid. (Refer **Clause no.5.97 of Sec-5**) (N.A.- not applicable)

3.43.5 Contractor shall submit final Bill within 60 days of issue of defects liability certificate. Client's Nodal Officer or his nominee shall check the bill within 60 days after its receipt and return the bill to Contractor for corrections, if any 50% of undisputed amount shall be paid to the contractor at the stage of returning the bill. (Refer **Clause no.5.97 of Sec-5**)(N.A.)

3.43.6 The Contractor should re-submit the bill, with corrections within 30 days of its return by the Nodal Officer or his nominee. The re-submitted bill shall be checked and paid within 60 days of its receipt. (Refer **Clause no.5.97 of Sec-5**) (N.A.- not applicable)

3.43.7 Interest at a pre-specified rate (suggested rate SBI PLR+ 2% p.a. as on due date of payment) shall be paid if the bills is not paid within the time limit specified above. (Refer **Clause no.5.97 of Sec-5**) (N.A.- not applicable)

3.43.8 If an amount certified is increased in later certificates as a result of an award by the Conciliator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute. (Refer **Clause no.5.97 of Sec-5**) (N.A.- not applicable)

3.43.9 Items of the Works for which no rate or price has been entered in will not be paid for by the employer and shall be deemed covered by other rates and prices in the Contract.

3.44 Compensation Events (Refer **Clause no.5.97 of Sec-5**) (N.A.- not applicable)

3.44.1 The following mutually agreed Compensation Events unless they are caused by the Contractor would be applicable.

- (a) The Employer does not give access to a part of the Site by the site. Possession Date stated in the Contract Date.
- (b) The Employer modifies the schedule of other contractors in a way which affects the work of the contractor under the contract.
- (c) The Nodal Officer or his nominee orders a delay or does not issue drawings, specifications or instructions required for execution of works on time.
- (d) The Nodal Officer or his nominee instructs the Contractor to uncover to carry out additional tests work which is then found to have no Defects.
- (e) The Nodal Officer or his nominee unreasonably does not approve for a subcontract to be let.
- (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of letter of Acceptance from the information issued to Bidders (including the Site Investigation Reports), from information available publicly and form a visual inspection of the site.
- (g) The Nodal Officer or his nominee gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
- (h) Other contractors, public authorities, utilities or the Employer does not work within

the dates and other constraints stated in the Contract that cause delay or extra cost to the Contractor.

- (i) The advance payment is delayed.
- (j) The effect on the Contractor of any of the Employer's Risks.
- (k) The Nodal Officer or his nominee unreasonably delays issuing a Certificate of Completion.
- (l) Other Compensation Events listed in the Contract Data or mentioned in the contract.
- (m) Whenever any compensation event occurs, the contractor will notify the employer, within 14 days and provide a forecast cost of the compensation event.

3.44.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the intended Completion Date, the Contract Price shall be increased and/or the intended Completion Date shall be extended. The Nodal Officer or his nominee shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended. (Refer **Clause no.5.97 - N.A**)

3.44.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast has been provided by Contractor, it is to be assessed by the Nodal Officer or his nominee and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable the Nodal officer or his nominee shall adjust the Contract Price based on Nodal Officer or his nominee's own forecast. The Nodal Officer or his nominee will assume that the Contractor will react competently and promptly to the event. (**Clause no.5.97, not applicable**)

3.45 Tax (Refer **Clause no.5.97 of Sec-5) (N.A.- not applicable)**

3.45.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other taxes that the Contractor will have to pay for the performance of this Contract. The Employer will perform such duties in regard to the deduction of such taxes at sources as per applicable law. Any new Taxes, levies, duties imposed after signing the Contract shall be reimbursed by the employer on production of documentary evidence.

3.46 Currencies

3.46.1 All payments shall be made in Indian Rupees unless specifically mentioned.

3.47 Price Adjustment (Not Applicable)

3.47.1 Contract price shall be adjusted for increase or decrease in rates and prices of labour, materials, fuels and lubricants in accordance with the following principles and procedures and as per formula given. The price adjustment shall apply for the work done from the start date given in the Contract data up to end of the initial intended completion date or extensions granted by the Nodal Officer or his nominee and shall not apply to the work carried beyond the stipulated time for reason attributable to the contractor.

(i) Price adjustment for increase or decrease in the cost shall be paid in accordance with the following formula:

$$V = 0.85 \times Q \times R \times [(P - P_o) / P_o]$$

Where,

V = Variation in price on account of Labour/ Diesel/ Cement/ Steel/ All Commodities during the month under consideration.

P_o = Market rate of Diesel/ Cement/ Steel/ All Commodities on the date of opening of Technical bid. (Consumer Price Index for Labour).

P = Market rate of Diesel/ Cement/ Steel/ All Commodities during the month under consideration. (Consumer Price Index for Labour).

Q = Percentage of Labour/ Diesel/ Cement/ Steel/ All Commodities.

	Labour	Diesel	Cement (OPC)	Mild Steel-Long Product	All Commodities
Q (%)	35 %	5 %	4 %	11%	45 %
P	All India Consumer Price Index for Industrial Workers for the month under consideration as published in the RBI Bulletin /Indian Labour Journal. (Base 2016=100)	Retail Price of HSD received at Kandla by M/s. IOCL for the month under consideration	Wholesale Price Index for Cement for the month under consideration as published in RBI Bulletin/Indian Labour Journal	Wholesale Price Index for Steel for the month under consideration as published in RBI Bulletin/Indian Labour Journal	Wholesale Price Index for All Commodities for the month under consideration as published in RBI Bulletin/Indian Labour Journal (Base 2011-12 =

			(Base 2011-12 = 100)	(Base 2011-12 = 100)	100)
Po	All India Consumer Price Index for Industrial Workers as prevalent in the month in which bids are opened & as published in the RBI Bulletin /Indian Labour Journal. (Base 2016=100)	Retail Price of HSD received at Kandla by M/s. IOCL as on the date of opening of Bids.	Wholesale Price Index for Cement ruling in the month in which the Bids are opened and as published in RBI Bulletin/Indian Labour Journal (Base 2011-12 = 100)	Wholesale Price Index for Steel ruling in the month in which the Bids are opened and as published in RBI Bulletin/Indian Labour Journal (Base 2011-12 = 100)	Wholesale Price Index for All Commodities ruling in the month in which the Bids are opened and as published in RBI Bulletin/Indian Labour Journal (Base 2011-12 = 100)

R = Value of work done during the month under consideration.

Note: i) Escalation to be computed for relevant items. Percentage that shall govern the escalation under Q shall be predetermined and indicated in tender document for each component i.e. Labour, Fuel, Cement, Steel, All commodities etc.

3.47.2 NIL

3.47.3 To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amount to cover the contingency of such other rise or fall in costs.

SUBSEQUENT LEGISLATION

If, after the date 28(Twenty eight) prior to the date for submission of tenders for the contract there occur changes to any National or Statute Stature, Ordinance or Decree or other law or any regulation or bye law of any local or other duly constituted authority or introduction of any such statute, ordinance, decree, law, regulation or bye law which causes additional or reduced cost to the contractor in execution of the contract, such additional or reduced cost shall, after due consultation with the employer and the contractor be determined by the nodal officer or his nominee and shall be added to or deducted from the contract price and the nodal officer or his nominee shall notify the contractor accordingly with a copy to the employer.

3.48 Retention money

3.48.1 The employer shall retain from each payment due to the contractor the proportion stated in the contract data until completion of the whole of the works.

3.48.2 Security Deposit consists of only 10% contract price and as per tender condition party has to pay 5% performance guarantee on issuance of Letter of Acceptance and hence 5% recovery of retention money shall be deducted at 5% from each running bill, subject to a max. of 5 percent of the contract price. Retention money shall be refunded within 14 days from the date of payment of final bill.

3.49 Liquidated damages

(A) In case of delay in completion of the contract, liquidated damages (L.D) may be levied at the rate of $\frac{1}{2}$ % of the contract value per week of delay or part thereof, subject to a maximum of 10 percent of the contract price.

(i) The **Employer** if satisfied, that the works can be completed by the contractor within a reasonable time after the specified time for completion, may allow further extension of time at its discretion with or without the levy of L.D. In the event of extension of time at its discretion with L.D, the owner will be entitled without prejudice to any other right or remedy available in that behalf per cent ($\frac{1}{2}$ %) of the contract value of the works for each week or part of the week subject to the ceiling defined in sub-clause 3.49.A.

(ii) The **Employer**, if not satisfied that the works can be completed by the contractor, and in the event of failure on the part of the contractor to complete work with in further extension of time allowed as aforesaid, shall be entitled, without prejudice to any other right, or remedy available in that behalf, to rescind the contract.

(iii) The **Employer**, if not satisfied with the progress of the contract and in the event of failure of the contractor to recoup the delays in the mutually agreed time frame, shall be entitled to terminate the contract. In the event of such termination of the contract as described in clauses 3.49A (ii) or 3.49A (iii) or both the owner shall be entitled to recover L.D. up to ten per cent (10%) of the contract value and forfeit the security deposit made by the contractor besides getting the work completed by other means at the risk and cost of the contractor.

- (iv) The ceiling of LD shall be 10% of the cost of work.
- (v) In case part / portions of the work can be commissioned and port operates the portion for commercial purpose, the rate of LD will be restricted to the uncompleted value of work, the maximum LD being on the entire contract value.

Note: Contract price for LD shall be inclusive of tender price plus taxes and duties.

3.50 Incentives or Bonus (Refer [Clause no.5.97 of Sec-5](#))(Not Applicable)

For early completion of the contract before the stipulated date of completion of work an incentive amount at the rate of 0.25 % contract price may be paid to the Contractor for every fortnight of early completion, subject to a maximum of cap of 5% of the contract price.

The Port, if satisfied, that the works can be completed by the contractor within a reasonable time after the specified time for completion, may allow extension of time at its discretion, by virtue of which the contractor make himself eligible for incentive, the extension shall be considered only till the actual date of completion and no incentive shall be payable. For calculation of incentive payment, contract price shall be exclusive of tender price plus taxes and duties.

3.51 Advance payment Mobilization Advance (Refer [Clause no.5.97 of Sec-5](#))(Not Applicable)

- (a) The Mobilization advance shall not be sanctioned in less than two installments. The second installment is sanctioned only after proper utilization of advance disbursed in first phase and a certification to this effect by E-I-C.
- (b) The advance shall be limited to 10% of tendered amount.
- (c) Interest free advance shall not be granted. Rate of Interest shall be SBI Lending Rate+2%.
- (d) The mobilization advance shall be released only after obtaining a bank Guarantee bond from a nationalized bank for 110% (as per latest CVC directions) of amount of advance to be released and valid for the contract period. This shall be kept renewed time to time to cover the balance amount and likely period to complete recovery together with interest.
- (e) The original bank guarantee should be received by DPA directly from the issuing authority by Registered Post [AD]. However, in exceptional cases, where the guarantee is handed over to the customer for any genuine reasons, the branch should immediately

send by Registered Post [AD] an unstamped by the E-I-C.

- (f) The interest on the advance shall be calculated from the date of payment to the date of recovery, both days inclusive.
- (g) It shall be ensured that at any point of time, Bank Guarantee is available for the amount of outstanding advance.
- (h) The recovery should be commenced after 10% of work is completed and the entire amount together with interest shall be recovered by the time 80% of the work is completed. However, the interest recovery shall be effected immediately from the 1st release of payments towards execution of the work.
- (i) If the contractor fails to achieve the targeted progress at the end of 50% of time period the mobilization advance may be recovered by encashing the bank guarantee, provided no hindrance/delay was caused by the department.

3.52 Performance Securities (Refer Clause '1.33' of Sec-1)

Security Deposit shall consist of two parts; a) Performance Guarantee to be submitted at award of work, and b) Retention money to be recovered from Running Bills.

Security Deposit shall be 10% of Contract price of which 5% of contract price should be submitted as Bank Guarantee/ fixed deposit/ online transfer in DPA account within 21 days of receipt of Letter of Acceptance and balance 5% recovered as Retention Money from Running Bills. Recovery of 5% of Retention Money to commence from the first bill onwards @ 5% of bill value from each bill. Retention Money be refunded within 14 days from the date of payment of final bill. Balance SD to be refunded immediately not later than 14 days from completion of defect liability period. (Subject to fulfilment of clause no 5.18).

Failure of the Successful Bidder to comply with the requirements as mentioned above shall constitute sufficient grounds for cancellation of the award of work and forfeiture of bid security and/or the bidder can be disqualified from bidding for any contract with DPA for a period of three years from the date of notification."

"Bank Guarantee of Nationalized/ scheduled bank (except Co-operative) Banks having its branch at Gandhidham/Jamnagar/Khambhalia".

3.53 NIL

3.54 Cost of Repairs

3.54.1 Loss or damage to the works or materials to be incorporated in the works between the

start date and the end of the defects correction period shall be remedied by the Contractor at the Contractors cost if the loss or damage arises from the Contractors acts or omissions.

E. FINISHING THE CONTRACT

3.55 Completion

3.55.1 After completion of the work, the contractor will serve a written notice to the Nodal Officer or his Nominee/Employer to this effect. The Nodal officer or his Nominee/Employer upon receipt of this notice shall conduct a complete joint survey of the work within 7 days and prepare a defects list jointly. The defects pointed out by the Nodal Officer or his nominee/Employer would be rectified by the contractor within 14 days and thereafter acceptance report be signed jointly by the contractor and the employer. This joint acceptance report shall be treated as "completion Certificate".

3.56 Taking over

3.56.1 The employer shall take over the site and the works within seven days of the Nodal Officer or his nominee issuing a certificate of completion.

3.57 Final Account

3.57.1 The Contractor shall supply to the Nodal Officer or his nominee a detailed account of the total amount that the Contractor considers payable under the contract before the end of the Defects Liability period. The Nodal Officer or his nominee shall issue a defects liability certificate and certify any final payment that is due to the contractor within 60 days of receiving the contractor's account if it is correct and complete. If it is not, the Nodal Officer or his nominee shall issue within 15 days a schedule that states the scope of the corrections or additions that are necessary for the correction and certify payment of 50% of the undisputed amount to the contractor.

If the final account is still unsatisfactory after it has been resubmitted the Nodal Officer or his nominee shall decide on the amount payable to the contractor and issue a payment certificate, within 60 days of receiving the contractor's revised account.

3.58 Operating and Maintenance Manuals

3.58.1 If "as built" Drawings and /or operating and maintenance manuals are required, the contractor shall supply them by the dates stated in the Contract Data.

3.58.2 If the contractor does not supply the drawings and /or manuals by the dates stated in the contract data, or they do not receive the Nodal Officer or his nominee's approval, the Nodal Officer or his nominee shall withhold the amount stated in the contract data from payments due to the contractor.

3.59 Termination

3.59.1 The employer or the Contractor may terminate the contract if the other party causes a fundamental breach of the contract.

3.59.2 Fundamental breaches of contract include, but shall not be limited to the following:

- (a) The contractor stops work for 28 days when no stoppage of work is shown on the current program and the stoppage has not been authorized by the Nodal Officer or his nominee.
- (b) The Nodal Officer or his nominee instructs the contractor to delay the progress of the work and the instruction is not withdrawn within 28 days.
- (c) The employer or the contractor becomes bankrupt or goes into liquidation other than for a reconstruction restructure or amalgamation.
- (d) A payment certified by the Nodal Officer or his nominee is not paid by the employer to the contractor within 50 days of the date of the Nodal Officer or his nominee's certificate.
- (e) The Nodal Officer or his nominee gives Notice the failure to correct a particular defect is a fundamental breach of contract and the contractor fails to correct it within a reasonable period of time determined by the Nodal Officer or his nominee.
- (f) The contractor does not maintain a security which is required.
- (g) The contractor has delayed the completion of works by the number days for which the maximum amount of liquidated damages can be paid as defined in the contract data and
- (h) If the contractor, in the judgment of the employer has engaged in corrupt or fraudulent practices in competing for or in the executing the contract.
- (i) If the contractor has contravened clause 1.37 and clause 3.9 of condition of contract. For the purpose of this paragraph: "corrupt practice" means the offering, giving receiving or soliciting of anything of value to influence the action of public officials in the procurement process or in contract execution. "Fraudulent practice" means a

misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the employer, and includes collusive practice. Bidders (prior to or after bid submission) designed to establish bid prices at artificial non- competitive levels and to deprive the employer of the benefits of free and open competition”.

3.59.3 When either party to the contract gives notice of a breach of contract to the Nodal Officer or his nominee for a cause other than those listed under sub Clause. 3.59.2 Above, the Nodal Officer or his nominee shall decide whether the breach is fundamental or not.

3.59.4 Notwithstanding the above, the employer may terminate the contract for convenience subject to payment of compensation to the contractor including loss of profit on uncompleted works. Loss of profit shall be calculated on the same basis as adopted for calculation of extra/additional items.

3.59.5 If the contract is terminated the Contractor shall stop work immediately, make the site safe and secure and leave the site as soon as reasonably possible.

3.60 Payment upon Termination

3.60.1 If the contract is terminated because of a fundamental breach of contract by the contractor, the Nodal Officer or his nominee shall issue a certificate for the value of the work done less advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the contract data. Additional liquidated damage shall not apply if the total amount due to the employers exceeds any payment due to the contractor, the difference shall be payable to the employer.

3.60.2 If the contract is terminated at the employer’s convenience or because of a fundamental breach of contract by the employer, the Nodal Officer or his nominee shall issue a certificate for the value of the work done, the reasonable employed solely on the works, and the contractor’s costs of protecting and securing the works and loss of profit on uncompleted works less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

3.61 Property

3.61.1 All materials on the Site, Plant, Equipment, Temporary Works and Works for which

payment has been made to the contractor by the Employer, are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor's default.

3.62 Release from Performance

3.62.1 If the Contract is frustrated by the outbreak of war or by other event entirely outside the control of either the Employer or the Contractor, the Nodal Officer or his nominee shall certify that Contract has been frustrated. The Contractor shall leave the Site and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

3.63 NIL

F. SPECIAL CONDITIONS OF CONTRACT

1. LABOUR

The contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

The Contractor shall, if required by the Nodal Officer or his nominee, deliver to the Nodal Officer or his nominee a return in detail, in such form and at such intervals as the Nodal Officer or his nominee may prescribe, showing the staff and numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Nodal Officer or his nominee may require.

2. COMPLIANCE WITH LABOUR REGULATIONS:

During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing labour enactment and rules made there under, regulations, Notifications and by laws of the State or Central Government or local authority and any other labour law (including rules) regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below.

The Contractor shall keep the Employer indemnified in case any action is taken against the employer by competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including

amendments. If the Employer is caused to pay or reimburse such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules /regulations including amendments, if any, on the part of the Contractor the Nodal Officer or his nominee/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Nodal Officer or his nominee shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

3.64 INTEGRITY PACT

INTEGRITY PACT IN DEENDAYAL PORT AUTHORITY

The Central Vigilance Commission (CVC) has been promoting integrity, transparency, equity and competitiveness in transactions by various organizations of the Government of India. Public procurement is an area of concern for the CVC, and many steps have been taken to put proper systems in place. In this context, Integrity Pact (IP), a tool conceptualized and promoted by Transparency International, an international NGO, aimed at preventing corruption in public contracting, has been found useful. It has been decided by Ministry of Shipping that all organizations under the Ministry will implement IP. IP should cover every tender / procurement above a specified threshold value. The threshold value of contracts / procurements / transactions incorporating IP would be such that it covers 90% by value of all contracts / procurements / transactions of the organization in the last 3 years. Presently the threshold is fixed as Rs. 50 Lakhs. IP essentially envisages an agreement between prospective vendors / bidders, and Deendayal Port Authority, committing the persons / officials of both sides not to resort to any corrupt practice in any aspect of the contract at any stage. Only those vendors / bidders, who commit themselves to IP with DPA, would be considered competent to participate in the bid process. Any violation would entail disqualification of the bidders and exclusion from future business dealings. IP, in respect of a particular contract should cover all phases of the contract, from the stage of Notice inviting Tender (NIT) / pre-bid stage, till the conclusion of the contract, i.e. final payment or the warranty / guarantee period. IP would be implemented through Independent External Monitor (IEM), who are eminent persons appointed by the organization, with approval of CVC. The term of appointment for an IEM would be 3 years. Name of the IEM will be mentioned in NIT. The IEM would review independently and objectively assess, as to whether and to what extent parties have complied with their obligations under the IP. IEM would have access to all contract documents, whenever required. The bidders may

raise disputes / complaints if any, with the IEM. The IEM would examine complaints received by them and give their recommendations / views to the Chairman of Port Authority. Recommendations of IEM would be in the nature of advice and would not be legally binding.

Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization. Shri S.K.Sarkar, IAS (Retd.) and Shri Saurabh Chandra, IAS (Retd.) has been appointed IEM by DPA from 2013 to 2016. Draft condition to be incorporated in the Draft Tender papers 1) Then bidder has to execute Integrity pact agreement with Deendayal Port Authority (As per Appendix) Shri S.K.Sarkar, IAS (Retd.) and Shri Saurabh Chandra, IAS (Retd.) has been nominated as Independent External Monitor for Integrity Pact whose address is as under;

Dr S.K.Sarkar, IAS (Retd.)
B-104, Nayantara Aptt.,
Plot No.08-B, Sec-07, Dwarka,
New Delhi – 110 075
Mobile No. 98111 49324
Email:- sksarkar1979@gmail.com

Shri Saurabh Chandra, IAS (Retd.)
A-9, Sector-30,
Noida (UP) 201301
Mobile No. 9871322133
Email: saurabh7678@yahoo.co.in

The potential bidders shall download and print the IP Agreement signed by the Employer and their witness and affix his/her signature on the IP Agreement in the presence of a witness from his/her side, who shall also affix his/her signature thereof. Having completed the signing procedure, the potential Bidder shall upload the duly filled and signed IP Agreement on n-procure portal.

The procedure mentioned above regarding signing of Integrity Pact Agreement by both the parties (Employer and Potential bidders) shall be completed online. However, in case of any technical glitch due to which if any potential bidder is unable to upload the IP Agreement, then he/ she shall submit the Hard Copy of the dully filled, signed IP Agreement, to the Department concerned of DPA within a period of seven days and prior to opening of the Technical Bid, failing which Bid of potential Bidder shall be treated as disqualified

3.65 SALIENT FEATURES OF SOME MAJOR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.

- (a) Workmen Compensation Act 1923: - The act provides for compensation in case of injury by accident arising out of and during the course of employment.
- (b) Payment of Gratuity Act 1972: - Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5

years' service or more on death at the rate of 15 days' wages for every completed year of service. Act is applicable to all establishments employing 10 or more employees.

- (c) Employees P.F and Miscellaneous Provision Act 1952: - The Act Provides for monthly contribution by the employer plus workers @ 12%/8.33%. the benefits payable under the Act are:

Pension to family pension retirement or death, as the case may be. (ii) Deposit linked insurance on the death in harness of the worker, (iii) payment of P.F accumulation on retirement/death etc.

- (d) Maternity Benefit Act 1951: - The Act provides for leave and some other benefits to workmen/ employees in case of confinement or miscarriage etc.

- (e) Contract Labour (Regulation & Abolition) Act 1970: - The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.

- (f) Minimum Wages Act 1948: - The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment Construction of Buildings, Roads, Runways are scheduled employment.

- (g) Payment of Wages Act 1936: - It lays down as to by what date the wages are to be paid when it will be paid and what deductions can be made from the wages of the workers.

- (h) Equal Remuneration Act 1979: - The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.

- (i) Payment of Bonus Act 1965: - The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing

Rs.3500/- per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above up to 3500/- per month shall be worked out by taking wages as Rs.2500/- per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.

- (j) Industrial Disputes Act 1947: - The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lockout becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- (k) Industrial Employment's (Standing Orders) Act 1946: - It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get same certified by the designated Authority.
- (l) Trade Unions Act 1926: - The Act lays down the procedure for registration of trade union of workmen and employers. The Trade Union registered under the Act have been certain immunities from civil and criminally abilities.
- (m) Child Labour (Prohibition & Regulation) Act 1986: - The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of Children in all other occupations and processes. Employment of Child Labor is prohibited in Building and Construction Industry.
- (n) Inter-State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act 1979: -
The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter- State migrant workmen, in establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upon the establishment and back, etc.
- (o) The Building and Other Construction workers (Regulation of Employment and

Conditions of Service Act 1996 and the Cess Act of 1996: - All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or Construction work and other welfare measures, such as Canteens, First-Aid facilities. Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

(p) Factories Act 1948: - The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrence to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 more persons without the aid of power engaged in manufacturing process.

- 3.66 Taxes:** The prices shall be quoted inclusive of all Taxes [excluding GST], duties, salary and wages of staff, repair and maintenance cost, fuel cost, insurance and other incidentals etc. and should remain firm till completion of work. The employer will perform such duties in regard to the deduction of such taxes at sources as per applicable law.
- 3.67 GST:** Applicable GST on the taxable value of supply of Goods or Service or both covered in this tender/contract will be paid by Port as reimbursement on production of documentary evidences/reflection of the same under the GSTIN of DPT in the GST web portal. Applicable statutory recoveries including TDS under Income Tax, TDS under GST will be deducted/recovered while accounting for or making payment to the vendor as per the applicable laws.
- 3.68 Deduction of Income-Tax:** Income-Tax deductions and surcharge as applicable thereon shall be made good while making payments due to the contractor for carrying out the work and only net amount shall be paid as directed by the Central Board of Direct Taxes, Ministry of Finance, Government of India.
- 3.69 TDS under GST:** TDS under GST Act is required to be deducted @2% [1% CGST and 1% SGST or 2% IGST] from payment credited given to contractor / professional and others for work order on contract on exceeding Rs.2,50,000/-. Contractor / Service provider / Supplier etc. has to ensure timely and proper filling of GSTR 1, so that Deendayal Port Authority can avail input tax credit in timely manner. In case DPT not allowed input tax credit due to failure on part of the contractor / service provider / supplier etc., it will be a financial loss to the DPT and therefore same shall be recovered from the payment / deposit of the contractor / service provider / supplier.

3.70 Time Schedule: The work shall be completed within 12 months (including monsoon period) which shall be effective from the date of commencement as mentioned in the Work Order.

3.71 Only vehicles permitted by the Board will be allowed inside the Port premises. Admission to the Port premises of men and vehicles is regulated by rules and regulations of the Port Authority in force from time to time and any passes, tokens, permits or licenses for his workmen vehicles or plant will have to be obtained by the Contractor from the Security Officer/C.I.S.F. of the Port Authority directly by making necessary deposits or payments for the same if any.

3.72 Force Major - This will be restricted to natural calamities and acts of God only. In the event that the Contractor is delayed in performing its obligations in the contract, and such delay is caused by force majeure including war, civil resurrection, strikes (other than the strike solely by the Contractor's men), fire, flood, epidemics, earthquakes, extremely adverse climatic conditions, such delay may be excused and the period of such delay may be added to the time of performance of the obligations without any addition to the contract price.

If a force majeure situation arises, the Contractor shall promptly notify the Board in writing of such condition and the cause thereof, but not later than 7 days from its occurrence. Unless otherwise directed by the Board in writing, the Contractor shall continue to perform its obligations under the contract as far as reasonably practicable. The Contractor shall demonstrate to the Board's satisfaction that it has used its best endeavour to avoid or overcome such causes of delay and the parties will mutually agree upon remedies to mitigate or overcome such causes of delay without having any right to any claim on account of such force majeure.

In any other situation, which is beyond the reasonable control of the Contractor in the opinion of the Engineer-In-charge, and where the Contractor has promptly notified the Board in writing about such situation, it may be considered as "Force Majeure" situation.

3.73 The tenderers are expected to have full knowledge of the site of work and local working condition in the Port before submitting the tenders. The Port is basically an operational area dealing mainly with handling liquid products at Vadinar. The Nodal Officer or his nominee will give to the Contractor possession of so much of the site as in the opinion of Nodal Officer or his nominee may be required to enable the Contractor to proceed with the construction without interruption of the work in accordance with the requirement. However, all efforts will be made to handover

entire clear site at the starting of work.

No claim / disputes what-so-ever for handing over the site of work late, for starting the work shall be entertained. If the contractor suffers any delay the Nodal Officer or his nominee may grant at his discretion an extension of time for completion of work. However, no claim / disputes etc. arising out of extension of time so granted shall be entertained. The contractor while filling up their rates in the tender should consider the above aspects unfailingly.

- 3.74** The contractor shall take necessary precautions and prevent the falling of sparks in the seawater while carrying out the work of cutting / welding. In case of any leakages / escape of gas from vessel / flexible line etc. all the work shall be stopped immediately and co-operate the Fire Brigade personnel. It is further clarified that the suitable extension of time shall be granted to Contractor for completion of work on account of such stoppage without any compensation and idle charges. No claims / disputes shall be entertained on that account.
- 3.75** All Statutory clearance required to carry out the work from the state government/ Central government such as environment clearance, forest clearance etc. Shall be arranging by Contractor. Statutory payment shall be remitted by the department after submission of receipt. The Contractor shall consider the same and quote the accordingly.

Contractor

Executive Engineer (Civil)
Deendayal Port Authority

SECTION 4

CONTRACT DATA

CONTRACT DATA

Items marked "N/A does not apply in this contract.

The following documents are also part of the contract clause reference

The schedule of other contractors (3.8)

The schedule of key personnel (3.9)

The above insertions should correspond to the information provided in the invitation of bids.

The employer is
Chairman,
Deendayal Port Authority, Kandla

Address: A.O. Building, P.O. Box No. 50, Gandhidham - 370201, Gujarat State, India Employer's

authorized representative is Chief Operations Manager/Chief Engineer Deendayal Port Authority.

The nodal officer or his nominee is
EXECUTIVE ENGINEER (Civil),
DEENDAYAL PORT AUTHORITY,
A.O BUILDING, VADINAR -361010,
DEV BHOO MI DWARKA DISTRICT,
GUJARAT STATE, INDIA,

Nodal officer's authorized representative is AXEN / AE

The conciliator appointed jointly by the employer and contractor is: **(Not Applicable)**

Name:- **Not Applicable**

Address:- **Not Applicable**

The name and identification number of the contract is **"Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar"**

The works consist of **"Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar"**

The start date shall be _____

The intended completion date for the whole of the work is **12 (Twelve) Months.**

The following documents also form part of the contract

The contractor shall submit a program for the works immediately after delivery of the letter of acceptance.

The site possession dates shall be given after the award of work. The defect liability period is 12 Months (3.32.3). The minimum insurance cover for physical property, injury and death is **Rs.20.00 lakhs** per occurrence with the number of occurrences limited to four. After each occurrence, contractor will pay additional premium necessary to make insurance valid for four occurrences always.

Appointing authority for the Arbitrator is Chairman, DPA.

The following events shall also be Compensation Events. (3.44)

1. The Employer terminates the Contract from his convenience.
- 2._____.
- 3._____.
- 4._____.

The period between programme updates shall be 15 days. (3.27)

The language of the contract documents is English (3.3)

The law, which applies to the contract, is law of Union of India (3.3)

The currency of the contract is Indian rupees (3.46)

Fees and types of reimbursable expenses to be paid to the
Dispute Review Expert (3.25)

Appointing authority for the Arbitrator is Chairman, DPA. Escalation is

Payable for contracts as per clause no. 3.47 of section – 3, subjected to

Special condition provision.(Not Applicable)

SECTION 5

SPECIFICATIONS AND SPECIAL CONDITIONS

5.00 Special Condition

The conditions of contract of Section 1 to 4 (hereinafter called as the General conditions) modified or added to by the following part i.e. Section-5, conditions of particular application which shall be read and construed with the General Conditions as if they were incorporated therewith.

In so far as any of the conditions of particular application may conflict or be inconsistent with any of the General Conditions, particular Section-5 shall prevail.

5.01 The following Existing clauses are modified as under;

- A. **Section-I; Clause No. 1.4.2 d;** Major items of construction equipment available with the bidder
- B. **Section 2 Table 5** The list of Equipment available with bidder
- C. **Section 2 Table 6** Qualification and experience of key personnel available with the bidder. Attach biographical data.

5.02 Bidders are advised to consider the below points while submitting the offer:

- i) If multiple bidders submit work experience showing the same/particular work, then such experience will be considered of Main Contractor.
- ii) If tendered/bidder completed the works in private organization as stipulated in Minimum Qualification Criteria (work experience) shall be considered only if CA certifying value of work done with TDS certificates (where applicable) / Bank statement will be required with respect to referred work is issued by Competent Authority needs to be enclosed by the tenderer along with the offer.
- iii) The completed works only is considered for qualification. Partly completed works or works are in progress shall not be considered for qualification.
- iv) If the work is completed successfully and contract is under maintenance period, such works are considered as a completed works for evaluation purposes. In such cases, completion cost excluding AMC works shall be considered for evaluation purpose
- v) In case of any contract having material and labour components are controlled at different heads, in such cases the value of work indicated in work order and respective completion certificates only considered for experience.

- vi) If the tenderer have successfully completed the work (date of completion of work i.e. physically/actually completion irrespective of maintenance period) during last 7 years ending last day of month previous to the one in which applications are invited irrespective of date of commencement / start of work. Such experience of work is also considered for evaluation in work experience.
- vii) If the tenderer has executed "Similar works" in any Contract/Project/BOT Project/Turnkey Project etc. In those particular Projects/Contracts, if the cost of marine structure works (separately or combined) meets the requirement of MQC, such experience shall also be considered for evaluation.
- viii) If the similar work is executed as sub-contractor, the contract experience shall be considered for pre-qualification only, if same is carried out in Govt. / Semi Govt. / Autonomous Body working under GoI / Public Sector Undertakings subject to submission of sub-contract permission issued by the respective authority prior to execution of the work. Further, if sub-contract is not authenticated, the respective party shall be de-barred for participation in tenders of DPA for min. 2 years. The decision taken by DPA shall be final. It is mandatory to upload the sub-contract permission letter obtained from the respective authority. Also, the completion Certificate / Form 3A authenticated by concern respective authority shall be uploaded along-with TDS certificate deducted from that particular work issued by the competent authority shall be submitted along-with bid submission.

5.03 Site Information

Off- shore oil terminal Vadinar a satellite port of Deendayal Port Authority is located at Vadinar about 60 KM away from nearest town Jamnagar, 'L' shaped berthing jetty for shelter of Tugs, having 90 m & 60 m long arms with 173 m long approach trestle has been constructed by DPA in year 1978, Berthing facilities are available on the either face of the two arms. Width of the jetty is 12 meter and approach is 7 meter wide, diameter of piles for approach trestle is 800 mm and diameter of piles for berthing jetty is 1000mm. The top level of the Facia wall and Berthing Jetty is +8.63 M and Bottom Level of the Facia wall is +1.00 M.

5.04 Tidal Condition at Vadinar Port

Mean high water spring (MHWS) = + 5.549 M

Mean Low water spring (MLWS) = + 0.769 M

Mean high water Neap (MHWN) = + 4.475 M

Mean Low water Neap (MLWN) = + 1.843 M

Local Mean Sea Level = + 3.159 M

The actual water level at the site may be slightly different from the figures given above. The contractor shall not be entitled to any extra payment, should the levels indicated above proves, during the execution of the works, to be either too high or too low or for

delay or damage due to especially high tides or floods

5.05 Scope of Work

Due to harsh weather condition, external and internal defects, which has caused structure to deteriorate at accelerated rate and therefore Port intends to repair/strengthen as may be required to put these structure in good working conditions. The work is to carry out at Facia Wall and R.C.C. Ladder of Berthing Jetty under Tidal Condition and work to be performed under scope of this specification shall broadly include;

- (a) Dismantling of existing Rubber Fenders and Steel Ladder.
- (b) Breaking of Concrete and Hacking of existing surface of concrete.
- (c) Providing and applying epoxy bond coat.
- (d) Providing and fixing reinforcement.
- (e) Providing and laying polymer Modified Micro Concrete & M40 grade Concrete.
- (f) Providing and applying Protective Coating.
- (g) Supplying and Fixing Rubber Molded Mooring Ladder.
- (h) Supplying and Fixing of Rubber Fenders & Bollards.

The above work will be carried-out under the contract scope. Further, if required, the items mentioned in the BOQ shall also be executed in the Port area at any location as per the directions of the EIC during the entire contract period.

The Contractor has to carry out the site inspection and get acquainted with the work needs to be carried out before quoting. Available data in enclosed however, Contractor has to study in detail independently to assess the quantum and scope of work etc. if required.

Some indication of nature and extent of the works have been given on the drawings and those are preliminary only. Drawings showing complete nature and extent of the works will be furnished to the Contractor progressively during the execution of the work. Quantities indicated in the Schedule of Items are tentative and are subject to change. All items of work shall be executed in accordance with the relevant specification annexed thereto and the provisions of the contract.

(a) Board: Board of Deendayal Port of Kandla. A body corporate under the Major Port Authorities Act, 2021 as amended from time to time.

(b) Chairman: means the Chairman of the Board of Deendayal Port of Kandla.

5.06 Drawings and Its Approval.

- 5.06.1. The drawings enclosed with the tender documents to provide some idea of the job are preliminary for tender purpose only and are by no means complete and final, and do not show the full range of the work under the scope of the contract. Work shall be carried out only on the basis of drawings marked "Released for Construction" with addition,

alteration and modifications made to aforesaid drawings from time to time and also according to other drawings that would be supplied to the Contractor from time to time during execution of work and no dispute on this account shall be entertained

5.06.2. In all cases where drawings are specified or required to be supplied by the Contractor for the approval of the Engineer for any work included in his contract any alteration to such drawings to satisfy the Engineer's requirement shall be made by the Contractor at no extra cost.

5.06.3. In all cases where drawings are specified or required to be supplied by the Contractor for the approval of the Engineer for any work included in his contract any alteration to such drawings to satisfy the Engineer's requirement shall be made by the Contractor at no extra cost.

5.06.4. Drawings of Temporary Works

At least one month before the date when the Contractor intends to start erecting, any part of the Temporary works and staging required for carrying out the work, he shall furnish to the Engineer complete drawings of that part of the temporary works and staging for reference. The Contractor shall at the same time, if so required by the Nodal Officer, furnish calculation in respect of such temporary works. The Contractor shall also furnish to the Nodal Officer drawings showing the method proposed for the erection of the various parts of the works.

5.06.5. Though the drawings to be supplied will be exhaustive the decision of the Nodal Officer or his nominee regarding any change in the drawings shall be final and binding to contractor and no dispute / claim regarding extra payment shall be allowed on account of such changes.

5.06.6. The Contractor shall at his own costs and expenses supply five complete sets of "As Made" drawings on polyester tracing film, three prints and soft copy (USB flash drive) showing details of all the works executed. The drawings and prints shall be delivered to the Employer within one month of completion of various sections of the work or at such other times as directed by the Employer. The drawings shall be fully dimensioned with the Employer's standard title block or as approved by the Employer.

5.07 Workmanship shall be the best possible quality and all work shall be carried out by skilled workmen except for those which normally require unskilled persons. If the laws of the local Government/Municipal or other authority require the employment of licensed or registered workmen for various trades, the contractor shall arrange to have the work done by such licensed/registered personnel.

5.08 All materials to be used in the works shall be subjected to inspection and test. Samples of all materials, proposed to be used, and in the permanent works shall be submitted to the Nodal officer or his nominee for approval before those are brought to site.

Samples provided to the Nodal officer or his nominee for their retention is to be in labeled

boxes suitable for storage. Materials or workmanship not corresponding in character & quality with approved samples will be rejected by Nodal officer or his nominee.

Samples required for approval and testing must be supplied allowing sufficient time for testing and approval, due allowance being made for the fact that if the first samples are rejected further samples shall be required. Delay in the execution of work due to late submission of samples will not be acceptable as -a reason for delay in the completion of the works. Materials shall be tested before dispatching to the site, where possible. Materials shall also be tested on the site and those may be rejected if found not suitable or not in accordance with the specifications notwithstanding the results of tests at the contractor's work or elsewhere or of test certificates or of any approval given earlier.

5.09 All materials required to be used in the work shall be got tested from Port Laboratory or government approved NABL lab under supervision of Nodal Officer, Nominee or Third party quality agency and the charges there of shall be borne by the Contractor. The laboratory shall be got approved from the Engineer-in- charge before sending the material's for testing

5.10 The Contractor shall develop a well-equipped laboratory at the site, so that necessary testing of concrete materials shall be done at site of work in presence of DPA Officials/Third-party agency or available services of DPA Civil laboratory can be availed at prescribed rates if desired.

5.11 Before commencement of work the Nodal officer or his nominee and the Contractor shall jointly survey and record all ground levels on the site if required. The Contractor shall supply all necessary equipment and attendance for carrying out such surveys. The contractor shall prepare record drawings showing the agreed levels which shall be signed by the Nodal Officer or his nominee and the Contractor.

5.12 As the work progresses, inspection of cement, aggregate, reinforcing steel and testing of the concrete strength will be done by the Contractor in the presence of the Nodal officer or his nominee. The Contractor's concrete plant and materials stores shall be made accessible to the Nodal officer or his nominee at all times for inspection and for taking samples. The Contractor shall facilitate in all possible ways the inspection and testing of samples by the Nodal officer or his nominee, Labour shall be provided by the Contractor for carrying out the testing's.

5.13 SUPPLY OF WATER

{i} The contractor shall have to make his own arrangements for the water required for execution of work and for labours etc.

{ii} Water used for mixing and curing shall be clean and free from injurious amounts of oil, acids, alkalis, salts, sugar, organic materials or other substances that may be deleterious to concrete or steel.

{iii} Unfiltered potable water is generally considered suitable for mixing and curing. Mixing and curing with sea water shall not be permitted in any case.

{iv}Periodically samples of water shall be tested as per IS-3025 and as a guide, the following concentrations represent the maximum permissible values:

- (a) To neutralize 200 ml sample of water using Phenolphthalein as an indicator, it should not require more than 2 ml of 0.1 normal NaOH.
- (b) To neutralize 200 ml sample of water using Methyl Orange as an indicator, it should not require more than 10ml of 0.1 normal HCL.

5.14 The tenderers are expected to have full knowledge of the site of work and local working conditions in the Port before submitting the tenders. The Engineer-in-Charge will after issue of work order will give to the contractor possession of so much of the site as in the opinion of Engineer-in-Charge may be required to enable the contractor to commence and proceed with the work and will from time to time as the works proceed give to the contractor possession of such portion of the site as may in the opinion of Engineer-in-Charge be required to enable the contractor to proceed to works without interruption of the work in accordance with the requirement. However, all efforts will be made to handover entire clear site at the time of starting of work. No claims/disputes about idling of machineries, tools, plants, equipment, boat, barge, manpower etc. what-so-ever for handing over the site of work late for starting the work shall be entertained.

- (a) The service of fire watch for carrying out any hot works/cutting work etc., as required by the Contractor at his own cost. However, all the necessary arrangements like obtaining a fire watch permits from the concerned authority transportation of man and materials, if any for fire prevention etc. shall have to be done by the contractor at his own cost. No claim what so ever on account of delay in arrangements or arrival of fire watch services shall be entertained.
- (b) The work has to carried out in tidal condition. The contractor shall acquaint himself with local tidal variations and quote his rates accordingly.

5.15 The contractor shall arrange to supply samples of coarse aggregate and fine aggregate etc. to the Port Laboratory for mix design for concreting works. Mixing of cement concrete Works shall be on weigh batching basis as per IS. Requirement. The charges shall be borne by the contractor.

5.16 Force Major - This will be restricted to natural calamities and acts of God only.

5.17 The flooring works are to be finished with neeru (cement slurry) without any extra cost.

5.18 All the royalties of the materials, quarry charges, octroi, charges, lead charges, any other taxes etc. are payable by the contractor directly to the authorities concerned and the rates tendered shall be deemed to be inclusive of all such charges. If required by EIC, contractor

shall submit royalty slip of each and every quantity used for work during the bill submission. Before claiming security deposit/Final bill, contractor shall produce **“No dues certificate”** from the Geologist, Geology and mining department of Jamnagar/Khambhalia,

5.19 POST TENDER MODIFICATION

The Tenderers are not expected to make any post tender modification. Hence, the tenderers should not make any correspondence regarding the tender after submission of the same on due date and time. No cognizance of any correspondence shall be taken and if Tenderers persists with the same necessary action will be initiated against him. All the tenders received on or before the due date and time shall be opened, if otherwise found in order.

5.20 Electricity Supply

The contractor shall make his own arrangements for supply any Electricity. However, if any spare electricity is available will be supplied at the notified rate to the contractor. The required cable shall be laid by the contractor with calibrated electricity meter at his own cost. If DPA could not supply electricity to the contractor, no claim from contractor shall be entertained. The contractor shall not claim any damages for stoppages or shortages in current supply for any reasons whatsoever. The contractor has also to install his own generator etc. at his own cost and risk to meet with his full requirement of electric power.

5.21 The contractor shall have to make good all damages done by him to structure nearby while executing the work and no extra payment shall be made to him on that account.

5.22 A Site Order book is to be maintained by the contractor at the site of work. Order and instructions written in the order book shall be deemed to have been legally issued to the contractor and the contractor shall sign each port promptly in the order book as a token of having seen the same. The order book shall be the property of the board and shall be handed over to the Nodal Officer or his nominee of the work in good condition on the completion of the work or whenever required by the Nodal Officer or his nominee.

5.23 The Contractor shall deposit / store any materials in such a way so as not to cause inconvenience to the employees / workers engaged on the Port activities and to nearby activities.

5.24 The stamp paper of requisite value shall be furnished by the contractor within 10 days from the date of issue of letter of acceptance, failing which he will not be permitted to start the work.

5.25 The value of the stamps to be affixed on the agreement shall be of appropriate value prescribed for bond as per latest provision of law enforced on the date of execution

contract same shall be borne by the Contractor. However, if the contractor furnishes G.P. Notes or approved guarantees in respect of part of security deposit, the stamp duty chargeable for the amount shall be as prescribed for agreements and payable in accordance with latest provision by law in force at the time of execution of the contract. All the cost of the stamp duty shall be borne by the Contractor.

- 5.26** For execution of work, contractor may be permitted to construct temporary offices, store, labour room toilet etc. at his own cost along with necessary letter / drawing for the permission in written. Nothing will be paid for these purpose and before handing over the site on completion of the work, the contractor has to dismantle all these temporary structure erected by him. Completion certificate will be issued only after compliance of above aspects.
- 5.27** The contractor shall take necessary precautions and prevent the falling of sparks in the seawater while carrying out the work of cutting / welding. In case of any leakages / escape of gas from vessel / flexible line etc. all the work shall be stopped immediately and co-operate the Fire Brigade personnel. It is further clarified that the suitable extension of time shall be granted to Contractor for completion of work on account of such stoppage without any compensation and idle charges. No claims / disputes shall be entertained on that account.
- 5.28** All the works until handed over to the Nodal Officer or his nominee shall stand at the risk of the contractor who shall be responsible to make good at his own cost all the losses and damage caused by or due to fires, weather, tides, cyclone, earth quake or any other reasons. The contractor shall hand over at the time of completion of work the work in good order and conditions and in conformity in every respect with the requirements of the contract and instructions of the Nodal Officer or his nominee.

5.29 GST REGISTRATION

The GST Registration No. should be invariably mentioned in the bid tender quotation failing which bid/ tender quotation will be considered as non – responsive and be liable for discharge.

5.30 GOODS & SERVICE (GST) CLAUSE

The contractor shall quote the price exclusive of GST.

The applicable GST shall be paid extra to the contractor after producing GST Invoice as per the certified Bill by the department as per Goods & Service Tax 2017. However, element of GST shall not consider for evaluation of bid.

TDS ON GST

TDS provision under GST Acts, 2017 are in force from 01.10.2018 and accordingly TDS under GST Act will be deducted @ 2 % (1% CGST and 1 % SGST or 2 % IGST) from payment / credit give to contractor/ professional and other for work order / contract exceeding Rs. 2,50,000/-

5.31 INCOME TAX DEDUCTIONS FROM BILLS

Income Tax deduction @ prevalent rate and surcharge/GST as applicable on the payments to the contractor will be deducted from the bills as directed by the central board of director taxes, Ministry of finance, Government of India.

5.32 During the execution of work, if dewatering is required the same is to be done by the contract or at his own cost and no claim on this account shall be pertained.

5.33 ARBITRATION

- (i) Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions here in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim right, matter or any other thing what so ever, in any way arising out of or relating to the contract, design, drawings, specifications, estimates, instructions, order or to the condition or otherwise concerning the work or regarding the execution or failure to execute the same whether arising during the progress of work or after the completion thereof as described here in after shall be referred to the Chairman for sole arbitration by himself or by any Office appointed by him.
- (ii) It will be no objection to any such appointment that the arbitrator is an employee of the Board or the Government, that he had to deal with the matter to which the contract relates and that in course of his duties as an employee of the Board or the Government, he had expressed views on all or any of the matters in dispute or of different.
- (iii) The arbitrator, who has been dealing with the arbitration case, being transferred or vacating his office or in the event of his death or being unable to act for any reason, the Chairman then holding the office shall arbitrate himself or appoint any officer to act as arbitrator.
- (iv) It is also a term of the contract that no person other than the Chairman himself or any officer appointed by him shall act as arbitrator.
- (v) It is a term of the contract that only such question and disputes as were raised during progress of work till its completion and not there after shall be referred to arbitration. However, this would not apply to the questions and disputes relating to liabilities of parties during the guarantee period after completion of the work.
- (vi) It is a term of the contract that the party invoking arbitration shall give a list of disputes with amounts of claim in respect of each said disputes along with the notice seeking appointment of arbitrator.
- (vii) It is also a term of the contract that if the contractor does not make any demand for appointment of arbitrator in respect of any claims/disputes in writing, as aforesaid,

within 120 days of receiving the intimation from the Nodal officer or his nominee that the final bill is ready for payment, the claim of the contractor shall be deemed to have been waived and absolutely barred and the Port Authority shall be discharged and released of all liabilities under the contract in respect of these claims.

- (viii) It is also a term of the contract that the arbitrator shall adjudicate only such disputes/claims as referred to him by the appointing authority and give separate award against each dispute/claim referred to him. The arbitrator will be bound to give claim wise detail and speaking award and it should be supported by reasoning.
- (ix) The award of the arbitrator shall be final, conclusive and binding on all the parties to the contract.
- (x) The arbitrator from time to time, with the consent of both the parties, enlarges the time for making and publishing the award.
- (xi) Arbitration shall be conducted in accordance with the provision of Indian Arbitration Act, 1996 or any statutory modifications or re-enactment thereof and rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause.
- (xii) It is also a term of the contract that if any fees are payable to the arbitrator, this shall be paid equally by both the parties.
- (xiii) It is also a term of the contract that the arbitration shall be deemed to have been entered on the reference on the date he issued the first notice to both the parties calling them to submit their statement of claims and counter statement of claims.
- (xiv) Venue of the arbitration shall be such place as may be fixed by the arbitrator at his sole discretion".

5.34 SPECIAL CONDITION IN RESPECT OF CEMENT

- a) Ordinary Portland Cement of 53 grade complying with the requirements of IS 269 shall be used in all works. The cement which has set or partially set shall not be used. The cement shall be used in the works only after approval of the engineer in charge.
- b) The contractor shall procure the cement confirming to relevant Indian Standard holding license to use ISI Certification mark for their product.
- c) For verification of such purchase all the bills of manufacturer/supplier/dealer will have to be furnished to the Nodal officer or his nominee.
- d) Supply of cement shall be taken in 50 Kg bags bearing manufacture's name, him registered trade mark, date of manufacture, batch number and ISI marking.

- e) Every consignment of cement must have identification marks on packages indicating date of manufacture and grade and type of cement, cement brought to works shall not be more than 6 weeks old from the date of manufacture.
- f) Every delivery of cement shall be accompanied by a manufacturers test certificate confirming that the supplied cement conforms to relevant specifications.
- g) Nodal officer or his nominee shall be at his liberty to carry out testing of cement at his discretion from Port laboratory or Government approved laboratory as per relevant before / during use. The contractor shall make all the necessary arrangements for the same and all the charges to be borne by the contractor.
- h) Each consignment shall be stored separately so that it can be readily identified and inspected. The arrangement of cement shall be such as to ensure the utilization of cement in the order of its arrival at the stores.
- i) In order to ensure due progress, the contractor shall at all times maintain on the site at least such stock of cement as the Engineer-in-charge may from time to time consider necessary.
- j) Cement in bulk shall be transported to the site in properly designed and approved bulk carriers. The contractor shall provide suitable unloading and storage facilities. The contractor shall submit full details of unloading, handling and storage facilities for the approval of the Engineer-in-charge before any cement in bulk is received by the Contractor.
- k) Cement brought to site and cement remaining unused shall not be removed from site without the permission of the Nodal officer or his nominee.
- l) In case concrete mixings with Batching Plant, Nodal Officer may allow cement to be used in bags/ silos/ Bulk etc.
 - (i) The batching plant shall be capable of separately proportioning each type of material by weight. The batching and mixing shall be carried out preferably in a forced action central batching and mixing plant having necessary automatic controls to ensure accurate proportioning and mixing. Calibration of the batching and mixing plant shall be carried out at regular intervals, as per IS.
 - (ii) The contractor shall also maintain a daily production record for that plant, including details of which mixes were supplied and which delivery dockets were dispatched.
 - (iii) There should be a record of what materials were used for that day's production including water and admixtures.
 - (iv) The production of concrete at each plant shall be systematically controlled. This is to ensure that all the concrete supplied shall be in accordance with these requirements and with the specification.
 - (v) Contractor to make a quality manual and keep authenticated copy of all

relevant Indian Standards. Work instructions, process control chart, applicable forms/ formats, shall be made and maintained. Contractor shall also follow all applicable regulations like environmental laws, weight and measure department etc. Records shall be maintained by the contractor to provide confirmation of the quality and quantity of concrete produced.

- m) The cement may be purchased from the reputed manufacturer like Ultratech, ACC, Birla or equivalent after approval of Engineer-In-Charge.

5.35 SPECIAL CONDITION IN RESPECT OF STEEL REINFORCEMENT

- a) The contractor shall procure the steel reinforcement confirming relevant Indian standard of various diameters holding license to use ISI Certification for their product from Primary Manufacturer/Supplier/Dealer. In any circumstances, steel reinforcement produced by re-rolling mills shall not be allowed to use in the work.
- b) Every delivery of Steel reinforcement shall be accompanied by a manufacturer's test certificate conforming that the supplied Steel reinforcement conforms to relevant specifications.
- c) The Reinforcement Bars shall be procured from primary producers like SAIL, TATA, VIZAG, RINL, etc. If the reinforcement bars of these manufactures are not available in market, the equivalent product may be allowed with prior approval of engineer in-charge. The structural steel shall also procured from SAIL, VIZAG, TATA , RINL or equivalent.
- d) The reinforcement binding wire shall conform to IS: 280 "Mild Steel Wire for General Engineering Purpose", with size 1 mm or more.
- e) Each consignment of Reinforcement brought at site shall be accompanied by a Manufacturer's Batch test certificate.
- f) Reinforcement bars shall be stored on site on timber or concrete supports, suitable space and of sufficient height to keep steel clear of the ground. The reinforcement shall be stored separately size wise.
- g) The testing shall be carried out as per Approved Quality Assurance Plan. The cost of all above tests on Reinforcement shall be deemed to be included in the rates entered in the Bill of Quantities of related items of the work.
- h) For verifications of such purchase all the bills of manufacturer/supplier/dealer will have to be furnished to the Nodal officer or his nominee.

- i) The contractor shall have to procure the steel reinforcement of various sizes/diameters as per the working drawings, which shall be supplied only during execution of the work. No claims/disputes arising about details of steel reinforcement so provided shall be entertained.
- j) In case, if particular size(s) of steel reinforcement is not available with the approved manufacturers, the contractors shall have to intimate the Nodal officer or his nominee in writing along with documentary proof in this regard. Nodal officer or his nominee, at his discretion, may allow to use alternate diameter of reinforcement bars provided that no claims/disputes arising out in respect of payment for difference in rate of steel shall be entertained.
- k) Nodal officer or his nominee shall be at liberty to carry out independent testing of steel reinforcement at his discretion from any of Government Approved laboratory as per relevant I.S. specifications before use. The contractor shall make all the necessary arrangements for same and all the charges to be borne by the contractor.
- l) The contractor shall procure the steel reinforcement bars of standard length as per relevant I.S.
- m) Steel reinforcement which remaining unused shall not be removed from site without the permission of the Nodal officer or his nominee.
- n) Payment for steel reinforcement shall be made on the basis of lengths of bars actually placed & measured in the work multiplied by the standard weight per unit length as given in the relevant IS code. The rates shall include for cutting & wastage, straightening, short & long length, & weight tolerance as per relevant IS codes & placing in position. Authorized laps, chair /separators, lifting hooks stiffening ring shall be measured and paid.

5.36 SETTING OUT

The Contractor shall be responsible for the true and proper setting out of the "Works" and the correctness of the positions, levels, dimensions and alignment of all parts of the works and for the provision of all necessary instruments, appliances and labour in connection herewith. If at any time during the progress of the works any error shall appear or arise in the position levels, dimensions or alignment of any part of the works, the Contractor shall immediately notify the Nodal Officer or his nominee who will direct the Contractor in what way the work shall be carried out and the Contractor, on being required to do so by the Nodal Officer shall at his own expense rectify such error to the satisfaction of the Nodal Officer or his nominee at any stage of the work or the checking of any setting out or any line or level by the Nodal Officer or his nominee shall not in any way relieve the Contractor of his obligations under the contract.

The Contractor shall carefully protect and preserve all benchmarks, site rails, pegs and other things used in setting out the works.

5.37 PATENT RIGHTS & ROYALTIES

The Contractor shall hold the Board, its officers, agents and employees absolved (or blameless) from liabilities of any other nature of kind on account of copyright or copyright composition, secret process, patented or unpatented inventions, article or appliances manufactured or used in the performance of this contract including their use by the Board unless otherwise specifically stipulated in this contract.

5.38 WORKING HOURS

Each Tenderer shall submit with his tender a programmed for execution of the work. The contractor has to carry-out the work as per general working hours except for declared closed holidays by the Port. However, based on progress of work, if required, round the clock work can be allowed after approval of Engineer-In-Charge.

5.39 NOTICE OF ADDRESS

The Contractor shall notify in writing to the Nodal Officer an address at Kandla/Gandhidham/Adipur for the service on the Contractor any communication or any notice to be given to him under the Contract and any such notice/communication to the Contractor shall be deemed to be duly served if sent by registered post to or left at such address or if delivered to the agent or representative of the Contractor. Any notice/communication to the Contractors shall also be deemed to be duly served if sent by registered Post to or left at the principal place of business or if the Contractor be a company the registered office of the Contractor or at the contractors last known address.

5.40 SALVAGE OF LOST/FALLEN/OBSTRUCTION MATERIAL SET C

If any pile, structural of the staging and of works or dismantled / filling materials fall down into the creek during the execution and guarantee period, which are likely to create any obstruction (the decision of the "Nodal Officer shall be final to the safe navigation of the ships and/or port craft), the Contractor shall remove such obstacles at his own costs.

5.41 MOORING PRECAUTIONS

The barges and floating crafts, if employed by the contractor, shall be provided with adequate mooring at the site of work. All necessary precautions shall be observed to protect the works and the existing structures from being damaged by such floating craft. The floating crafts like tugs, barges, launches, etc. brought by contractor be exempted from any port charges. However, the contractor is required to comply with all statutory regulations and instructions issued by the COM (OOT), DPA at his own cost.

- 5.42** The contractor has to arrange for required crafts like floating tank, jolly boat etc. at his cost for carrying out the work at underneath portion as directed by Nodal Officer or his nominee.
- 5.43** Concrete cover block with binding wire shall be used in all RCC works of standard size as directed by the Nodal Officer or his nominee c.c. cover block should be well cured for at least seven days before use- No stones or kapchi has to be used instead of cover blocks.
- 5.44** The welding of structural member Reinforcement shall be done with the best standard of workmanship and strictly in conformity with the requirement laid down in the relevant I.S. code.
- 5.45** Since the work is required to be carried out under tidal condition in jetty and it will be necessary for the contractor to provide insurance cover to his workers and his staff.
- 5.46 Contractor's Responsibility**
The information given here under and provided elsewhere is given in good faith but the Contractor shall satisfy himself regarding all aspects of weather, wind, waves, tides, currents, geological, sub-seabed and other site conditions and no claim will be entertained on the plea that the information supplied by the Engineer- in-charge is erroneous or insufficient.
All the works until handed over to the Nodal Officer or his nominee shall stand at the risk of the contractor who shall be responsible to make good at his own cost all the losses and damage caused by or due to fires, weather, tides or any other reasons. The contractor shall hand over at the time of completion of work the work in good order and conditions and in conformity in every respect with the requirements of the contract and instructions of the Nodal Officer or his nominee.
- 5.47 PLANT**
The contractor shall be responsible for the supply, use and maintenance of all construction plant and equipment and he shall ensure that it is suitable for the work and is maintained in such a manner as to ensure its efficient working. The Nodal Officer or his nominee may direct that plant which is not efficient and is prejudicial to the quality of the work be removed from the site and replaced by plant to his satisfaction.
- 5.48 QUALIFIED PERSONNEL**
Fully qualified and experienced concrete quality control Engineers shall be employed by the Contractor and shall be available on site at all times when important work is taking place. Operators for mechanical vibrators, mixers and foreman in charge of placing of concrete shall be fully trained and experienced in their classes of work.
- 5.49 CLASS OF CONCRETE**
All the requirements of each Class of concrete for all RCC works shall be as per IS- 2911 & 4651 & 456. However, the minimum cement content considered is @ 400 kg/cum.

However, based on the actual mix design concrete shall be carried out considering above minimum cement content no any extra claim shall be entertained for cement if more is required.

(a) DECLARED ACCEPTED PROPORTIONS

The proportions finally accepted and approved by the Nodal Officer or his nominee which he considers will produce concrete having the properties required by the foregoing clause and elsewhere in the specifications, shall be known as declared proportions but no agreement by the Nodal Officer or his nominee to such declared proportions shall be the Contractor's responsibility to use in the works at all times, only concrete having properties as laid down the foregoing clause, and elsewhere in the specifications, and in all respects satisfactory to the Nodal Officer or his nominee.

(b) NO DEVIATION FROM DECLARED PROPORTIONS

No deviation from declared proportions will be allowed unless and until the Nodal Officer or his nominee shall give his written authorization for the adoption of revised proportions for any class of concrete.

(c) MEASUREMENT OF INGREDIENTS

The proportioning of ingredients of concrete for each batch of concrete shall be performed by an Automatic weight batching plant / or an approved weight batching machine. Water shall be fed into the mixer from a tank provided with means of adjusting the flow of water so that water supplied may be as determined for each class of concrete. Due allowance shall be made for the weight of water carried by the aggregates and the amount of water added to the mixer may be reduced as required. For this purpose, the moisture content of coarse and fine aggregate shall be ascertained (as per IS 2386 Pt. III) daily and at any other times when alteration of the moisture content may be expected for fresh deliveries of aggregates/inclement weather or any other reason.

(d) MIXING

The ingredients and water shall be thoroughly mixed to uniform consistency in approved type pan or drum mixer. The use of continuous mixer will not be allowed. If the Contractor should find it expedient to use small type mixers for special or outlying portions of the work rather than to supply from the main batching plant, he may subject to the approval of the Nodal Officer or his nominee, use smaller approved concrete producing units of the weigh batch type. In such cases the mix shall be adjusted to whole bags of cement and no splitting of bags will be allowed. The "time period" allowed for the mixing shall be as laid down in the foregoing table of relevant IS or as directed by the Nodal Officer or his nominee.

(e) DISCHARGE FROM MIXER

The concrete shall be discharged from the mixer on to a level, clean and water-tight platform or fed into water-tight containers. The areas surrounding the mixer shall be paved and kept clean.

(f) TRANSPORTATION OF CONCRETE

The concrete shall be transported from the mixer to its place of the works as rapidly as

possible and in such a manner that there shall be no separation or loss of its ingredients. In no circumstances shall more than half an hour elapse between the time water is added to the mix and the time when the concrete shall be permitted to be used in the works after initial set has taken place. The use of concrete distributing chutes at an angle of more than 45 degrees from the horizontal will not be permitted without the approval of the Nodal Officer or his nominee.

(g) POURING

Authorization to pour concrete shall be obtained from the Nodal Officer or his nominee at least one day in advance of each pour. The arrangements for placing concrete shall be subject to the approval of the Nodal Officer or his nominee. In no case shall the concrete be dropped or thrown from a height of more than 2 meters. Concreting of beams, slabs and similar members shall be carried out in one continuous operation to the full depth of the member and the sequence of placing shall be so arranged as to avoid disturbance to partially set concrete.

Freshly laid concrete shall not be wheeled over or otherwise disturbed when placing concrete adjacent to a construction joint, special care shall be taken not to disturb the dowels or other reinforcing bars projecting from the existing concrete. Concreting shall proceed continuously over the area between the construction joints. Fresh concrete shall not be placed against concrete which has been in position for more than 30 minutes unless a proper construction joint is formed.

(h) COMPACTION OF CONCRETE

The contractor shall compact the placed concrete thoroughly by means of sufficient number of approved mechanical vibrators of adequate power and having a frequency of not less than 6000 impulses per minute. The vibrator shall be allowed to sink freely under its own weight until it enters the previous lift.

It shall be withdrawn immediately at the same rate and used at a new location. Concrete once vibrated shall not be vibrated again. The Contractor shall ensure that the concrete is thoroughly worked around the reinforcement and against external shutters and the shuttering suitably tamped so that all entrained air is expelled and the concrete surface when exposed is found good and free from air pockets, honey-combing or other defects.

(i) CONCRETING IN INCLEMENT WEATHER

In the event of rain, storm or any other severe condition concreting shall be stopped and appropriate temporary stop ends, vee grooves, etc. placed as may be necessary. During wet weather, the concrete shall be adequately protected as soon as it is placed in position. The contractor shall always have in readiness approved framed sheeting, tarpaulins etc. for the protection of green concrete from damage due to rain, storms or other weather-conditions. The Nodal Officer or his nominee may order the cutting out and replacement of the damaged concrete, all at the expenses of the Contractor.

(j) CONSTRUCTION JOINTS

The joints shall be in the position as shown on the drawings or as approved and ordered by the Nodal Officer or his nominee. The cost of all shuttering for such joints shall be deemed to be included in the rates named in the bill of quantities.

The work of joints, vertical or horizontal, shall be carried out in a suitable manner as approved by the Nodal Officer or his nominee. Any skin or laitance shall be thoroughly removed and the surface roughened by hammering, brushing and washing so as to accomplish exposure of the surface of aggregate. The joints shall be thoroughly washed with clean fresh water and blown off with compressed air. The moist surface shall be covered by neat cement slurry or with a layer not less than 4 mm thick of 1:1 cement mortar of medium consistency, while placing of fresh concrete.

(k) JOINTS BETWEEN PRECAST DECK UNITS

For all surfaces of precast units which will eventually be jointed to other precast units or in-situ concrete cement mortar to be used shall be of 1:1 ratio.

(l) CURING

All concrete shall be protected during hardening from the harmful effects of sunshine, and drying winds. All exposed faces of concrete shall be kept continuously moist with clean fresh water for a period as laid down in Indian Standard Specifications. However, in lieu thereof the contractor may use curing compound of approved quality in conformity to IS 9103 with prior approval of the Nodal Officer or his nominee. The contractor shall remain extremely vigilant and employ proper equipment and workmen for curing.

The decision of the Nodal Officer or his nominee regarding the adequacy of curing is final. In case any lapse on the part of the Contractor is noticed by the Nodal Officer or his nominee, he will inform the Contractor or his supervisor verbally, or in writing to correct the deficiency in curing. If no satisfactory action is taken by the Contractor, the Nodal Officer or his nominee will be at liberty either to employ sufficient means through any agency to make good the deficiency and recover the cost thereof from the Contractor.

5.50 SCREENING

All the surfaces of slabs or other members not requiring to shuttering are to be screened with cement sand mortar approved by the Nodal Officer and to be laid in an approved manner and within a tolerance of plus minus 3 mm of true level and grade.

5.51 CONCRETE BELOW SPECIFIED CRUSHING STRENGTHS

Should the test cubes fail to meet the minimum specified crushing strength for each class of concrete, the Nodal Officer may take one of the following decisions.

- (a) Instruct the contractor to carry out additional tests at his own cost.
- (b) Accept the work at his discretion and in such a case may make a reduction in the rate of the appropriate item.
- (c) Reject the work in which case the contractor shall pull down and rebuild at his own cost the relevant section of work.

5.52 FAULTY WORK

Faulty work due to any reason shall be demolished and re-constructed by the Contractor at his own cost.

5.53 PROGRESS REPORTS

Daily and weekly progress reports on concreting shall be submitted to the Nodal Officer

in an approved Performa.

5.54 SHUTTERING AND FORMWORK

i. GENERAL

All shuttering and support required for construction of concrete works shall be designed by the contractor and relevant drawings together with calculations for strengths and deflection shall be submitted to the Nodal Officer or his nominee for approval before commencement of the work. Shuttering shall be of steel plates or plywood.

ii. FIXING

The contractor shall fix all the form work in perfect alignment. The form work shall be securely braced so as to be able to withstand without appreciable displacement, deflection or movement of any kind, weight of the constitution or movement of persons, material and plant. All the joints should be watertight to prevent leakage of cement slurry from the concrete. Wedges and clamps are to be used wherever practicable. Side and bottom shuttering will have to be provided for casting of precast units.

iii. REMOVING

Forms or shuttering shall not be disturbed until the concrete has sufficiently hardened. The proper time for removal of form work shall be in accordance with IS- 456-2000 or as directed by Nodal Officer or his nominee.

iv. FINISH /ALIGNMENT

Shuttering shall be such as to produce a first class fair face on the concrete free from board marks or any other disfigurements, and shall be used for all surfaces exposed and unexposed. All shuttering is to be aligned within a tolerance of 3mm.

v. SPECIAL PROVISION

Wherever concreting of narrow members is required to be carried out within shuttering of considerable depth, temporary openings in the sides of the shuttering shall, if so directed by the Nodal Officer, be provided to facilitate the pouring and consolidation of the concrete. Small temporary openings shall be provided as necessary at the bottom of shuttering of columns, walls and deep beams to permit the expulsion of rubbish, etc. All corners of beams, columns and slabs shall unless otherwise shown on the drawings, be provided with chamfers of 20 x 20 mm or as directed by the Nodal Officer or his nominee.

vi. PREPARATION FOR CONCRETING

Before any concreting is commenced, shuttering and centering shall be carefully examined and the space to be occupied by the pour, thoroughly be cleaned out. The inside of shuttering shall be treated with a coating of an approved substance to obviate adhesion and where necessary to prevent absorption from the concrete, the shuttering shall be thoroughly wetted shortly before concreting is commenced.

vii. CONTRACTOR'S RESPONSIBILITY

Any, damage resulting from premature removal of shuttering or from any other cause

shall be made good by the Contractor at his own expense.

5.55 REINFORCED CONCRETE

A. GENERAL

The following clauses shall be read in conjunction with the section relating to Concrete.

B. STORAGE

The reinforcement bars shall be stored on the site on timber or concrete supports suitably spaced and of sufficient height to keep the steel clear off the ground. It shall be protected from rusting, oil, grease and distortions. The stacks shall be easily measurable. Steel needed for immediate use shall only be removed from storage.

C. BAR BENDING SCHEDULES

The Contractor shall submit to the Nodal Officer or his nominee for approval Bar Bending Schedules with working drawings, showing clearly the arrangement proposed by the Contractor to match available stock of reinforcing steel. Upon receipt of the Nodal Officer or his nominee final approval of the Bar Bending, Schedule and drawings, the Contractor shall submit requisite copies of the drawings after incorporating necessary modifications or corrections, for final record and distribution. Approval of such detailed drawings by the Nodal Officer or his nominee shall not relieve the Contractor of his responsibility for correctness nor of any of his obligations to Meet the other requirements of the Contract.

D. BENDING A REINFORCEMENT

Bending of reinforcement shall strictly be in accordance with the approved drawings, or IS: 2502 or as ordered by the Nodal Officer or his nominee. No reinforcement bar shall be bent when in position without the approval of the Nodal Officer or his nominee, whether or not it is partly embedded in the hard concrete.

E. BINDING WIRE

All bars shall be bound tightly together where they cross, with annealed steel wire 1.5 mm in diameter. The free ends of the binding wire shall be bent inwards.

F. PLACING AND FIXING

All types of reinforcement shall be correctly placed and fixed in position entirely to the satisfaction of the Nodal Officer or his nominee. The cost of providing tying wire as well as space blocks rods shall be deemed to be covered in the rate for reinforcement steel.

G. SPLICING REINFORCEMENT

Where splicing and/ or overlapping in reinforcement are required, the bars shall be provided with such splices or overlaps as are shown on the drawings or as directed by the Nodal Officer or his nominee.

H. WELDING OF REINFORCEMENT

Welding of reinforcement shall be in accordance with the approved drawings or as desired/ordered by the Nodal Officer or his nominee and in accordance with IS: 2751 and

I. COVER OF REINFORCEMENT

Cover to reinforcement shall not be less than that specified or shown on the drawing. Where two bars cross, the outer shall have the minimum cover.

J. REINFORCEMENT TO BE CLEAN

All steel reinforcement before the concrete is deposited, shall be clean, free from dust, loose scales, oil, rusts grease or any other deleterious materials. Particular care shall be taken to avoid contamination with oil.

K. DEPOSITING, CONCRETE

No concrete shall be deposited until all shuttering, concrete and reinforcement have been inspected and approved by the Nodal Officer or his nominee. On each concreting gang, a competent steel fitter shall be available who shall ensure that the reinforcement and other embedded fittings are kept in position during placing and compaction of the concrete.

5.56 WATCHING & LIGHTING

The contractor shall in connection with the works, provide and maintain at his own expenses, all lights, guards, fencing and watching whether on shore or afloat when and where necessary or as required by the Nodal Officer or his nominee or by any Competent Statutory or other authority for preparation of works or for the safety and convenience of the public or others.

5.57 ALLOTMENT OF SITE

The Nodal Officer will, after the issue of written order to Contractor to commence the work, give to the contractor possession of so much of the site as in the opinion of the Nodal Officer may be required to enable the contractor to commence and proceed with the construction of the works in accordance with the programme submitted by the contractor and stated from time to time as the proceed, give to the Contractor possession of such portions of the site as may, in the opinion of the Nodal Officer or his nominee, be required to enable the contractor to proceed with the construction of the works without interruption if the work in accordance with the said programme. Nodal Officer reserves the right to take back from the contractor the portions of "Site" which, in the Nodal Officer's opinion, is considered unnecessary for the purpose of the "Works".

If the contractor suffers any delay from failure in accordance with the terms of this Clause, the Nodal Officer shall grant an extension of the time for completion of the work without financial repercussions on either side.

5.58 ALLOTMENT OF WORK SITE

1. SITE OF WORK.

Site will be handed immediately after award of work. However, No claim / disputes what-so-ever for any reason if site is not handing over for starting the work at time. If the contractor suffers any delay the Nodal Officer or his nominee may grant at his discretion an extension of time for completion of work. However, no claim / disputes etc. arising out of extension of time so granted shall be entertained. No claim regarding extra payment/ escalation shall be allowed on account of such

Extension. Hence, the contractor while filling up their rates in the tender should consider the above aspects unfailingly.

2. WORKING AREA

Area for setting up batching plant, pre-cast yard, laboratory, office, storage of steel and cement, reinforcement yard, stacking of query materials etc. shall be provided if available with DPA. The area to be used with due care that no damage to be done to the existing structure. If any damage is done the contractor shall repair the portion in its original shape at his own cost.

Contractor has to make suitable platforms for stacking of materials and setting up of equipment. The necessary barricading, lights, sign boards and flags etc., wherever necessary has to be provided by the contractor.

5.59 PROGRESS PHOTOGRAPHS

The contractor at his own cost shall supply to the Nodal Officer or his nominee two copies of color photographs and digital copies of photographs of works in progress as directed by the Nodal Officer or his nominee from time to time. The negatives of the photographs and USB drive shall become the property of the Port Authority. The photographs shall be half plate size. The photographs shall be mounted in albums and shall be suitably inscribed. Two albums shall be handed over to the Nodal Officer or his nominee. No prints of the negatives may be supplied to any person or persons without the permission of the Nodal Officer or his nominee.

5.60 AMENDMENTS

The Board may, from time to time, add to or amend the regulation and on any question regarding the application, interpretation or effect of these regulation the decision of the Chief Labour Commissioner or Deputy Chief Labour commissioner of the Government of India or any other person authorized by the Board in that behalf shall be final.

5.61 INFLAMMABLE STORES

The contractor is to comply with all local regulation in respect of safe storage of all inflammable stores, explosive or other materials involving risk to third parties and is to take all precautions required in the transport and use of such materials. The contractor is to submit to the Nodal Officer or his nominee for approval all drawings and documents required for the sanctioning of storage sheds or other accommodation and is to build all such storage to the proper requirement at his cost.

5.62 FIRE HAZARDS

The contractor shall be required to comply with the petroleum act 1934 and petroleum rules 1976 during progress of the construction work. For all arrangement of Fire watch services as required shall have to be made by the Contractor at own cost.

5.63 THIRD PARTY QUALITY MONITORING

- i. The contractor shall engage at his own cost for Third party Inspection agency for the Work having requisite experience of Government or semi-Government organization & NABL accredited. The third party inspection agency has to carry

out the work on round the clock basis and shall certify all requirement and tests as required under relevant IS or/and Codes. However available services of DPA civil laboratory can be availed at prescribed rates, if desired. The Third Party Inspection Agency shall be engaged by Contractor at his own cost with prior approval of the Engineer-in-charge. TPIA has to prepare and submit the quality assurance plan, inspection & testing as per BOQ/consult with PMC/Technical Advisor of work.

Following are the brief scope of TPIA but not limited to:

- a) To assist DPA for monitoring, quality of the work, by carrying out inspection, laboratory testing, quality audit, verification of site records regarding quality of materials and its certification and any other means required in this connection. Inspection of construction equipment's deployed by the contracting agency in order to assess their suitability for the work.
- b) To deploy required experienced Technical Personnel on the site for TPI & QA to ensure that quality of the work is maintained as per provision of relevant IS codes and specifications of work.
- c) To suggest various measures for achieving required quality in the work. To sort out all problem regarding quality of work, during the course of execution and to give proper suggestions.
- d) Reporting, Documentation, Quality certification etc.

All materials required to be used in the work shall be got tested from Government / Govt. Approved lab/NABL accredited lab under supervision of Third party inspection agency and the charges there of shall be borne by the contractor. The contractor shall extend all necessary assistance, service as may be required, without any extra cost, necessary test shall be carried-out if directed by the third party agency deputed by Deendayal Port Authority or as directed by Engineer-In-charge.

- ii. Contractor has to obey the instructions given by TPI during execution of the work including necessary testing / inspection etc. This work may also be inspecting by any Government / Vigilance Department and they may order for certain testing / inspection of executed work etc. Contractor has to assist to them and also bear the expenses for such testing and results. The test results/observations are binding on the contractor. Such incidental costs are included in the quoted bid.

- 5.64** Barricading, including proper lighting arrangement in the night at the required places shall have to be provided by the contractor at his own cost, including necessary arrangements for proper movement of traffic by carefully maintained approaches and road diversions with suitable sign boards for indications of road signs etc. as directed by the Engineer-in-Charge.
- 5.65** All the grass, shrubs, plants and foreign matter etc. in the alignment of the site and within the site of work shall have to be cleared, if required without any extra cost.
- 5.66** The Engineer-in-charge may delete any number of items included in his tender (contract) without assigning any reasons and without any financial liability.
- 5.67** All the tools, plants, scaffolding, ladder etc. and other machinery etc. required temporary

for the purpose of execution of work will have to be arranged by the contractor at his own cost, and storing of such tools, plants etc. will have to be made by him.

- 5.68** Unless otherwise specifically mentioned the rates quoted for all items includes for all lead and lift and no extra claims shall be entertained on this account.
- 5.69** The contractor shall have to obtain quarry permits from the office of the Geologist, Department of Geology and Mines, Jamnagar/Khambhalia before quarrying any secondary materials like Quarry spall, crushed metal, sand, earth, murrum, rubble etc.
- 5.70** Nothing extra shall be paid for change of quarry against lead etc.
- 5.71** Contractor has to take full responsibility of safety, security and formalities of custom bound area etc. for all the shifts during execution of work.

5.72 DEFECT LIABILITY:

The defect liability period for the work is 12 months from the date of completion of work as per completion certificate issued by the Engineer in charge. The contractor will be responsible to rectify all the defects observed during defect liability period at his own cost, failing which same will be rectified by the Engineer in charge and amount will be recovered from the performance security.

- 5.73** All the labour acts, rules and regulations in force from time to time are to be followed by the contractor and the contractor has to obtain license/ Registration from the Assistant Labour Commissioner (C), as per rules, during the course of execution of work.
- 5.74** The prospective bidders may raise quarry relating to bidding conditions, bidding process, and / or rejection of bid. The reason for rejecting the tender or non-issue a tender to prospective bidder will be disclosed where written enquires are made by the concerned bidder.
- 5.75** The Bank Guarantee towards EMD/Performance Guarantee shall be from any Nationalized/Scheduled Banks (except Co-operative banks) having its branch at JGandhidham/Jamnagar/khambhali/Vadinar.
- 5.76** The bidder has to execute Integrity pact arrangements with Deendayal Port Authority, Kandla (as per agreement form enclosed) Shri S.K. Sarkar, IAS (Retd.) and Shri Saurabh Chandra IAS (Retd.) has been appointed as Independent External Monitor for Integrity, whose address is as under:

Shri S.K. Sarkar, IAS (Retd.)
B-104, Narantra Aptt.,
Plot No 8B, Sec-07, Dwarka
New Delhi- 110 075
Mobile No. 98111 49324
Email: sksarkar1979@gmail.com

Shri Saurabh Chandra IAS (Retd.)
A-9, Sector-30
Noida (UP) 201301
Mobile No. 98713 22133
Email: saurabh7678@yahoo.co.in

- 5.77** The potential bidders shall download and print the IP Agreement signed by the Employer

and their witness and affix his/her signature on the IP Agreement in the presence of a witness from his/her side, who shall also affix his/her signature thereof. Having completed the signing procedure, the potential Bidder shall upload the duly filled and signed IP Agreement on n-procure portal.

The procedure mentioned above regarding signing of Integrity Pact Agreement by both the parties (Employer and Potential bidders) shall be completed online. However, in case of any technical glitch due to which if any potential bidder is unable to upload the IP Agreement, then he/ she shall submit the Hard Copy of the dully filled, signed IP Agreement, to the Department concerned of DPA within a period of seven days and prior to opening of the Technical Bid, failing which Bid of potential Bidder shall be treated as disqualified.

In case of JV firm, IP agreement is to be filled and submitted in the name of the JV firm only otherwise the bid will not be considered for further evaluation.

5.78 Removal of rejected / substandard materials

- i. Whenever any material brought by the contractor to the site of work is rejected, entry thereof should invariably be made in the site order book under the signature of Assistant Engineer, giving the approximate quantity of such materials.
- ii. As soon as the material is removed, a certificate to that effect shall be recorded by the JE/AE against the original entry, giving the date of removal and mode of removal, including the registration No of the truck and a copy of gate pass wherever applicable.

5.79 EXTRA SUBSTITUTED AND DEVIATED ITEMS OF WORK.

Any changes in the contract are broadly classified as deviations. While No changes should be done with an intention to cause any undue benefit to the contractor but in the interest of the work for valid reasons or when situation so demands quantities of agreement items can be increased or decreased, extra items can be executed , agreement items can be substituted materials/ T & P which was not stipulated can be issued and period of completion can be extended for which necessary provisions and unambiguous procedure should be incorporated in the contract to regulate rates/ payments for such deviations.

5.80 On award of the contract, the contractor to whom the contract has been awarded has to provide at least 10 (Ten) bonded copies of Agreement including the Technical bid, Price bid and the correspondence exchange between the parties till the award of the work. One full set including indexing, insertion of page nos. certification with index will be provided by the Department. The cost of above ten sets is to be borne by the contractor.

5.81 Contractor/service provider/supplier etc. has to ensure timely and proper filling of GSTR 1 so that Deendayal Port Authority can avail input tax credit in timely manner. In case DPA not allowed input tax credit due to failure on part of the contractor/service provider/supplier etc., it will be a financial loss to the DPA and therefore same shall be recovered from the payment/deposit of the contractor/service provider/supplier.

5.82 Special Conditions for Environmental Protection

1. The Contractor shall strictly follow-up the Environmental rules as per the Environmental Protection Act 2022. While execution of work and as directed by Engineer in Charge.
2. All the Construction materials e.g. Cement, Aggregates, sand & fill materials which are to be used in construction work shall be covered with Tarpaulin or other fabric material as directed by Engineer in Charge.
3. The contractor should stack and dispose the waste material in such a manner which is not destroying the environment.
4. The contractor shall sprinkle the water to minimize the dust emission.
5. Machine mixers, vibrators, way batcher's plant, diesel generator sets and other vehicles engines shall not be left running when not in use.
6. Emission of NO₂ and SO₂ shall be maintained within the work site area as per the International Regulations (MARPOL).
7. To prevent the minimize vibration and noise from machineries / vehicles during construction activities the contractor shall take the remedial action to minimize noise pollution as under: -
 - (i) Provide adequate silencers attached with all vehicles and machineries.
 - (ii) Install suitable mufflers on engine exhaust and compressor component.
 - (iii) The diesel generators set shall be used of noise less.
8. The contractor (s) shall stacked/stored the construction materials at adequate distance from coastal area.
9. The contractor shall provide the barrier to prevent the construction material from mixing up with surface / ground water.
10. The contractor (s) should discharge Waste water generated during Constructionwork as per CPCB/GPCB regulations.

5.83 Special Conditions for Tender Documents: The all required documents for preliminary & Technical bids as per tender and other documents which are going to be submitted in physical form should be upload on (n)procure site while bidding in same sequence with index.

5.84 The contractor shall be registered under the building and other constructions workers (Regulation of employment and conditions of Services) Act, 1996.

5.85 The payment from 2nd bill to pre-final bill, shall be released, subject to the condition that the documentary evidence (copy of paid challan in Govt. Treasury) of the welfare Cess @ 1% of the work done or as amended by Statutory Authority from time to time, paid to concerned authority is submitted for the previous bill. The bidders shall consider the same while bidding, no payment will be made by the Port in this regard.

5.86 The documentary evidence (copy of paid challan in Govt. Treasury) of Welfare Cess @ 1% of work done or as amended by Statutory Authority from time to time, paid to concerned authority is submitted before releasing the performance Guarantee.

5.87 Payment to labors is to be made in accordance with latest CLC circular released from time to time failing which appropriate action will be taken against the prospective bidder by the tender issuing authority.

5.88 Work is to be carried out as per detailed specification laid down in IS specification. MOST specification for road works, Latest IRC standard, and CPWD manual however the provisions made in contract documents and DPA SOR shall prevail.

5.89 In case of items where no specifications is defined under IS, MOST or CPWD manual or DPA SOR or tender document superior quality of material available in market shall be applicable.

5.90 The provision in special condition which form a part of the contract shall have precedence over those specified in General Conditions of Contract in case of diversity if any.

5.91 Quality Assurance Plan (QAP)

The work shall be arranged in the order of preference as directed by the Engineer-in-Charge of work. In addition to above, contractor shall submit a Quality Assurance Plan (QAP) for the entire works under this contract and it shall be approved by the Engineer-in-Charge before commencing the work and shall be ensured strict compliance of the same. The QAP shall contain the details of tests to be conducted for each material to be used in the work.

5.92 CLEARANCE OF SITE ON COMPLETION: On the completion of the works the Contractor shall clear away and remove from site as required all temporary works of every kind, constructional plants and also all surplus materials dismantled or otherwise, earth and rubbish and leave the whole site and works clean and in a workmanlike condition to the satisfaction of the Engineer/Engineer-in-charge or the Representative.

- (i) The Contractor should understand that all debris, surplus earth and other materials will be considered in dismantling or otherwise for the construction of the works will be considered as property of the Board and will be disposed-off to the best advantage of the board at contractor's cost to the places fixed by the Engineer-in-charge.
- (ii) The Contractor shall clear the site prior to issuance of Completion Certificate. Site clearance means clearing of work site, site office, labour camps and any other structure constructed/erected by the contractor.

5.93 Facilities to be provided by the Port

- (a) Contractor's work area: Work area of about 3,000 sq. m. or mutually agreed area subject availability of land near to construction site will be made available free of cost at free of charges for setting up of site office, store, casting yard, batching plant etc. up to completion of work.
- (b) Residential Accommodation for contractor's technical and supervisory staff, Quarters (A & B Type) in Port Colony at Vadinar can be allotted on leave and license basis by the Port Authority, subject to availability and at Board's prescribed rental charges. These rates shall be subject to revision from time to time.

5.94 Contractor's responsibility

- 1. All materials for use on the works shall be supplied and provided by the contractor at his own cost and shall conform to relevant BIS Specification unless otherwise specified.

2. Samples of all materials including fixtures, if any, to be incorporated in the work shall be got approved by the Engineer-in-Charge before procurement.
3. The contractor shall thoroughly study the specifications and drawings and errors/omissions/modifications, if any, shall be brought to the notice of the Engineer-in-Charge well in advance so that a final decision in the matter could be given in time.
4. All labour, skilled or unskilled shall be provided by the contractor. Settling any dispute with the labour will be contractor's responsibility.
5. The contractor shall be solely responsible for any damage or injury to the persons or things caused or suffered during the execution of the work and these shall be made good or compensated at his risk & cost.
6. The contractor shall take all care and precautionary measures for avoiding any kind of damage/accident in the work site on any account. The department shall not entertain any claim from the contractor whatsoever towards compensation for any damage/accidents at the site due to negligence from his part, during the execution of work.
7. The contractor shall prior to commencement of the work insure in the joint names of the Employer and the contractor against all loss or damage from whatever cause arising for which he is responsible under the terms of contract.
8. The work shall be arranged by the contractor without causing any damage to Port's/ any other structures. Any damage caused by the contractor's operation shall be compensated/ made good at contractor's risk and cost to the satisfaction of the Engineer-in-Charge of the works, failing which department will do the rectification work and the cost incurred will be recovered from any sum due to him from the Port.
9. All plants and equipments and consumables required for the whole work shall be provided by the contractor at his own cost.
10. The contractor shall not construct any structure, even of temporary nature, for any purpose at site, except with the written permission of the Engineer-in-Charge of the work and any construction so put up shall be removed by the contractor whenever the Engineer-in-Charge calls upon the contractor to do so.
11. The Contractor shall be responsible for the true and proper setting out of the works in relation to original points, lines and levels of reference.
12. The dismantled concrete and steel and other debris and waste materials shall be conveyed and deposited at suitable locations by the contractor without causing environmental hazards/ problems as per the directions by the Engineer-in-Charge.

13. Qualified Engineers with sufficient experience in works of similar nature as indicated in –Contract Data|| shall be available at site throughout the contract period during working hours in order to receive instructions from department and to implement them properly and in time.
14. The contractor shall take all care and precautionary measures for avoiding damage or accidents to the work from ship or other water crafts movements or other operations in the area. The department will not entertain any claim from the contractor whatsoever, towards compensation for any such damage or accident occurring during the execution of the contract.
15. The contractor shall observe all safety regulations during the execution of the work. Safety measures, precautions, warning signals etc. shall be done at the contractor's cost as directed by the Engineer-in-charge of the work. The contractor shall provide all necessary personnel protection equipment's such as helmet, lifeguard, goggles, boots etc. to the workmen at his own risk and cost.
16. The work shall be arranged by the contractor without causing any hindrance to the ship and other water craft operating in the area. No damage shall be caused to the structures in the area, water crafts operating in the area or otherwise by the contractor's operations. Any damage or accident caused by the contractor's operations shall be compensated / made good at the contractor's risk and cost.
17. The contractor shall supply at his own cost monthly or at intervals as directed by the Engineer-in-charge, well executed photographs in standard size (approximately 24x18 cm) with soft copy showing the progress of the work and also such other particular item of the work.
18. No information or photograph concerning the works shall be published without the prior permission of the Chief Operations Manager and drafts of all such proposal/ publication shall be submitted for approval.
19. The information and data shown in the drawing and detailed elsewhere in the tender document are furnished for general information and guidance only and the Port Authority in no case will be held responsible for the strict accuracy thereof or any deduction, interpretation or conclusion drawn by the tenderer.
20. The contractor shall observe the conservancy rules relating to the Port and shall always take necessary steps to keep the Port water free of noxious or unhygienic matter due to the work, as are required by the Engineer-in-Charge. Under no circumstances, inflammable materials are allowed to spill into Port waters.
21. The DEENDAYAL Port is an International Ship & Port Facility Security (ISPS) code compliant Port and the contractor is obliged to comply with the

provisions of the code in force and as amended from time to time.

22. The contractor will have to provide a site office accommodation minimum 40 Feet container or suitable accommodation with air conditioner 1.5 T and toilet facilities, near the contractor's work area or other location as approved by the Engineer-in-charge, for the use of departmental staff and Port consultant within 15 days of the work order which shall be maintained till completion of work. Arrangements for fresh water supply and power supply to the office building shall be made by the contractor. Necessary fans and lights shall be provided.
23. The following minimum facilities shall be provided in the site office accommodation for Port Officials and PMC.

1	Executive Table	1 Nos.
2	Executive Chair	1 Nos.
3	Office Tables	2 Nos.
4	Office chair	6 Nos.
5	Steel Almirah [1270mm x 765mm x 440mm or nearest available size]	2 Nos.
6	Ceiling Fans 1400mm size	As required
7	Personal Computer (i7 & above version) with Printer	1 No.
8	One photocopying machine capable of colour and Black & White copying / Scanning A4 & A3 size of paper, with auto feed of papers (Source to be copied) along with sorting facilities. Stationery and consumables for the PC and the photocopying machine.	1 No.

24. No separate payment shall be made for providing the office as said above and it shall be included in the rate quoted for the work. In case the contractor fails to hand over the furnished office within the above period and / or fails to maintain the office for the stipulated period, an amount of Rs.20,000/- per month or part thereof shall be deducted from the contractor's running bills, for the period of delay/ lapse. In case the contractor is proposed to provide Port cabins for site office accommodation it shall be air-conditioned. On completion of the work, the office accommodation provided by the contractor shall be disposed off by the contractor.
25. Contractor shall provide 01 nos. of four wheeler tourist A.C. vehicle (Innova/Bolero/or equivalent) with driver during contract period including extended period of contract, limiting to a maximum distance of 4500 km per month. For use of DPA employer/representative and the vehicle shall be

available for use for the around the clock of work on all days including Sundays and holidays. In Sundays and holidays the vehicle shall be made available, only if work is arranged at site.. This vehicle will be used only for duties related to the works of this contract. Vehicle must be in very good condition and to the satisfaction of Engineer-In-charges. The supply shall commence not later than 15 days from the date of commencement of work .Necessary fuel/ oil/ driver / maintenance etc., will have to be borne by the contractor. During the period of contract in case the contractor does not provide the vehicle the employer will engage the other tourist vehicle and actual charges incurred will be recovered from their due payments or Rs.4000/- per day will be recovered. The vehicle shall have valid registration and insurance. All consumables and stores for the safe working of the vehicle and its drivers as necessary should be provided by the contractor and nothing will be given by the Port for the running of the vehicle under this contract. The contractor shall be solely responsible for the consequences arising out of any loss or damage/accident etc. caused to the vehicle on duty.

26. The Contractor shall provide 1 Nos. latest smart mobile phone sets (Compatible to 5G Sim) for the official use. The Contractor shall provide the smart mobile phones within 15 days from the date of commencement of work. He shall submit a guarantee for replacement of any defective set during the currency of the contract. The cost of supply of mobile phones and all its charges (voice & data charges) is included in the quoted price. If the Contractor fails to hand over the smart mobile phone in the stipulated time, an amount of Rs.2,000/- per set per month or part thereof shall be debited to the Contractor's account. If the Contractor fails to maintain the facility of smart mobile phones directed by the Engineer-in- charge at any stage of work, an amount of Rs.1,500/- per set per month or part thereof shall be debited to the Contractor. If the Contract Works are not completed within the stipulated period or within the granted extended time of completion, the smart mobile phone facility shall be maintained by the Contractor at his own cost till the completion of the work. In case of any failure by the Contractor to do so, an amount of Rs.2, 000/- per month or part thereof per set shall be debited to the Contractor's account.
27. The contractor shall provide necessary arrangements as desired by the Engineer- in-Charge for inspection of work without any extra cost from commencement till completion of work.
28. The Contractor shall ensure that no laborers with criminal background are engaged for the work.
29. The site located in the zone of marine eco sensitive zone (Marine National Park)
30. All fossils, coins, articles of value or antiques and structures and other remains or things of geological or archaeological interest discovered in the site of work shall be deemed to be the absolute property of the Port

Authority and the contractor shall take responsible precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall immediately upon discovery thereof and before removal, acquaint the departmental officers of such recovery and carry out at the expense of the department, the Engineer-in-Charge's orders as to the disposal of the same.

31. The contractor shall remove any plant (floating or otherwise) belonging to him or to any person employed by him which might have sunk in the course of work or otherwise deal with the same as directed by the Engineer-in-Charge and until the same is raised and removed, the contractor shall set on such buoys and display at night such lights for avoiding any mishaps.
32. Water required for the construction works including curing work shall be arranged by the contractor at his own cost.
33. The contractor shall take all precautions for not to damage any cables/pipes etc. passing through the area of work. Damages, if any, caused to electrical cables/ water lines/ telephone lines shall be rectified by the Contractor at his cost and risk.
34. While carrying out hot works such as welding, cutting, chipping the concrete etc. the following conditions shall be strictly observed by the contractor.
35. Hot work shall be carried out with the approval of the Engineer-in-charge and the work shall be done as per the instruction of the fire service personnel.
36. Welding /gas cutting work shall be carried out only with the prior permission of the Marine Dept. and only when vessel carrying inflammable materials is not berthed at the existing berths near to it.
37. Chipping and drilling the RCC etc. when vessel carrying inflammable material is at berth shall be done with soft metal tools only and under the directions of the Fire Personnel.
38. The contractor shall hire a boat with 4 persons capacity, at his own cost, exclusively for the departmental and Consultant staff throughout the contract period. The boat shall be available round the clock on all days including Sundays and holidays. In Sundays and holidays the boat shall be made available, only if work is arranged at site. The boat and its operators shall have valid registration and insurance. All consumables and stores for the safe working of the boat and its operators as necessary should be provided by the contractor and nothing will be given by the Port for the running of the boat under this contract. The contractor shall be solely responsible for the consequences arising out of any loss or damage/accident etc. caused to the boat on duty. If the contractor fails to provide boat as above, the department will hire the same, the actual cost of which will be deducted from the contractor's bills or an amount of Rs.5,000/- per day or

part thereof shall be deducted from the contractor's running bills.

5.95 The following clauses of the INSTRUCTION TO THE BIDDERS (Section- I) will not be applicable, which is superseded the earlier.

- (a) Clause 1.4.1 (c), (d), (e) & (h), 1.4.2 (j)
- (b) Clause 1.4.4
- (c) Clause 1.4.5 (Sub-contractor Experience & Resources)
- (d) Clause 1.8.2 (Bidding documents)
- (e) Clause 1.19.1(A), 1.19.2, 1.19.3, 1.20.1 (sealing and marking of bids)
- (f) Clause 1.22.2 (Modification of withdrawal of Bid)
- (g) Clause 1.23.2, 1.23.3, 1.23.4
- (h) Clause 1.26.4
- (i) Clause 1.27.1, 1.27.2 (Correction of errors)
- (j) Clause 1.34 (Advance payment)
- (k) Clause 1.35.1 (Conciliator)

5.96 The following clauses of Section-II will not be applicable, which is superseded the earlier.

- (a) The clauses c, d, g of the Specimen for form of Bid.
- (b) Table at Sr.No.7 of Information required by the employer in form prequalification of bidder (Section-2)

5.97 The following clauses of the CONDITION OF CONTRACT (Section-III) will not be applicable, which is superseded the earlier.

- (a) Clause 3.8.1 (Sub-contracting)
- (b) Clause 3.21.1 (Possession of site)
- (c) Clause 3.24.1 (Disputes)
- (d) Clause 3.25.1, 3.25.2, 3.25.3 (Settlement of disputes, decision by Conciliation, Arbitration)
- (e) Clause 3.26.1 (Replacement of Conciliator),
- (f) Clause 3.43.3, 3.43.4, 3.43.5, 3.43.6, 3.43.7, 3.43.8
- (g) Clause 3.44.1, 3.44.2, 3.44.3 (Compensation events)
- (h) Clause 3.45 (Tax)

- (i) Clause 3.50 (Incentive or Bonus)
- (j) Clause 3.51(Advance Payment)

5.98 The following clauses (Section-4 to 9) will not be applicable, which is superseded.

- i. Conciliator is not applicable under contract date of (section-4)
- ii. The form for Dispute Review Board Agreement (section-9) & Exception & Deviations (Section-9).
- iii. The form for specimen Bank Guarantee for advance payment (Section -9).
- iv. The form for specimen Bank guarantee for stage payment (Section-9).

5.99. Joint Venture

Companies/Contractors may jointly undertake contract/contracts. The number of Partners in JV/Consortium shall be limited to maximum of three. Each entity would be jointly and severally responsible for completing the task as per the contract, however declaration of the Lead member to be indicated by bidders, however JV has to designate in their MOU. The firms with at least 26% equity holding each be allowed to jointly meet the eligibility criteria.

(i) A legally binding Joint venture / Consortium Agreement signed by authorized signatories of all the partners of the JV/Consortium, as per the proforma at section -9 shall be enclosed with the bid.

(ii) Power of attorney duly executed and signed by legally authorized signatories of all the partners, authorizing the Lead Partner (a) to submit bid, negotiate and conclude contract and incur all liabilities therewith on behalf of the partner(s) of the V/Consortium during the bidding process; and (b) in the event of a successful bid, to incur liabilities and receive instructions or and on behalf of the partner(s) of the JV /Consortium and to carry out the entire execution of the contract including payment, exclusively through Lead Partner, as per the proforma of power- of- attorney for lead member of JV/ consortium at section -9, which shall be duly authenticated by a notary public or equivalent certifying authority, shall be enclosed with the bid.

(iii) The bid and in the case of the successful bidder, the Agreement, shall be signed and / or executed in such a manner for making it legally binding on all partners (including operative parts of the ensuing Contract in respect of Agreement of Arbitration, etc.). The Contract shall

be signed by legally authorized signatories of all partners.

(iv) The Lead Partner shall be authorized to receive instructions for and on behalf of the partners of the Joint venture and entire execution of the Contract including payment shall be carried out exclusively through the Lead Partner. A Statement to this effect should be included in the Joint Venture Agreement.

(v) All partners of the Joint Venture shall be liable jointly and severally for the

execution of the Contract in accordance with the Contract terms, and a Statement to this effect should be included in the Joint Venture Agreement.

(vi) Bid Security as required shall be furnished by Lead Member of Joint venture.

(vii) Performance Guarantee, as required, will be furnished by Lead Member of Joint venture.

(viii) Participation by a firm in more than one JV /Consortium is not permissible. A firm who submits bid on individual capacity is not eligible to be a partner of a JV /Consortium. In case a firm's name appears in more than one bid then both application may be rejected.

(ix) Each partner must submit the complete documentation, or portions applicable thereto, required qualifying the firm for bidding.

(x) All the partners of the JV/Consortium shall be jointly and severally liable for due performance, recourse/sanctions within the joint venture in the event of default of any partner and arrangements for providing the required indemnities.

(xi) Notwithstanding demarcation or allotment of work among the partners, each partner shall be liable for non-performance of the whole contract irrespective of their demarcation or share of work.

(xii) The Lead Partner shall be authorized to act on behalf of the JV/Consortium.

(xiii) All the correspondences between the Employer and the contractor shall be routed through the Lead Partner.

(xiv) In the event of default by the Lead Partner, it shall be construed as default of the Contractor; and Employer will take action under relevant clause(s) of the Bid Document and/or General Terms and Conditions of Contract.

(xv) An undertaking that all the partners are jointly and severally liable to the Employer for the performance of the contract shall be enclosed with the bid.

(xvi) In the event of any partner leaving the JV, it shall be intimated to the Employer within 30 days by other partner(s). Failure to do so shall be construed as default of the contractor and the Employer may take action under relevant clause(s) of the Bid Document and/or General Terms and Conditions of Contract.

(xvii) The contractor shall not alter its composition or legal status without the prior written permission of the Employer. Failure to do so shall be construed as default of the contractor and the Employer may take action under relevant clause(s) of the Bid Document and/or General Terms and Conditions of Contract.

(xviii) One of the partners of JV/Consortium should have downloaded the bid documents.

Contractor

**EXECUTIVE ENGINEER (C)
DEENDAYAL PORT AUTHORITY**

SECTION 6

TECHNICAL SPECIFICATIONS

SECTION - 6 TECHNICAL SPECIFICATIONS

6.00 MATERIAL

6.1.1 General

- a) All materials used in the works shall be of the best quality of their respective kinds, obtained from sources and suppliers approved by the Engineer-In-Charge and shall conform to the latest issues of relevant Indian Standards/MORT specifications. Any materials not fully specified and for which no relevant Indian Standard may be available shall be the best of its kind and as approved by the Engineer-In-Charge.
- b) Samples of all materials to be used for the works shall be got approved from Engineer-In-Charge before these are brought to site.
- c) While submitting the samples for approval the Contractor shall supply information regarding the name of the manufacturer, manufacturer's specifications and certification.
- d) No material shall be used in the works without prior approval of the Engineer-In-Charge.
- e) All materials brought to site shall be stored and protected in such a manner that these remain in perfect condition until these are to be used in the works. Storage, protection and handling of material shall be as per relevant Indian Standards and where such standards are not available; it shall be as per instructions of Engineer-In-Charge.
- f) The Contractor shall maintain complete record of all materials received on the site or in stores and working area and shall make copies of such records available to the Engineer-In-Charge.
- g) All materials rejected by Engineer-In-Charge shall be removed from the site immediately and shall be replaced by the Contractor at his own cost.

6.1.2 Sampling and Testing

All materials used in the works shall be subjected to inspection and test. Samples of all materials proposed to be employed in the permanent works shall be submitted to the Employer for approval before they are brought to the site. A quality assurance plan should be submitted by the contractor for the approval of Engineer-in-Charge. Cost of all samples and tests, whether at the manufacturer's premises, at sources, at site or at any testing laboratory or institution as directed by the Employer shall be deemed to be included in the rates quoted in the Bill of quantities and no extra payment whatsoever shall be made on this account.

6.1.3 Rejected Materials

If any materials brought to site are rejected by the Engineer in charge as result of tests carried out at the site or visual observation any having been found below the specification or standard the contractor shall forthwith remove the same and replace them, at his own cost to the entire satisfaction of the Engineer-in-Charge.

6.1.4 All the materials and ingredients of concrete materials such as river sand (from Bhogavo or halvad river – Uncrushed River sand), Coarse crushed aggregate and brick etc. require for the work shall be got approved from the Engineer-in charge before stacking at the site of work and the same shall be got tested from Port laboratory/ NABL Government approved Lab. at the cost of Contractor. The rejected materials shall be removed immediately from the site of work within 48 hrs. Of issue of written order otherwise the same will be removed by the department at the cost and responsibility of the contractor.

6.1.5 For preparing Mix-design of concrete if required for RCC work, the contractor shall supply construction materials to the Port/NABL laboratory free of cost. RCC Mix design the laboratory test of CC cubes, construction materials and grading of aggregate to standard practice and approved by the Engineer-in charge be got conducted by the department at Port laboratory where ever necessary and the test result shall be submitted to the Engineer-in charge for his approval, these test shall confirm to the relevant IS code failing which the concrete work will be liable for rejection, the rejected work have to be dismantled and redone by the contractor at his own cost. Out of various test carried out in Port / NABL Govt. approved laboratory the charges for testing of CC cube for 7days / 28 days (seven / twenty eight days) compressive strength will be borne by the contractor. The testing charges of extra CC cubes casted for indicative result and charges for Mix design shall be payable by the contractor. The transportation of the samples of the concrete materials, cement concrete cubes etc. from site of work to the Port / NABL Govt. approved laboratory shall be done by the contractor at his own cost.

6.1.6 Water

Contractor shall make necessary arrangements. Clean fresh water only shall be used for mixing all concrete, grout and mortar. The water shall be free from any deleterious matter in solution or in suspension and be obtained from an approved

source. The quality of water shall conform to IS: 456. The contractor shall make adequate arrangements to deliver and store sufficient water at the works for use.

6.1.7 Reinforcement Steel

- 6.1.7.1 The reinforcement steel bars shall be TMT having tensile strength of Fe 500/500D N/sq.mm conforming IS: 1786. The reinforcement shall be purchased from manufacturer or distributor of M/s. Steel Authority of India Limited (SAIL)/ M/s. Tata Iron & Steel Company (TISCO) / Rashtriya Ispat Nigam Ltd. (RINL). In case the material not available with the manufacturer/ authorized distributors of SAIL/TISCO/RINL, the employer may permit to use reinforcement steel manufactured by others.
- 6.1.7.2 The reinforcement binding wire shall conform to IS: 280 "Mild Steel Wire for General Engineering Purpose", with size 1 mm or more.
- 6.1.7.3 Each consignment of Reinforcement brought at site shall be accompanied by a Manufacturer's Batch test certificate.
- 6.1.7.4 Reinforcement bars shall be stored on site on timber or concrete supports, suitable space and of sufficient height to keep steel clear of the ground. The reinforcement shall be stored separately size wise.
- 6.1.7.5 The testing shall be carried out as per Approved Quality Assurance Plan. The cost of all above tests on Reinforcement shall be deemed to be included in the rates entered in the Bill of Quantities of related items of the work.
- 6.1.7.6 The contractor shall procure the steel reinforcement confirming relevant Indian standard of various diameters holding license to use ISI Certification for their product from manufacturer/ supplier/dealer. In any circumstances, steel reinforcement produced by re-rolling mills shall not be allowed to use in the work.
- 6.1.7.7 Every delivery of Steel reinforcement shall be accompanied by a manufacturer's test certificate conforming that the supplied Steel reinforcement conforms to relevant specifications.
- 6.1.7.8 For verifications of such purchase all the bills of manufacturer/ supplier/dealer will have to be furnished to the Nodal officer or his nominee.
- 6.1.7.9 The contractor shall have to procure the steel reinforcement of various sizes/diameters as per the working drawings, which shall be supplied only during execution of the work. No claims/disputes arising about details of steel reinforcement so provided shall be entertained

- 6.1.7.10 In case, if particular size(s) of steel reinforcement is not available with the approved manufacturers, the contractors shall have to intimate the Nodal officer or his nominee in writing along with documentary proof in this regard. Nodal officer or his nominee, at his discretion, may allow using alternate diameter of reinforcement bars provided that no claims/disputes arising out in respect of payment for difference in rate of steel shall be entertained.
- 6.1.7.11 Nodal officer or his nominee shall be at liberty to carry out independent testing of steel reinforcement at his discretion from any of Government Approved laboratory as per relevant I.S. specifications before use. The contractor shall make all the necessary arrangements for same and all the charges to be borne by the contractor.
- 6.1.7.12 The contractor shall procure the steel reinforcement bars of standard length as per relevant I.S.
- 6.1.7.13 Steel reinforcement which remaining unused shall not be removed from site without the permission of the Nodal officer or his nominee.
- 6.1.7.14 Payment for steel reinforcement shall be made on the basis of lengths of bars actually placed & measured in the work multiplied by the standard weight per unit length as given in the relevant IS code. The rates shall include for cutting & wastage, straightening, short & long length, & weight tolerance as per relevant IS codes & placing in position. Authorized laps, stiffening ring shall be measured and paid.

6.1.8 Structural Steel

- 6.1.8.1 The structural steel shall be purchased from the manufacturer or authorized distributors of M/s. Steel Authority of India Limited(SAIL)/M/s. Tata Iron & Steel company (TISCO) / Rashtriya Ispat Nigam Ltd.(RINL). In case the material not available with the manufacturer/ authorized distributors of SAIL/TISCO/RINL, the employer may permit to use structural steel manufactured by others.
- 6.1.8.2 Structural steel used in the works, other than steel in reinforced concrete and rails and fastenings shall comply with IS: 226“Structural steel (standard quality)” or IS 2062 “Structural steel (Fusion welding quality)”.
- 6.1.8.3 The structural steel shall be stored on site on timber or concrete supports suitably spaced and of sufficient height to keep steel clear of the ground. The steel shall be stored separately section-wise. The steel shall be stored in such a way as to avoid and prevent corrosion.
- 6.1.8.4 The testing shall be carried out as per approved quality assurance plan.

The cost of all tests on structural steel shall be deemed to be included in the quoted rates.

6.1.9 Micro Concrete

- 6.1.9.1 The fluid micro-concrete repair material shall be a single component, cement based, micro-concrete to which only the site-addition of clean water (and approved graded coarse aggregates to be washed before use, where specified) shall be permitted. The micro concrete shall contain no metallic aggregates, or chlorides and shall be shrinkage compensated in the plastic state.
- 6.1.9.2 The micro concrete in the flow able consistency should achieve a compressive strength of not less than 10N/mm² after 24 hours, 40N/mm² after 7 days and 50 N/mm² after 28 days at 30 degree Celsius. Most importantly, the cured micro concrete shall contain no metallic aggregates, or chlorides and shall be shrinkage compensated in the plastic state.
- 6.1.9.3 The unrestrained expansion shall be between 1 - 4%. The flexural strength shall not be less than 5 N/mm² @ 28 days. The micro concrete shall have a coefficient of thermal expansion similar to that of the host concrete. The mixed density of micro-concrete shall exceed 2100 kg/m³ at 27 degree Celsius.
- 6.1.9.4 **Product properties:** The following results to be obtained at Water: Powder ratio of 0.16 @ 30 degree Celsius

Typical result at 30° C Compressive strength (N/mm²)

(Tested on 70.7mm cubes as per BS 4551-80)

1Day	3Days	7Days	28Days
10	30	40	50

Tensile strength 2.0N/mm² @ 28 days

Flexural strength (BS4551 - 80): 5 N/mm² @ 28 days

Young's Modulus: 25 kN/mm²

Expansion characteristics (ASTM C827 - 1987): Unrestrained expansion 1 to 4%.

Pressure to restrain Plastic expansion: Approx. 0.004 N/mm².

Coefficient of thermal expansion: 10 - 12 x 10⁻⁶ / °C. **Thermal conductivity:** 1.5W/m°C

Fresh wet density (Mixed density @270C):2100 - 2200 kg/cum

Typical results of Micro concrete with graded coarse aggregates of maximum size 12mm.

Micro concrete: Coarse aggregate (SSD) (By weight):1: 0.75

Water: Powder ratio (By weight): 0.16

Workability: Flow able

Compressive strength (N/mm²)

1Day	3Days	7Days	28Days
15	35	45	55

6.1.10 Under Water Micro concrete

Under water micro concrete shall be used as a free flow or pumped material to repair deteriorated underwater or tidal zone concrete structures without significant 'wash-out' of the cement phase.

Product properties: -

Compressive strength: compressive strength test cubes to be cast under water and under restraint. (At 30 degree C) (Cube size:70.6mm)

Compressive strength (N/mm²) (BS1881-1983)

1Day	3Days	7Days	28Days
15	30	44	53

Tensile strength: Direct tensile specimens to be prepared under water and kept under restraint. The specimens to be cured submerged for 14 days at 30 degree C at the time of test. The tensile strength of the specimen exceeded 3 N/mm².

Flexural strength (BS4551 - 1980): 6.5N/mm² @ 7 days, 7.5N/mm² @ 28 days

Pull-out bond strength: 6N/mm²

Density of hardened material: 2100 kg/m³.

Setting time: Dependent on temperature. Typical values (at 300C) are as follows: **Initial Setting time 4 hrs, Final Setting time 6-8hrs.**

6.1.11 Sacrificial Anode

6.1.11.1 Product properties:

The Sow includes design, detailed engineering, manufacture, supply, installation and commissioning of Zinc anode with cable system as per SoW. The agency has to demonstrate suitable sacrificial zinc anode before erection and take approval from EIC.

6.1.11.2 The scope includes

- 6.1.11.2.1 Providing & fixing galvanic or Sacrificial anodes in the repair area at the interface of old & new concrete at 500mm c/c along the boundary of patch repair on to the reinforcement steel as per the recommendations of the manufacturer.
- 6.1.11.2.2 Each galvanic anode shall be having bar shape with approx. dimensions of 35mm X80mmX40mm and contain minimum 55grams weight of zinc, pre – manufacture, and consist of zinc in Compliance with ASTM B418- 95A Type I bright annealed and encased in a highly alkaline cementitious mortar with PH of 13.5 or greater.
- 6.1.11.2.3 The cementitious motor shall contain no chlorides or other corrosive constituents. Anodes shall be supplied with integral tie wire for tying to the reinforcing steel.
- 6.1.11.2.4 Anodes shall be supplied with integral tie wires for tying to the reinforcing steel.
- 6.1.11.2.5 Anode-to-steel continuity and steel-to-steel continuity within the patch should be verified with an appropriate meter;’ discontinuous steel should be tied to continuous bars using steel tie wire and re-tested. A value between 0 and 1 should be achieved.

6.1.12 Epoxy Bonding Agent

- 6.1.12.1 The bonding agent shall be two component epoxy resin system pre packed in distinct colours to give visual evidence for proper mixing.

6.1.12.2 Product properties:

Mixed resin and hardener only

Compressive Strength @ 23°C :65 MPa @ 7 days

Tensile strength @ 23°C :25 MPa @ 7 days Mixed

viscosity @ 25°C: 2450 ± 450cps

Pot life :2 hours @ 25°C,1 hour @ 40°C Recoat time:

8 hours @ 25°C,6 hours @ 40°C

Slant shear bond strength (BS 6319 part 4) :>11 MPa (Concrete failure)

Bond strength (ASTM D4541) >2.5 MPa (concrete failure)

Setting time 150 minutes @ 25°C

Meets the requirements of ASTM C881 Type 2 Grade

6.1.13 Membrane curing agent

6.1.13.1 The non-degrading membrane forming curing & sealing compound shall be acrylic resin-based formulation. The product shall comply with ASTM C 309 Class B. The product shall exhibit water loss not more than 0.55 kg/m² in 72 hours when tested as per ASTM C156. The product shall form non-degrading abrasion resistance film which shall also exhibit capability as primer for subsequent protective coatings.

6.1.13.2 Typical properties

Appearance: Clear/white liquid Specific gravity

Clear: 0.83 ± 0.01 at 25° C

White: 0.855 ± 0.01 at 25° C Flash point: 30oC

Dry film appearance: Clear or white

Loss of Water (ASTM C156): < 0.55 kg /m² Drying time (ASTM C309): 45 mins at 25oC

6.1.13.3 Protective Coating

The protective coating classified in to two parts

- (a) Inter tidal Zone
- (b) Above intertidal Zone/ water Splash zone

6.1.14 (I) Protective coating at inter tidal zone

6.1.14.1 Impregnating/Penetrating/Sealing coat

Damp tolerant, impregnating/penetrating/sealing coat shall be applied on the concrete surfaces in accordance with the recommendations/technical requirements of the Coating manufacturer prior to application of primer coat. The impregnating/penetrating/sealing coat shall normally be primer coat diluted using a thinner recommended by the coating manufacturer and shall be applied as per the recommendations of the manufacturer.

6.1.14.2 Primer coat

Primer coat shall be applied on prepared concrete surfaces already coated with an impregnating/penetrating/sealing coat and before application of top coat. The primer coat shall be applied in 2 coats to achieve a total DFT of 200 microns. The requirements of primer coat shall be as follows:

Type and composition	One component moisture cured urethane coating with MIO and hydrophobic resins for barrier properties
Resin type	Aromatic urethane
Volume Solids	65 (±2) %
Theoretical covering capacity	6.5 m ² /ltr at 100 µm
Touch dry time (minimum) at 24oC and 60 % RH	2.5 hours
Full curing time (minimum) at 24oC and 60 % RH	7 days
Over coating interval (minimum) at 24oC and 60 % RH	6 hours
Elasticity as per ISO 1520	3 (Erichsen scale)
Adhesion test Result pull off method at 23oC (As per ASTM D 4541) on steel surface	8 MPa (Min.)
Abrasion resistance (As per ASTM D 4060)	< 0.2 gm loss per 1000 rev. (Max.)
Flexibility (As per ASTM D 522)	35 % (Min)
Cathodic Disbondment After 28days, at 20oC (As per ASTM G 8/G 95) (to be reported on steel)	6 mm (max)
Direct Impact test as per ISO 6272	30 kg-cm

6.1.14.3 Top coat

Top coat shall be applied over primer coat after the specified re-coat interval of primer coat. The top coat shall be applied in single coat to achieve a DFT of 50 microns. The requirements of top coat shall be as follows:

Type and composition	One component moisture cured urethane coating with UV resistance properties
Resin Type	Aliphatic urethane

Volume Solids	54 (±2) %
Theoretical covering capacity	10.8 m ² /litr at 50 µm
Touch dry time (minimum) at 24oC and 60 % RH	3 hours
Full curing time (minimum) at 24oC and 60 % RH	4 days
Over coating interval (minimum) at 24oC and 60% RH	10 hours
Elasticity as per ISO 1520	3 (Erichsen scale)
Abrasion resistance (As per ASTM D 4060)	< 0.2 gm loss per 1000 rev. (Max.)
Flexibility 522) (As per ASTM D	35 % (Min)
Accelerated weathering test ASTM D 4587 (min 1000 hrs) i) Colour Change	Less than 2.0 OE QVA
(ASTM D 2244)ii) Gloss Loss (ASTM D 523)	Less than (30 gloss measured @ 60° angle)

(I) Protective coating above intertidal Zone/ water Splash zone

a) Acrylic elastomeric coating:

It comprises water based (solvent free), conforming code and specification, acrylic polymer modified with selected mineral fillers applied over the prepared surface to form an elastic elastomeric protective membrane.

The coating should have anti-carbonation and water vapor diffusion property and should be resistant to action of UV radiation. It should be waterproof and capable of bridging cavings and cracks. The coating protects exposed faces of the superstructure and portions of the substructure above water level of concrete bridges from the aggressive action of industrial polluted and marine/saline environment. The shelf life for such coatings shall not be more than 6 months.

It is necessary that the system should be capable of protecting the pre-stressed and reinforced concrete from all deleterious elements such as chlorides and sulphates. The protective treatment should allow excess water vapor in the concrete to evaporate out (breathing) without rupturing itself due to vapor pressure. The protective system itself should not

deteriorate from exposure to UV rays and weathering.

The Acrylic Elastomeric coating system shall satisfy the following requirements given in Table

Sr. No.	Parameter	Requirement	Reference
1.	Specific Gravity	1.35 to 1.40	IS : 345
2.	Solid Gravity	70 \pm 3%	IS : 345
3.	UV resistance	No colour change	ASTM – G – 53 / DIN – EN / 150 – 105
4.	IR-Spectrum	As per Acrylic Polymer	IR – Spectrometer standards
5.	Adhesion with concrete	1.5 N/m ²	ASTM – D – 4541 – 02 / DIN500014
6.	Dry film thickness	200 – 225 Microns [for minimum 2 coats]	
7.	Coverage	400 – 450 gm / m ² [2 coats]	
8.	Physical properties Diffusion resistance against Carbon dioxide	Equivalent air layer thickness S ₉ H ₂ O shall be > 50 m	DIN 53122 Part – I
9.	Diffusion resistance against water vapor	Equivalent air layer thickness S ₉ H ₂ O < 4 m	DIN 52615
10.	Water proofing characteristics	Percentage reduction in flux should be > 50%	
11.	Re-coatability	Min. 2 h to 72 h or as per manufacturers specification with the approval of the Engineer-in-Charge	

The primer shall satisfy the following requirements

- (i) System -Single component universal polymer primer
- (ii) Base-Acrylic Resin dispersion
- (iii) Curing- Air Curing
- (iv) Colour- Milk white, transparent application
- (v) Shelf life -6 months from date of manufacturing in tightly sealed container.

- (vi) Coverage-75-100 gm/m² (depending upon smoothness and absorption of concrete surface)

6.1.15 Polyester Resin grouts:

Polyester resin grouts are used for high strength corrosion resistant anchoring of bolts and bars from 12 – 51mm diameter into concrete, rock, masonry or brickwork where high speed of installation and early application of load is required.

6.1.15.1 Product Properties:-

- (i) **Compressive strength:** After the minimum time required before loading the grout typically attains a compressive strength in excess of 20N/mm² and an ultimate compressive strength of 70N/mm² in 7 days (50mm x 50mm x 50mm) when tested as per BS 6319 Part 2 : 1983.
- (ii) **Chemical resistance:** The cured resin is resistant to fresh and salt water, petrol, oils, grease and most acids, alkalis and solvents.

6.1.15.2 Epoxy based zinc rich primer for steel (Anti corrosive coating)

Two components, solvent borne zinc rich epoxy primer, providing active galvanic protection to steel. It is a thick grey liquid of paint-like consistency, recommended for use where chloride induced attack on steel is likely.

(i) Product properties: -

Aspect	Thick grey suspension
Mixed density	2.4 ± 0.1 kg/litre
Volume Solids, %	4(B) : 1(H)
Pot Life	120 Minutes at 25°C
Tack free time	25 Minutes at 25°C & : 10 Minutes at 40°C
Recoat time	6-8 Hours at 25°C & : 2-4 Hours at 40°C
Total zinc content in dry film	>84% by weight
D.F.T. per coat	> 50 microns
Application temperature	minimum 10°C : maximum 40°C
Shelf life	6 months under sealed properly stored condition.

6.1.15.3 **Coverage:** As per manufacture recommendations

6.2 OTHER MATERIALS

The works executed for under provisional sum, the material shall be as per relevant IS specifications or manufacturers specification.

6.2.1 RUBBER FENDER

6.2.1.1 Arch fender of size 500H 7200mm long of rubber R-1 Grade conforming to ASTM D-2000-12, 4AA, 717, A13.B33, C12, K11, Z each with rated Energy Absorption of 60.6 T-m Deflection 51.5% with accessories stainless steel SS 316 M36 x 413 L resin anchor stud with nuts and washers of 2.5M Long. With reaction force 298.2KM, Energy absorption 35.3 KN – MTR, Deflection 50% and Performance tolerance $\pm 50\%$.

6.2.1.2 DD Fender size 400X 400 and 2000mm long of rubber R-1 Grade conforming to ASTM D-2000-12, 4AA, 717, A13. B33, C12, K11, Z each with Deflection 51.5% along the outer side of the waist Beam as shown in the approved drawings with Stainless Steel SS 316 M30 resin anchor studs with nuts.

6.2.1.3 The rubber fender shall be subjected to inspection by the Indian Register of Shipping (IRS) or American Bureau of Shipping (ABS) or Bureau Veritas at the cost of contractor. Accordingly, a test certificate may be submitted to the Engineer-in- Charge before putting into use.

6.2.1.4 **MATERIAL SPECIFICATION:** Polymer/Rubber: Natural/ SBR; Colour: Black; Finish: Good/Smooth.

PROPERTY	TESTING STANDAR D	CONDITION AND ADDITIONAL DETAIL	REQUIRMENT
TENSILE STRENGT H	ASTM D 412	ORIGINAL	160kg/cm x cm
	ASTM D 573	Aged for 96 hours at 70°C	ORIGINAL VALUE -25 % (Max)
ELONGATIO N BREAK	ASTM D 412	ORIGINAL	350 % (Min)
	ASTM D 573	Aged for 96 hours at 70°C	ORIGINAL VALUE -25 % (Max)
HARDNESS	ASTM D 412	ORIGINAL	72 ⁰ ± 3 ⁰ (Max) shore A

	ASTM D 573	Aged for 96 hours at 70°C	ORIGINAL VALUE +10 points
COMPRESSION SET	ASTM D 395	Aged for 22 hours at 70°C	30 % (Max)
OZONE RESISTANCE	ASTM D 1171	@50PPHM	NO CRACK VISIBLE BY EYES
WATER RESISTANCE	ASTM D 471	70 hours at Room temperature	10 % Max Swell
TOLERANCE	+/-4 % on cross section and +/- 30mm on lengths.		

6.2.2 BOLLARD

6.2.2.1 Cast Steel Bollards

6.2.2.1.1 General

Cast steel bollards of line pull capacity 30T are proposed for the jetty. The arrangement of bollards shown in the drawings is only tentative and shall be altered/changed, based on detailed designs.

6.2.2.1.2 Conditions for supply of Stag horn cast steel bollards

The specifications of Bollard, fixtures and other requirements etc., shall be as per details given here under.

Sl. No.	Item	Requirement
<u>A. BOLLARD:</u>		
1.	Type of bollard	Cast Steel Bollard I.S: 5625-1970 or latest (sketch enclosed)
2.	Size (Nominal Diameter)	As per sketch
3.	Capacity (force)	30T
4.	Dimensions and thickness	As per Sketch and IS:4897 for cast steel material
5.	Other requirements for bollard	As per the clauses of IS:5625 for cast steel material
6.	Material to be used in the bollard	Cast steel (Carbon Steel) as per IS:1030 – 1998
	a) Grade Designation	230-450 W as per the Table 1 of IS:1030

	b) Chemical Composition	As per Table 1 of IS:1030 related to the specified grade.
	c) Mechanical properties	As per Table 2 of IS: 1030 related to the specified grade.
<p><u>Method of casting:</u> The steel for the casting would be made from open hearth, electric duplex acid Bessemer, basic oxygen (LD) or a combination of these processes.</p> <p>The casting would be made under strictly controlled condition to ensure chemical composition, soundness, uniformity, correct grain size to develop shock resistance properties and to avoid any blow-holes.</p>		
<u>B.FIXTURES:</u>		
1.	Material of bolts, nuts, washers	All fixtures are of stainless steel AISI 316 grade (X 04 Cr 17 Ni 12 Mo 2) conforming to IS 6603 – 2001 and IS 6911-1992.
<u>C. TESTS ON CAST STEEL (Carbon Steel)</u>		
1.	Tensile Test	Tensile test shall be carried out in accordance with IS:1608-1995
2.	Impact test	Impact Test shall be carried out in accordance with IS1757-1988.
3.	Bend Test	Bend test shall be carried out in accordance with IS1599-1985.
4.	Nondestructive tests	Random ultrasonic flow detector test as per IS 3664-1966 for checking the thickness of the castings and to detect the defect in the casting.
5.	Ultra-Sonic Examination	This test shall be carried out in accordance with IS: 7666:1988
6.	Magnetic particle examinations	Magnetic particle inspection shall be carried out in accordance with IS 10724: 1990
7.	Heat Treatment	Magnetic particle inspection shall be carried out in accordance with IS: 10724: 1990.

8.	Chemical analysis	The manufacturer shall carryout chemical analysis from a sample of each melt and shall supply a test certificate of the chemical analysis of the sample for each melt to satisfy the composition given in Table-1 of IS: 1030 related to the specified grade
<u>D.GENERAL:</u>		
1.	The bollards shall be designed to with stand sudden jerking effect from ropes connected to vessels and to resist rubbing effect of the ropes on its sides.	
2.	The manufacturers/supplier shall ensure that the cast steel bollards are of specified pull capacities and a certificate to that effect shall be submitted by the manufacturers/suppliers.	
<u>E. TESTS ON FIXTURES:</u>		
1.	Tests	All tests shall be carried out in accordance with the requirements specified in IS 6603:2001 and IS 6911:1992.
<u>F.INSPECTION:</u>		
1.	Inspection	Third party inspection by IRS shall be arranged by the supplier to witness the above tests. The inspection reports shall to be submitted to DPA duly certified by the inspecting agency Indian Register of Shipping (IRS) or American Bureau of Shipping (ABS) or Bureau Veritas at the cost of contractor for approval by DPA before dispatch of Bollards.

6.2.2.1.3 Specifications for Bollards

The bollards have to withstand sudden jerking effect from ropes connected to vessels and to resist rubbing effect of ropes on its sides.

6.2.2.1.4 Standards and Codes

The following latest edition of standards and codes or approved equivalent international codes shall be followed for the manufacturing and testing of cast steel bollards.

IS1030 -Specifications for carbon steel casting for general Engineering purposes.

IS1387 -General requirements for supply of metallurgical materials.

IS 1599 -Method for bend test for steel products other than sheet, strip, wire and tube.

IS1608 - Method of tensile testing of steel products

IS3664 - Code of practice for ultrasonic Pulse Echo Testing by contact and Immersion methods.

6.2.2.1.5 Properties

6.2.2.1.5.1 Bollards shall be of Cast Steel.

6.2.2.1.5.2 The casting shall conform to IS.1030. The mechanical properties of it shall be:

Tensile strength : 540 MPa (min)

Elongation : 15% (Gauge length4JA)

Yield strength : 50% of min. tensile strength Angle of bend :
60%(min)

Chemical composition:

6.2.2.1.5.3 The limit for sulphur and phosphorous in the steel when analysed shall be:

Sulphur : 0.05% max.

Phosphorous : 0.5 %max.

6.2.2.1.6 Specification for Casting

a. Method of Casting

The steel for the casting can be made from open hearth, electric, duplex, acid Bessemer, basic oxygen (L.D) or a combination of these processes.

Casting manufactured from steel made by Bessemer processes will not be accepted. The steel shall conform in quality, strength, hardness etc. to IS 1030.

The casting shall be made under strictly controlled condition to ensure chemical composition, soundness, uniformity, correct grain size to develop shock resistance properties and to avoid blow- holes.

b. Moulding and Moulding Tolerances

The casting shall be accurately moulded in accordance with the drawing. The dimensional tolerance that can be allowed for all important dimensions shall be ± 1.6 mm.

The castings shall be sound, clean and free from sand. They shall be free from distortion, blowholes, twists and other injurious defects. They shall be properly flattened and dressed.

c. Heat Treatment

All casting shall be supplied in the heat-treated condition, which shall be carried out at suitable temperature to give the mechanical properties as specified. The casting shall thoroughly be annealed to refine the crystalline structure throughout the casting by heating to uniform temperature no less than the normalising temperature and allowing to cool slowly from maximum temperature in a uniform manner or alternatively normalizing by heating in a similar manner and allowing it to cool in air away from draughts.

In no case it shall be allowed to conduct heat treatment process for more than two times on the same casting.

The method of heat treatment and all relevant records shall be furnished.

d. Marking Procedure

Each casting shall be legibly marked with

- Number or identification mark by which it can be traced to the melt from which it was made and
- The manufacture's initial and trademark
- The capacity of the bollard in bold letters-(**30T**)

e. Defects and Rectification

If the casting is found defective during the course of any subsequent preparation or machining, it shall be rejected even if it has been found satisfactory during earlier testing, if any.

No casting shall be repaired or welded without the prior permission of the Employer or his representative. When repairs that might have been so sanctioned are completed, the concerned casting shall be again presented for inspection. When welding is carried out, the welding technique and the preparation of the casting for repairs shall be accordance with IS 5530.

6.2.2.1.7 Testing

a. Test Sample

The test samples shall be cast separately from the casting. The test sampling shall be cast from moulds of the same material, which is used for casting and shall be poured at the same time and from the same melt as the casting they represent. The samples shall be treated along with casting they represent.

The test samples shall be provided to the extent of 2% of the number of casting from each melt but in no case less than two samples per melt. When a casting is made from more than one melt, at least four tensile tests and four bend tests shall be made from samples situated as far apart as possible in the casting. Some of the test samples shall be taken as near the tip and others from as near the bottom of the casting as is practicable.

Samples shall be tested in approved laboratory.

b. Type of Test

i. Tensile Test

The tensile test shall be carried out in accordance with IS 1608. The minimum tensile strength and elongation shall be as given earlier in this specification.

ii. Bend Test

The bend test shall be carried out in accordance with IS 1599. This test piece shall be capable of being bent without fracture to the angle specified earlier in this specification. It should be bent round a former having a radius of 25mm.

iii. Non-destructive Tests

The following non-destructive tests at Cross-sections decided by the Employer shall be carried out.

Ultrasonic flaw detector test as per IS 3664 for checking the thickness of the castings and to detect the defects in the casting.

- Magnetic particle test
- Ringing test

The Engineer-in-charge shall indicate the location to be examined on the casting and the stage of manufacture at which such examinations are to be made.

The technique, inspection and interpretation of results shall be laid down and agreed before the manufacture is commenced.

iv. Test by Chemical Analysis

Chemical analysis test shall be conducted to ascertain the percentages of sulphur and phosphorous content in the material of which the casting is going to be made. A certificate of chemical analysis of such cast shall be supplied when required to do so by the Employer.

v. Testing Facilities

The manufacturer shall supply the casting required for testing free of charge and shall at his own cost furnish and prepare the necessary test pieces and supply labour and appliances for conducting all tests at his own premises in accordance with this specification.

If such facilities are not available at the place of manufacture for conducting the prescribed tests, the manufacturer shall bear the cost of transportation for the test pieces or casting and for carrying out the tests at a place approved by the Employer.

vi. Re-test

If any of the test pieces fails to pass any of the mechanical tests specified under tensile test and bend test, two further samples which represent that particular casting or castings shall be selected and tested in the same manner. The manufacturer shall have the option, if he so desires, to re-heat-treat (not more than twice) the casting before the two further samples are accepted. Should either of these tests fails, the casting represented shall be liable for rejection.

6.2.2.2 Bolts, Nuts and Washers

6.2.2.2.1 Bolts and Nuts

All anchor bolts shall be of mild steel conforming to IS:432 Grade I and nuts shall be made from steel conforming to IS 2062 and shall conform to IS:3138.

6.2.2.2.2 Washers

All plain washers shall conform to the requirements of IS:2016.

All bolts, Nuts and Washers shall be galvanised conforming to IS:1367.

6.2.2.2.3 Fixing Details

The manufacturer shall submit the detailed fixing arrangements of the bollard to the deck with full details of the bolts etc. to the Engineer-in-charge for his approval.

The manufacturer shall submit the following documents and certificates at suitable time for the approval of Engineer-in-charge.

6.2.2.2.3.1 Drawing showing the complete details of cast steel bollard.

6.2.2.2.3.2 Drawing showing the fixing arrangements of bollard in the deck of the jetty.

6.2.2.2.3.3 All relevant test certificates.

6.2.2.3 Certificate from Approved Classification Society

6.2.2.3.1 Test Certificate & Acceptance Criteria

All bollards and accessories shall be certified by competent testing agency such as Indian Register of Shipping (IRS) or American Bureau of Shipping (ABS) or Bureau Veritas at the cost of contractor.

The design of the bollard shall be as approved by the Classification Society appointed by the contractor with the approval of Chief Operations Manager/Chief Engineer and the bollard shall be built under their supervision. Such approval issued by the Classification Society along with a copy of the design calculations of each component of bollard and fixing bolt and a copy of the detailed drawing shall be furnished to the Chief Engineer and consent obtained before the commencement of the casting of

the bollard. The required tests shall be conducted under the supervision of the classification society. A certificate to the above effect as well as the bollards conform to the technical requirements stipulated in the contract, issued by the classification society shall be furnished along with bollards supplied. All cost and fee payable to the classification society for rendering the above services and costs for any rectification works carried out as required by the classification society shall be borne by the contractor and shall be included in the rate quoted.

6.2.2.3.2 Installation

- a. If required, resin anchor system of —HILTI/ equivalent approved system shall have to be used for fixing the bolt to the connecting structure.
- b. The installation work shall be carried out in accordance with the requirements of the Engineer-in-charge, employing sound engineering techniques and modern methods with the approval of the Engineer-in- charge.

6.2.3 RUBBER MOLDED MOORING LADDER

Rubber molded mooring ladder in between two arch fenders. Ladder of width 375mm and 7600mm long as shown in the drawing comprising of rubber molded flat 120mm*16mm (2 nos.), MS round bar (rubber molded) of 25mm dia. for steps fixed with SS 316 M24 nuts and washer, rubber coated L mounting bracket of 150mm*305mm*20mm connecting flat with SS 316 M20 bolt and with resin anchor bolt SS316 M30 bolt along with nuts and washers with embedment depth of 210mm. In addition, MS Handrail of SS 316 of 30mm dia shall also be provided on top of the deck as per the dimensions shown in the approved drawing. Flat, Bracket, Rung and Insert shall be in accordance with ASTM A36 or Equivalent. All fixtures shall be of SS316.

6.2.4 WORKMANSHIP

6.2.4.1 General

- a) A high standard of workmanship in all trades will be required. The Contractor shall ensure that only skilled and experienced tradesmen are employed.
- b) Indian Standards where mentioned in this Specification shall be the latest editions including amendments, if any, issued by Indian Standards Institution, one month prior to the date of receipt of the Tenders.
- c) The Contractor shall be responsible for supply, use and maintenance of all construction plant and equipment and he shall ensure that it is suitable for the work and is maintained in such

manner as to ensure safe and efficient working. The Engineer-In-Charge may direct unsuitable plant to be removed from the site and replaced by plant to his satisfaction at the cost of the Contractor.

- d) The Contractors supervisory staff shall be fully experienced in the type of works being carried out under this contract.
- e) The Contractor will be required to furnish a certificate from the manufacturer and suppliers of materials used in this work that the works have been executed as per their standard specification for the said materials.

6.2.5 Reinforcement

- 6.2.5.1.1 Bar bending schedules will be prepared by the contractor and shall be submitted to the Engineer-In-Charge in duplicate for approval at least two weeks before the bars are to be bent. The Engineer-In-Charge will check and return one copy for the Contractor's use, with amendments if any. The cost of preparing schedules will be deemed to be included in the rates for reinforcement in the Bill of Quantities. Any approval given by the Engineer-In-Charge shall, in no case, relieve the Contractor from being responsible for the accuracy and correctness of bar bending schedules. Bends, cranks or other labour on reinforcement shall be carefully formed in exact accordance with the Drawings or bar bending schedules; otherwise all bars shall be made cold round a former having a diameter four times the diameter of the bars.
- 6.2.5.1.2 Stirrups and binders shall be bent to the radius of the bars against which they are to be bent. Bending shall be in accordance with IS: 2502 "Code of practice for bending and fixing of bars for concrete reinforcement." Heating of bars will not be allowed. Bars incorrectly bent shall be used only if means for strengthening and rebinding have been approved by the Engineer-In-Charge. No reinforcement bar shall be bent when in position without the Engineer's approval whether or not it is partly embedded in hard concrete. Bar bending schedules shall be prepared as per IS:2502.
- 6.2.5.1.3 All bars shall be bound tightly together, where they cross, with black annealed steel wire 1 mm or over in diameter. The free ends of binding wire shall be bent inwards.
- 6.2.5.1.4 The number, size and form of all reinforcement shall be in exact accordance with the Drawings. The reinforcement shall be placed,

fixed and maintained in the forms during the placing and compaction of the concrete. Horizontal bars shall be suspended or supported with concrete blocks to prevent them from sagging. The spacer blocks shall be pre cast from concrete of the same class as the concrete in which they are to be embedded except that the largest size of aggregate shall be 10 mm. Each block shall be cured for 10 days or more. Each block shall be secured to the reinforcement with wire or spring clip embedded on the center of the block so that it shall not be in contact with the shuttering or subsequently cause rust marks on the concrete. Where necessary spacer bars, and fixed by the contractor to maintain reinforcement rigidly in the correct position and to the satisfaction of the Engineer-In-Charge. Any ties stirrups connecting the bars shall be taut so that the bars are properly braced, inside of their curved parts in actual contact with the bars round which they are intended to fit.

- 6.2.5.1.5 Where splicing and/or overlapping in reinforcement are required, the bars shall be provided with such splices or overlaps as are shown on the Drawings or directed by the Engineer-In-Charge.
- 6.2.5.1.6 Butt welding of reinforcing steel bars shall only be used where specified or shown on the Drawings unless permission in writing has previously been given by the Engineer-In-Charge. Where butt welding is carried out the ends of the bars shall be prepared with single 45° V and a backing plate shall be used. The minimum root face will be one quarter of the bar diameter.
- 6.2.5.1.7 Minimum cover to reinforcement shall be equal to that specified or shown on the Drawings. Where two bars cross the outer one shall have the minimum cover, unless specified otherwise.
- 6.2.5.1.8 All steel reinforcement before the concrete is deposited shall be cleaned, free from dust, loose scales, oil, rust, grease or any other deleterious material. Particular care shall be taken to avoid contamination of reinforcement with mold oil.
- 6.2.5.1.9 No concrete shall be deposited until all reinforcement has been inspected and approved by the Engineer-In-Charge. There shall be in attendance on each concreting gang a competent steel fixer who shall ensure that the reinforcement and other embedded fittings are kept in position before placing and compacting of the concrete.
- 6.2.5.1.10 Bending of reinforcement shall strictly be in accordance with the

approved drawings, or IS:2502 or as ordered by the Nodal Officer or his

nominee. No reinforcement bar shall be bent when in position without the approval of the Nodal Officer or his nominee, whether or not it is partly embedded in the hard concrete.

6.2.5.1.11 All bars shall be bound tightly together where they cross, with annealed steel wire 1.5 mm in diameter. The free ends of the binding wire shall be bent inwards.

6.2.5.1.12 All types of reinforcement shall be correctly placed and fixed in position entirely to the satisfaction of the Nodal Officer or his nominee. The cost of providing tying wire as well as space blocks rods shall be deemed to be covered in the rate for reinforcement steel.

6.2.5.1.13 Where splicing and/ or overlapping in reinforcement are required, the bars shall be provided with such splices or overlaps as are shown on the drawings or as directed by the Nodal Officer or his nominee.

6.2.5.1.14 Welding of reinforcement shall be in accordance with the approved drawings or as desired/ordered by the Nodal Officer or his nominee and in accordance with IS: 2751 and IS:456.

6.2.5.1.15 Cover to reinforcement shall not be less than that specified or shown on the drawing. Where two bars cross, the outer shall have the minimum cover.

6.2.5.1.16 All steel reinforcement before the concrete is deposited, shall be clean, free from dust, loose scales. Oil, rusts grease or any other deleterious materials. Particular care shall be taken to avoid contamination with oil.

6.2.5.2 Shuttering

6.2.5.2.1 All shuttering and supports included under the contract shall be designed by the Contractor. The Contractor shall be fully responsible for the safety of the design.

6.2.5.2.2 Form shall be true to shape, lines and dimensions of the concrete works as shown on the Drawing. The Contractor shall fix all the form work in perfect alignment. The form work shall be securely braced so as to be able to withstand, without appreciable displacement, deflection or movement of any kind, the weight of the construction or movement of persons any material and plant.

All the joints should be water tight to prevent leakage of cement slurry from the concrete. Wedges and clamps are to be used wherever practicable.

6.2.5.2.3 Forms or shutters shall not be disturbed until the concrete has sufficiently hardened. The proper time shall be determined by the Engineer-In-Charge.

6.2.5.2.4 The shuttering provided for surfaces shall be such as to produce a first class finish on the concrete, free from marks or any other disfigurement and quality to the satisfaction of Engineer-In-Charge. Before concreting is commenced, shuttering and centering shall be carefully examined and the space to be occupied by the pour thoroughly cleaned out. The inside of shutters shall be treated with a coating of an approved substance to obviate adhesion and, where necessary to prevent absorption from the concrete the shutters shall be thoroughly wetted shortly before concreting is commenced. The Contractor shall provide all necessary labour, supervision, material, equipment and tools to the entire satisfaction of the Engineer-In-Charge.

6.2.5.3 Under water micro concrete

6.2.5.3.1 **Preparation:** Substrate must be clean and sound. All loose material must be removed. Substrates which are permanently immersed should be sand blasted or cleaned with a high pressure water jet. Non-immersed or intermittently immersed substrates can also be prepared using these techniques. Depending on the circumstances, scrabbling or bush hammering may be appropriate. In view of the fluid nature of base component all shuttering must be leak proof. This can be achieved using foam rubber sealing strips at the edges.

6.2.5.3.2 **Mixing:** The quantity of water required to achieve a fluid consistency must be accurately measured for each mix. Each 25 kg bag requires 5.5liters of water [May vary based on site condition]. A mechanically powered mixer must be used. Ensure that the machine capacity and the number of operators is adequate to enable grouting to be carried out as a continuous operation. The specified amount of water shall be placed in the mixer. The underwater micro concrete pack is opened in the mixer and added slowly while mixing continuously. When all contents are added, mixings shall be continued for a minimum of 5 minutes making sure that a smooth, even mix is obtained. The mixed material shall be passed through a 5mm sieve to remove any lumps prior to

placing.

6.2.5.3.3 **Placing:** The mixed material shall be placed within 20 minutes of mixing to gain full benefit of the expansion process. Continuous material flow is required and the material should be poured or pumped through a flexible tube, minimum diameter 50mm, to the lowest point in the form. At the start of the operation, the material flow should be restricted in order to avoid any water entrapment. The bottom of the tube maybe raised as necessary to reduce any back pressure but should not be raised above the level of the material.

6.2.5.3.4 **Application thickness:** -UW micro concrete may be placed in thicknesses up to 80mm in one pour when placed above water. When placed underwater, the heat sink effect in this environment permits thicknesses up to 150mm to be placed. For thicker sections up to 200mm above water and 400mm under water, it is necessary to fill out underwater micro concrete using a clean, rounded and well graded aggregate in the size range 2mm up to 10mm. The quantity of aggregate added should not exceed 1part aggregate to 1part UW Concrete by weight. For such mixes a concrete mixer must be used. Unrestrained surface area should be kept to a minimum.

6.2.5.3.5 **Curing:** Curing will not be required in intermittently or totally submerged situations. However, when cast above water, all exposed surfaces should be thoroughly cured.

6.2.5.4 Micro Concrete

6.2.5.4.1 **Preparation:** The unrestrained surface area of the repair must be kept to a minimum. The formwork should include drainage outlets for pre-soaking and, if beneath a soffit, provision for air venting. Provision must also be made for suitable access points top our or pump the mixed micro-concrete in place. Defective concrete surfaces must be cut back to a sound base. Smooth surfaces should be mechanically roughened. Corroded reinforcing steel should be exposed around its full circumference and cleaned to remove all loose scale and corrosion deposits. It is important to clean the steel to a bright condition.

6.2.5.4.2 **Placing:** The mixed material shall be placed within 20 minutes of mixing to gain full benefit of the expansion process. Continuous material placement is required.

6.2.5.5 Anti-carbonation Paint

The exposed concrete surface shall be thoroughly cleaned and apply one coat of primer and two coats of anti-carbonation acrylic elastomeric paint conforming the requirements of IRC-SP 80 manufactured by Fosroc, BASF, SIKKA, Pidilite or equivalent. The application procedure shall be as per manufactures manual or as directed by Engineer-In-Charge. Contractor has to do necessary scaffolding, store of material, safety equipment's, labours, material etc. complete as per direction of Engineer-In-Charge.

6.2.5.6 Galvanized structural steel

The structural steel members shall be fabricated and hot dipped galvanized (galvanized thickness shall not be less than 80 micron) for mooring rings, ladders, hand railing, expansion joint angles and other inserters as directed by Engineer-In- Charge. Cost for transportation, material, manpower handling, fixing, coating etc. shall be included in the quoted rates.

6.2.5.7 Sacrificial Anode

Concrete shall be removed from around and behind all corroding rebar in accordance with good concrete repair practice such as ICRI Guideline R310.1R. Exposed reinforcing steel should be cleaned to remove all residual rust and concrete residue. The anode units and repair material should be installed immediately following preparation and cleaning of the steel reinforcement. The location and spacing of the units shall be as specified by the designer [refer to design criteria]. The units can be placed around the perimeter of the repair or on a grid pattern to protect a second mat of steel if required. Securely fasten the anode units from the side or beneath the exposed rebar as close as practical to the surrounding concrete (preferably within 4 in. (100 mm)) while ensuring that enough space remains to fully encapsulate the unit in the repair. Wrap the tie wires around the clean reinforcing steel at least one full turning opposite directions and twist tight for secure connection. The minimum cover of the repair material over the units should be $\frac{3}{4}$ in. (20 mm). Anode-to-steel continuity and steel-to-steel continuity within the patch should be verified with an appropriate meter; discontinuous steel should be tied to continuous bars using steel tie wire and re-tested. A value between 0 and 1 ohm should be achieved.

6.2.5.8 Epoxy Bonding Agent

6.2.5.8.1 Preparation: All surfaces to be treated must be firm, dust free and clean. In some cases, the existing concrete must be chipped to a sound substrate. Where surfaces are contaminated with oil or grease, this should be removed by using a strong industrial detergent or organic degreaser. Surface should be washed thoroughly with water and dried before the application

6.2.5.8.2 Mixing: The entire contents of the hardener can should be poured

into the resin container and the two materials thoroughly mixed until a uniform colour is obtained. To facilitate application at temperatures below 10 °C the separate components should be warmed in hot water to a maximum of 25 °C before mixing.

6.2.5.8.3 Coating: Mixed coating material should be brush applied to the prepared surface. The new concrete should be placed within 6 hours at 30°C to the coated substrate, when it is in a tacky state.

6.2.5.9 Membrane curing agent

6.2.5.9.1 Surface Preparation: The object of the surface preparation is to achieve a clean sound surface with a good mechanical key. All substrates should be cleaned and free of dust, plaster, oil, paint, grease, corrosion deposits, and any other deleterious substances. Laitence should be removed by mechanical means. Oil or greasy deposits should be removed by suitable means. All surfaces so treated should be thoroughly washed with clean water. Smooth substrates must be mechanically roughened e.g., by scrabbling, needle gun or grit/ sand blasting to provide a mechanical key.

6.2.5.9.2 Concrete Repairs: Remove all surface dust and debris. Any reinforcing steel in the repair area should be exposed around its full circumference and cleaned to remove all loose scale and corrosion deposits and then primed with zinc rich Primer.

6.2.5.9.3 Priming: Immediately before priming, the concrete substrate should be thoroughly dampened with water and any excess being brushed off. Scrub membrane curing agent into the substrate. Avoid pudding of the emulsion. The repair mortar/topping should be applied whilst the primer is still tacky. The bond coat becomes tacky in about 2 minutes and best results are achieved if the mortar is applied within the next 5-10min.

6.2.5.10 Protective Coating

6.2.5.10.1 Protective Coating above inter tidal zone

(i) Base Primer:

Preparation: All surfaces should be dry and free from contamination such as oil, grease, loose particles, decayed matter, moss, algae growth, laitance, and all traces of mould release oils and curing compounds. This is best achieved by lightly grit blasting the surface. Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the grit blasting process.

Applying: In order to obtain the protective properties, it is important that the following application instructions shall be followed strictly.

Application Tool	Brush/Spray – portable spray equipment of the knapsack type.
No. of coats	Minimum one coat and maximum two coats (for highly porous concrete substrates).
Application rate/Coverage	As recommended by manufacturer
Inter coat period	Minimum 2 hrs @ 25° C

Note: application of Primer should not commence if the temperature of the concrete substrate is below 10°C.

Any areas of Glass should be masked. Plants, grass, joint sealants, asphalt and bitumen – painted areas should be protected during application of Primer.

The primer should be allowed to dry for a minimum of two hours (at 25°C) before application of primer. Under no circumstances should Primer be over coated until the surface is properly dry.

(ii) Top Coating:

Preparation: All surface should be dry and free from contamination such as oil, grease, loose particles, decayed matter, moss, algae growth, laitance, and all traces of mould release oils and curing compounds. This is best achieved by lightly grit blasting the surface. Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the grit blasting process.

Application: Application should not commence if the temperature of the substrate is below 10 deg C. Any areas of glass should be masked. Plants, grass, joint sealants, asphalt and bitumen - painted areas should be protected during application.

The primer should be applied in one or more coats until the recommended application rate of 0.4 litre per square meter has been achieved. This is best accomplished by using portable spray equipment of the knapsack type.

The Coating should be allowed to dry for a minimum of two hours (at 25° C) before application. May be applied by the use of suitable brushes or rollers. All primed substrates should be treated with two coats. The material should be stirred thoroughly before use. The first coat should be applied to all areas by the use of suitable brushes or rollers to achieve a uniform coating with wet film thickness not less than 175 microns. This coat should be allowed to dry before continuing. The second coat should be applied exactly as detailed above, again achieving a wet film thickness not less than 175micron.

6.2.5.10.2 Protective Coating at inter tidal zone

(i) Initial coating

Preparation: All surface should be dry and free from contamination such as oil, grease, loose particles, decayed matter, moss, algae growth, laitance, and all traces of mould release oils and curing compounds. This is best achieved by lightly grit blasting the surface. Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the grit blasting process.

Application:

Mixing: Material temperature must be 5° F (3°C) above the dew point before opening and agitating. Power mix thoroughly prior to application. Do not keep under constant agitation. Apply a 3-6 oz (9-18cl) solvent coat over material to prevent moisture intrusion and cover pail.

Brush/Roller

Brush: Natural Fiber

Roller: Natural or synthetic fiber cover

Nap: 1/4" to 3/8"

Core: Phenolic

Reduction: Typically, not required

Airless Spray

Pump Ratio: 28-40:1

Pressure: 2400-2800 psi (170-200 Bar)

Hose: 1/4" to 3/8"

Tip Size: .013-.019

Filter Size: 60 mesh (250 µm)

Reduction: Typically, not required

Conventional Spray

Fluid Nozzle: E Fluid Tip

Air Cap: 704 or 765

Atomizing Air: 45-75 lbs.

Fluid Pressure: 15-20 lbs.

Hose: 1/2" ID; 50' Max

Reduction: Typically, not required.

Application Conditions

Temperature: 10°-122° F (-12°-50° C)

This temperature range should be achieved for ambient, surface and material

temperature. Substrate must be visibly dry.

(ii) Quick Cure Accelerator

Preparation: All surface should be dry and free from contamination such as oil, grease, loose particles, decayed matter, moss, algae growth, laitance, and all traces of mould release oils and curing compounds. This is best achieved by lightly grit blasting the surface. Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the grit blasting process.

Application: Quick Cure accelerated coatings are designed for spray application. Brush and roll applications are possible; however, the usable pot life may be drastically reduced when the accelerated coating is exposed to repeated dipping of brushes or mixing in the roller pan. Avoid excessive mixing or any action that will introduce atmospheric moisture into the coating.

(iii) Top coating

Preparation: All surface should be dry and free from contamination such as oil, grease, loose particles, decayed matter, moss, algae growth, laitance, and all traces of mould release oils and curing compounds. This is best achieved by lightly grit blasting the surface. Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the grit blasting process.

Application

Mixing: Material temperature must be 5° F (3°C) above the dew point before opening and agitating. Power mix thoroughly prior to application. Do not keep under constant agitation. Apply a 3-6 oz (9-18cl) solvent float over material to prevent moisture intrusion and cover pail.

Brush/Roller

Brush: Natural Fiber

Roller: Natural or synthetic fiber

cover Nap: 1/4" to 3/8"

Core: Phenolic

Reduction: Typically, not required

Airless Spray

Pump Ratio: 28-40:1

Pressure: 2400-2800 psi (170-200 Bar)

Hose: 1/4" to 3/8"

Tip Size: .013-.019

Filter Size: 60 mesh (250 µm)

Reduction: Typically, not required.

Conventional Spray

Fluid Nozzle: E Fluid Tip

Air Cap: 704 or 765

Atomizing Air: 45-75 lbs.

Fluid Pressure: 15-20 lbs.

Hose: ½" ID; 50' Max

Reduction: Typically, not required

Application Conditions

Temperature: 10°-122° F (-12°-50° C)

This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry.

6.2.5.11 Epoxy based zinc rich primer for steel

- (i) **Surface preparation:** The steel surfaces should be grit blasted or wire brushed to remove all traces of corrosion. Ensure no oil, grease or dust is present. Surfaces should be dry.
- (i) **Mixing: Stir** each component of Zinc rich primer and add Hardener to Base and mix using a drilling machine fitted with a mixer.
- (i) **Application: Apply** Epoxy based Zinc rich primer immediately after completion of preparation to prevent any contamination. Do not leave blasted or prepared steel uncoated. Brush the Epoxy based Zinc rich primer onto the prepared substrate, ensuring uniform and full coverage, particularly on the back face of reinforcement. In case of doubt on achieving continuous film in one coat apply second coat immediately after the drying of the first coat. Repair mortars can be applied as soon as the Epoxy based Zinc rich primer is dry. Epoxy based Zinc rich primer is not designed as a finished coating. Although protection to the steel will be provided for some time, over coating should be carried out as soon as possible if the environment is aggressive.

6.2.5.12 Polyester resin grouts

- (i) **Hole preparation and formation:**
Optimum performance resin grout requires rough sided, dust free holes. Uses of rotary percussive drills with air or water flushing are recommended. Diamond drilled holes should be under-reamed unless necessary safety factors are incorporated. Cast holes should preferably be inverse dovetail configuration. If parallel sided holes are cast they should be rough to provide adequate keying.

(ii) Bar preparation:

All bars should preferably be degreased and all flaky rust removed.

(iii) Mixing:

A complete pack of resin and catalyzed filler should be mixed in one operation. Mixing may be carried out mechanically. When a smooth, even consistency is achieved the grout is ready for use and should be placed well within the gel time of the grout

(iv) Installation

The grout should be poured steadily into the prepared holes. The anchor bar is then pressed into the hole to the required depth. Slight agitation of the bar will assist in achieving a complete bond. The bar should then be left undisturbed in the required position until the resin is set. The grout should be injected to the rear of the hole to avoid air entrapment. The thixotropic nature of grout will prevent significant flow of resin out of the hole.

6.2.6 Provisional sum items

The provisional sum shall be used for miscellaneous works such as expansion joint, joint filling, lighting arrangements, cabling, lighting fixtures, laying firefighting lines along with required fixtures etc. as directed as per site requirement. The all the material used for works and workmanship for the works under Provision sums should meet with the relevant Indian Standard Codes/practices. In absence of it, the same shall be best of its kind in the market. All materials and methods should be approved by Engineer-in-charge.

**6.3 REHABILITATION METHODOLOGY FOR
FACIA WALL Stage 1 - Erection of Scaffolding**

The working platform above the water level shall be erected using the friction support from adjacent two piles and hanging support from the top of the deck. The above fixing and erection work shall be carried out with the help of floating pontoon and boats etc. Before starting the repair work, all the connections between the individual members and the integrity of the platform have to be ensure considering the safety of the equipment's and the manpower.

Stage 2 - Dismantling/Removing of Existing Rubber Fenders and Steel Ladders

All the existing rubber fenders and steel Ladders have to dismantle including cutting and taking out the studs, bars, nut and bolts manually or mechanically as per direction of Engineer in charge and have to be shifted to the designated place as per DPT direction.

Stage 3 - Dismantling of Existing Structure/Loose Concrete

The existing facia wall structure shall be dismantled fully using mechanical

arrangements to reconstruct and the existing stiffening wall and RC Pile shall be chipped/cleaned (min up to 70mm) till the uncontaminated concrete and the existing rebars of RC Pile and stiffening wall shall be exposed and checked for corrosion. The concrete quality shall be verified using phenolphthalein solution. It is recommended to use water jet for the removal of all loose particles and corrosion stains, which might be present due to tidal difference/wave action. In addition, the top reinforcement of the face beam shall be exposed in order to connect the main reinforcement of fascia wall with it. The dismantled material shall be properly disposed at the designated location as per Port direction.

Stage 4 - Application of anti-corrosive coating

After opening the cover concrete of stiffening wall and RC Pile clean the existing reinforcement of RC Pile and stiffening wall and apply the metallic based (preferably zinc based) anticorrosive coating like Nitozinc primer (manufactured by M/s Fosroc Chemicals or equivalent) as per the manufacturer's specification after proper surface preparation.

Stage 5 - Anchoring shear connectors into existing structural element

- Shear connectors in the form of 'L/U-shaped' bars has to be anchored into the existing Stiffening Wall and RC Pile to ensure integral action of the reinforced concrete jacket portion with the hardened core concrete of the existing element.
- Drill holes not less than 200 mm depth (long) for L-shaped anchors in the stiffening wall front face portion and 75 mm depth in other members (stiffening wall side faces and RC Pile) from the surface (Perpendicular to the surface) taking care not to damage the existing steel reinforcements in the structural element. The positioning of the holes has to be staggered along the perimeter and height of the structural element.
- Clean the holes with a jet of compressed air and remove the loose dust particles thoroughly.
- Use chemical resin type capsules (Lokfix S manufactured by M/s Fosroc Chemicals (I) Pvt. Ltd. or Equivalent) for anchoring/fixing dowel bars into the holes to serve as shear connectors.
- Adopt at least 12-mm dia. bars as shear connectors for which required dia holes may be drilled.
- Additional reinforcements of the fascia wall shall be connected to the top reinforcement of the face beam by exposing the same.

- Provide additional reinforcement coated with anti-corrosive coating to the RC Pile and Stiffening Wall for jacketing purpose and new reinforcement coated with anti-corrosive coating to the fascia wall as per the drawings and based on the site condition.
- The additional reinforcement may be connected to the shear connectors already provided
- Provisions for the installation of Fenders and mooring ladders shall be provided.

Stage 6 - Provision of Galvanic protection

Provide galvanic protection system like Galva shield XPI or equivalent as per the design spacing (as per the specification of Manufacturer) based on the percentage of reinforcement available in the RC elements.

Stage 7 - Application of Epoxy Bond coat

Prepare the surface suitably using an epoxy based bond coat like Nito bond EP (manufactured by M/s Fosroc Chemicals, BASF, SIKA or equivalent), so that the repair material may bond well with existing/old concrete. Manufacturer's instructions/ specifications are to be strictly followed for the epoxy bond coat.

Stage 8 - Provision of water tight shuttering

Suitable shuttering (leak proof) system has to be placed in position for the jacket portion of the members in stages and micro concrete after mixing with required 12 mm down grade chips where ever required as per specifications has to be placed into the form work of the jacket portion. Care has to be taken so that the micro-concrete used does not flow out of the shuttering and shuttering should not bulge due to the self-weight of the micro concrete.

Stage 9 - under Water Micro Concrete over 100 mm over the existing Stiffening Wall and RC Pile

Under water Micro concrete (Rendroc UW, Fosrok, BASF, SIKA or equivalent) used for jacketing shall be prepared using washed surface dry condition 12 mm down size aggregates in the ratio of 1:0.5 (for a 25 kg bag of micro concrete 12.5 kg of 12 mm down size aggregate shall be added). The micro concrete should have a minimum characteristic compressive strength of 45 MPa at 28 days and shall be prepared and placed using the water cement ratio as per the manufacturer's specifications. Proper hopper arrangement needs to be provided in such a way that the micro concrete should travel along the hopper and the shutter to avoid the entrapped air. The micro concrete shall be poured within the stipulated time after the application of Epoxy Bonding Agent. Micro Concreting shall be done 100mm over the existing Stiffening Wall and RC Pile.

Stage 10 - M40 grade Concrete for 300mm thick x 7.62m ht. fascia wall.

Providing and laying in position machine batched and machine mixed design mix M-40 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying with Proper hopper arrangement needs to be provided in such a way that the M40 grade concrete should travel along the hopper and the shutter to avoid the entrapped air. The concrete shall be poured within the stipulated time after the application of Epoxy Bonding Agent. Concreting shall be done all as mentioned in the drawings including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting or quick setting of concrete, and improve workability without impairing strength and durability as per direction of Engineer-in-charge.

Stage 11 - De-shuttering

After the concrete in the jacket portion of the structural elements in the particular stage has attained its strength, the props placed for supporting the corresponding beams are to be removed.

Stage 12 - Application of Curing Compound

The surface shall be finished neatly to the required line and length. Membrane curing (Concure WB manufactured by M/s Fosroc Chemicals, Fosrok, BASF, SIKA or equivalent) shall be used for curing the finished surface.

Stage 13 - Application of Protective Coating

Two coats of Ultra violet resistant breathable coating Deck guard S or equivalent shall be applied to the RC Structural elements in view of the marine environment along with one coat of compatible primer as per the manufacturer's specification.

Stage 14 - Installation of Fenders

Two number of Arch Fenders of size 500H and 7200mm long of rubber R-1 Grade conforming to ASTM D-2000-12,4AA,717,A13.B33,C12,K11,Z each with rated Energy Absorption of 60.6 T-m Deflection 51.5% manufactured by Hitech Elastomers / IRM / ABC rubber / Lion rubber / Brahans Polymers on the either sides of the Facia Wall as shown in the approved drawings with Stainless Steel SS 316 M36 resin anchor studs with nuts and washer after drilling holes of required diameter and required distance (280mm tentative) on concrete substrates, cleaning and grouting the holes with approved epoxy resin based grout from approved manufacturer. All fixtures shall be of SS316.

Stage 15 - Installation of Rubber Molded Mooring Ladder

One number of Rubber molded mooring ladder in between two arch fender. Ladder of width 375mm and 7600mm long as shown in the drawing comprising of rubber molded flat 120mm*16mm (2 nos), MS round bar (rubber molded) of 25mm dia. for steps fixed with SS 316 M24 nuts and washer, rubber coated L mounting

bracket of 150mm*305mm*20mm connecting flat with SS 316 M20 bolt and with resin anchor bolt SS316 M30 bolt along with nuts and washers with embedment depth of 210mm. In addition MS Handrail of SS 316 of 30mm dia. shall also be provided on top of the deck as per the dimensions shown in the approved drawing. Flat, Bracket, Rung and Insert shall be in accordance with ASTM A36 or Equivalent. All fixtures shall be of SS 316.

6.4 REHABILITATION METHODOLOGY FOR RCC

LADDER Stage 1 - Erection of Scaffolding

The working platform above the water level shall be erected using the friction support from adjacent two piles and hanging support from the top of the deck. The above fixing and erection work shall be carried out with the help of floating pontoon and boats etc. Before starting the repair work, all the connections between the individual members and the integrity of the platform have to be ensuring considering the safety of the equipment's and the manpower.

Stage 2 - Dismantling/Removing of Existing Rubber Fenders

All the existing rubber fenders have to dismantle including cutting and taking out the studs, bars, nut and bolts manually or mechanically as per direction of Engineer in charge and have to be shifted to the designated place as per Port direction.

Stage 3 - Dismantling of Loose concrete

The crushed/ damaged concrete in the steps and in the waist beam shall be chipped and removed (upto 50mm) without damaging the rebar and the rear side of the steel bar shall be exposed using the mechanical arrangements and shall be checked for corrosion. It is recommended to use water jet for the removal of all loose particles and corrosion stains, which might be present due to tidal difference/wave action. The dismantled material shall be properly disposed at the designated location as per DPT direction.

Stage 4 - Application of anti-corrosive coating

After opening the cover concrete of waist beam, clean the existing reinforcement of RC Pile and stiffening wall and apply the metallic based (preferably zinc based) anticorrosive coating like Nitozinc primer (manufactured by M/s Fosroc Chemicals, BASF, FOSROC, Sika or equivalent) as per the manufacturer's specification after proper surface preparation.

Stage 5 - Anchoring additional reinforcement into existing structural element

- Drill holes not less than 200 mm depth (long) of required dia for

anchoring additional reinforcement for the waist beam & stiffening wall.

- Clean the holes with a jet of compressed air and remove the loose dust particles thoroughly.
- Use chemical resin type capsules (Lokfix S manufactured by M/s Fosroc Chemicals (I) Pvt. Ltd., BASF, FOSROC, SIKA or Equivalent) for anchoring/fixing dowel bars into the holes to serve as additional reinforcement.
- Provide additional reinforcement and stirrups coated with anti-corrosive coating to the Waist Beam as per the drawings and based on the site condition.
- Provisions for the installation of Fenders shall be provided.

Stage 6 - Provision of Galvanic protection

Provide galvanic protection system like Galva shield XPI or equivalent as per the design spacing (as per the specification of Manufacturer) based on the percentage of reinforcement available in the RC elements.

Stage 7 - Application of Epoxy Bond coat

Prepare the surface suitably using an epoxy-based bond coat like Nit bond EP (manufactured by M/s Fosroc Chemicals, BASF, FOSROC, SIKA or equivalent), so that the repair material may bond well with existing/old concrete. Manufacturer's instructions/ specifications are to be strictly followed for the epoxy bond coat.

Stage 8 - Provision of water tight shuttering

Suitable shuttering (leak proof) system has to be placed in position for the jacket portion of the members in stages and micro concrete after mixing with required 12 mm down grade chips where ever required as per specifications has to be placed into the form work of the jacket portion. Care has to be taken so that the micro-concrete used does not flow out of the shuttering and shuttering should not bulge due to the self-weight of the micro concrete.

Stage 9 - Under water Micro Concrete

Under water Micro concrete (Rendroc UW or equivalent) used for jacketing shall be prepared using washed surface dry condition 12 mm down size aggregates in the ratio of 1:0.5 (for a 25 kg bag of micro concrete 12.5 kgs of 12 mm down size aggregate shall be added). The micro concrete should have a minimum characteristic compressive strength of 45 MPa at 28 days and shall be prepared and placed using the water cement ratio as per the manufacturer's specifications. Proper hopper arrangement needs to be provided in such a way that the micro concrete should travel along the hopper and the shutter to avoid the entrapped air.

The micro concrete shall be poured within the stipulated time after the application of Epoxy Bonding Agent. Micro Concreting shall be done 100mm over the existing Waist beam and 50mm over the steps all as mentioned in the drawings.

Stage 10 - De shuttering

After the concrete in the jacket portion of the structural elements in the particular stage has attained its strength, the props placed for supporting the corresponding beams are to be removed.

Stage 11 - Application of Curing Compound

The surface shall be finished neatly to the required line and length. Membrane curing (Concure WB manufactured by M/s Fosroc Chemicals, BASF, FOSROC, SIKA or equivalent) shall be used for curing the finished surface.

Stage 12 - Application of Protective Coating

Two coats of Ultra violet resistant breathable coating Deckguard S, BASF, FOSROC, SIKA or equivalent shall be applied to the RC Structural elements in view of the marine environment along with one coat of compatible primer as per the manufacturer's specification.

Stage 13 - Installation of Fenders

Ten number of D- Type Fenders of size 400x400x200x200mm and 2000mm long of rubber R-1 Grade conforming to ASTM D-2000-12, 4AA, 717, A13.B33, C12, K11, Z each with Deflection 51.5% manufactured by Hitech Elastomers/IRM/ABC rubber/ Lion Rubber /Brahans Polymers along the outer side of the waist Beam as shown in the approved drawings with HDG Flat bar (100 micron galvanized thickness) & Stainless Steel SS 316 M30 resin anchor studs with nuts and washer after drilling holes of required diameter and required distance (280mm tentative) on concrete substrates, cleaning and grouting the holes with approved epoxy resin based grout from approved manufacturer. All fixtures shall be of SS 316.

6.5 REHABILITATION METHODOLOGY FOR RCC

PILES Stage 1 - Erection of Scaffolding

The working platform above the water level shall be erected using the friction support from adjacent two piles and hanging support from the top of the deck. The above fixing and erection work shall be carried out with the help of floating pontoon and boats etc. Before starting the repair work, all the connections between the individual members and the integrity of the platform have to be ensure considering the safety of the equipment's and the manpower.

Stage 2 - Dismantling of Loose concrete

The crushed/ damaged concrete/Liner shall be chipped and removed (upto 70mm)

without damaging the rebar and the rear side of the steel bar shall be exposed using the mechanical arrangements. It is recommended to use water jet for the removal of all loose particles and corrosion stains, which might be present due to tidal difference/wave action. The dismantled material shall be properly disposed at the designated location as directed.

Stage 3 - Application of anti-corrosive coating

Clean the exposed reinforcement and check for corrosion and apply the metallic based (preferably zinc based) anticorrosive coating like Nitozinc primer (manufactured by M/s Fosroc Chemicals, BASF, SIKA or equivalent) as per the manufacturer's specification after proper surface preparation.

Stage 4 - Anchoring shear connectors into existing structural element

- Shear connectors in the form of 'L-shaped' bars has to be anchored into the existing concrete to ensure integral action of the reinforced concrete jacket portion with the hardened core concrete of the existing element.
- Drill holes not less than 75 mm depth (long) into the members from the surface (Perpendicular to the surface) taking care not to damage the existing steel reinforcements in the structural element. The positioning of the holes has to be staggered along the perimeter and height of the structural element.
- Clean the holes with a jet of compressed air and remove the loose dust particles thoroughly.
- Use chemical resin type capsules (Lokfix S manufactured by M/s Fosroc Chemicals (I) Pvt. Ltd., BASF, SIKA or Equivalent) for anchoring/fixing dowel bars into the holes to serve as shear connectors.
- Adopt at least 12-mm dia bars as shear connectors for which required dia holes may be provided.
- Provide additional reinforcement as shown in drawing and based on the site condition.
- The additional reinforcement may be connected to the shear connectors already provided.

Stage 5 - Provision of Galvanic protection

Provide Galvanic protection system like Galvashield XPI or equivalent as per the design spacing (as per the specification of Manufacturer) based on the percentage of reinforcement available in the RC elements.

Stage 6 - Application of Epoxy Bond coat

Prepare the surface suitably using an epoxy based bond coat like Nitobond EP (manufactured by M/s Fosroc Chemicals, BASF, SIKA or equivalent), so that the repair material may bond well with existing/old concrete. Manufacturer's instructions/ specifications are to be strictly followed for the epoxy bond coat.

Stage 7 - Provision of water tight shuttering

Suitable shuttering (leak proof) system has to be placed in position for the jacket portion of the members in stages and micro concrete after mixing with required 12mm down grade chips wherever required as per specifications has to be placed into the form work of the jacket portion. Care has to be taken so that the micro-concrete used does not flow out of the shuttering and shuttering should not bulge due to the self-weight of the micro concrete.

Stage 8 - Under Water Micro Concrete

Under water Micro concrete (Rendroc UW or equivalent) used for jacketing shall be prepared using washed surface dry condition 12 mm down size aggregates in the ratio of 1:0.5 (for a 25 kg bag of micro concrete 12.5 kgs of 12 mm down size aggregate shall be added). The micro concrete should have a minimum characteristic compressive strength of 45 MPa at 28 days and shall be prepared and placed using the water cement ratio as per the manufacturer's specifications. Proper hopper arrangement needs to be provided in such a way that the micro concrete should travel along the hopper and the shutter to avoid the entrapped air. The micro concrete shall be poured within the stipulated time after the application of Epoxy Bonding Agent. Micro Concreting shall be done 100mm over the existing RC Pile all as mentioned in the drawings.

Stage 9 - De shuttering

After the concrete in the jacket portion of the structural elements in the particular stage has attained its strength, the props placed for supporting the corresponding beams are to be removed.

Stage 10 - Application of Curing Compound

The surface shall be finished neatly to the required line and length. Membrane curing (Concure WB manufactured by M/s Fosroc Chemicals, BASF, SIKA or equivalent) shall be used for curing the finished surface.

Stage 11- Application of Protective Coating

Two coats of Ultra violet resistant breathable coating Deckguard S or equivalent shall be applied to the RC Structural elements in view of the marine environment along with one coat of compatible primer as per the manufacturer's specification.

6.6 REHABILITATION METHODOLOGY FOR DECK SLAB WEARING COAT AND CABLE TRENCH

Stage 1 - Dismantling of loose concrete

The existing wearing coat concrete shall be chipped and removed (upto 50mm) using the mechanical arrangements. It is recommended to use water jet/Compressed air blower for the removal of all loose particles.

Stage 2 - Providing Additional Reinforcement

Provide additional reinforcement of 8mm dia @300mm c/c in both directions for the wearing coat and 10mm dia main bars @250mm c/c, 8mm dia distribution bars @300mm c/c for the bottom of the cable trench.

Stage 3 - Concreting

The Concrete used shall be prepared as per the design mix of M30 grade. The Concrete should have a minimum characteristic compressive strength of 30 MPa at 28 days and shall be prepared and placed using the water cement ratio as per the design mix specifications.

Stage 4 - Provision for Expansion Joint (Only for wearing coat)

After the concrete in the jacket portion of the structural elements in the particular stage has attained its strength, the locations for providing horizontal joints shall be marked and cut. Clean the joint and remove the pad to the required depth. At any given point of time, the depth should not be less than half width of the joint. If the joint is broken, rectify the same with either Micro concrete or with Polymer modified mortar. Allow the same to cure completely.

Stage 5 - Micro sealant Expansion Joint (Only for wearing coat)

Affix Masking tape on either side of the joint. Apply the Primer to both the faces of the joint and provide debonding tape. Mix the base and hardner of the PU Sealant Colpor 200 manufactured by M/s Fosroc Chemicals, BASF, SIKa or equivalent and pour the same to the primed joint. Allow it to set completely.

6.7 LIST OF APPROVED MATERIALS/MAKES

Specification/brand names of materials (Refer materials, whichever are applicable for the scope of work) and finishes approved are listed below. However, all material may be used with the approval from the Engineer-in-Charge before stock at site.

Sr. No	Materials	Approved Make
1.	Cement	Ultratech, Ambuja, Kamal or

		equivalent
2.	Reinforcement Bars	TATA, SAIL, RINL, JSW, JSPL or equivalent
3.	Structural Steel	TATA, SAIL, RINL, JSW, JSPL or equivalent
4.	Mechanical Splicing – Couplers	Dextra, Bartec or equivalent
5.	Admixtures for Concrete	BASF, FOSROC, CEARA, SIKA or its equivalent
6.	Concrete Penetrating Corrosion Inhibiting Admixture	EPCO KP-200, Elee-CI, FOSROC, Sika, Choksey Chemicals, CIPY, BASF or equivalent
7.	Protective coat for Concrete Surface - Exposed to UV	Licensed suppliers of Interpenetrating Polymer Network Coating System (IPNet)
8.	Anticorrosive zinc rich epoxy primer	Nitozinc Primer make FOSROC & Sika or equivalent
9.	Alkaline based rust remover (to clean the rust formed on corroded steel reinforcement)	Reebaklens RR make FOSROC & Sika or equivalent
10.	Fender System	IRM, Hitech, Brahans, ABC rubber, Lion rubber or equivalent
11.	Bollards	IRM, Hitech, Brahans, ABC rubber, Lion rubber or equivalent
12.	Epoxy resin based anchoring grout to fix shear keys	Lockfix 'S' make FOSROC, Sika or equivalent
13.	Epoxy bond coat (to be applied on the old concrete surface to receive new concrete)	Nitobond EP make FOSROC & Sika or equivalent
14.	Acrylic resin based coloured (for protective coating)	Dekguard S & Dekgaurd Primer make FOSROC & Sika or equivalent
15.	Micro-concrete	Rendroc UW (25kg) make FOSROC & Sika or equivalent
16.	Curing compound	Concure WB make FOSROC & Sika or equivalent

17.	Expansion Joint – Treatment for 10mm x 50mm Of RCC road Groove	PU sealent Colpar 200, Primer No 20., Solvent 102, make FOSROC & Sika or equivalent & Debonding tape 1"
18.	Galvanic Anode	Galvashield XPI or equivalent
19.	Moulded Rubber Mooring ladder	IRM, Hitech, Brahans, ABC, Lion or equivalent
20.	Paints for steel work	Asian Co. Dulux Co., Burger or equivalent
21.	CPVC Pipe & all accessories for water supply	Astral Co., Prince Co. or equivalent
22.	Water meter for water supply pipe line	Ist quality – Kranti Co. or equivalent

Note: -

In the cases where products of above approved brand/manufacturers are not available in market at the time of execution of work, the equivalent/alternate brand/manufacturers are permitted subject to production of non-availability certificate from the respective manufactures by the contractor.

SECTION 7

DRAWING

SECTION 8

BILL OF QUANTITIES

SECTION 9

FORMS OF SECURITIES AND OTHER FORMATS

FORMS OF SECURITIES AND OTHER FORMATS

Acceptable forms of securities are annexed. Bidders should not complete the performance and advance payment security forms at this time. Only the successful bidder will be required to provide performance and advance payment securities in accordance with one of the forms, or in a similar form acceptable to the employer

Specimen EMD (Bank Guarantee Format)

[The Bank shall fill in this Bank Guarantee Form in association with the instructions indicated. To be executed on Rs. 300/- non Judicial Stamp Paper]

(Bank's name and address of Issuing Branch or Office)

Beneficiary:____(Name and Address of Employer/Board)

Date: _____

Tender Guarantee No.: _____

We have been informed that [name of the Bidders] (hereinafter called "the Bidders") has submitted to you its Tender dated (hereinafter called "the Bidders") for the execution of [name of contract] under Invitation for Tenders No.[Number]. Furthermore, we understand that, according to your conditions, Tenders must be supported by an EMD.

At the request of the Bidders, we [name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [amount in figures] ([amount in words]) upon receipt by us your first demand in writing accompanied by a written statement stating that the Bidders is in breach of its obligation(s) under the Tender conditions, because the Bidders:

- (a) Has withdrawn its Tender during the period of tender validity specified by the Bidders in the Form of Tender; or
- (b) Having been notified of the acceptance of its Tender by the Employer/Board during the period of Tender validity, (i) fails or refuses to execute the Form of Agreement, if required, or (ii) fails or refuses to furnish the performance guarantee, in accordance with the Instructions to Bidders.

This guarantee will expire unless otherwise extended or informed by the Employer/Board:

- (a) If the Bidders is the successful Bidders, upon our receipt of copies of the contract signed by the Bidders and the performance guarantee issued to you upon the instruction of the Bidders; or
- (b) If the Bidders is not the successful Bidders, upon the earlier of
 - (i) Our receipt of a copy of your notification to the Bidders of the name of the successful Bidders; or
 - (ii) Twenty-eight days after the expiration of the Bidder's tender or any extended period thereof;

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

[Signature(s)]

[Authorization letter from the issuing bank that the signatory of this BG is authorized 59

to do so should also be enclosed]

SPECIMEN BANK GUARANTEE PERFORMANCE
GUARANTEE / SECURITY DEPOSIT

(To be executed on Rs.300/- non-judicial Stamp Paper)

[The bank, as requested by the successful Bidders, shall fill in this form in accordance with the instruction indicated]

In consideration of the Board of Deendayal Port Authority of [insert name of port] incorporated by the Major Port Authorities Act, 2021 as amended by Major Port Authority (Amendment) Act 1974 (hereinafter called "The Board" which expression shall unless excluded by or repugnant to the context or meaning thereof be deemed to include the Board of Deendayal Port Authority of [insert name of port], its successors and assigns) having agreed to release Performance Guarantee / Security Deposit to (hereinafter called the "Contractor")

(Name of the Contractor/s)

from the demand under the terms and condition of the contract, vide from the demand under the condition of the contract, vide_'s letter No

(Name of the Department)

Date_____made between the Contractors and the Board for execution of _____covered under Tender No._____

_____dated_(hereinafter called "the said contract") for the payment of Security Deposit in cash or Lodgment of Government Promissory Loan Notes for the due fulfillment by the said Contractors of the terms and condition of the said contract, on production of a bank Guarantee for Rs._____

_____ (Rupees_____) only we, the (Name

of the _____ Bank _____ and _____ Address)

_____ (herein after referred to as "the Bank") at the request of the Contractors do hereby undertake to pay _____ to the Board an _____ amount not exceeding _____ Rs.

_____ (Rupees_____) only against any loss or damage caused to or suffered by the Board by reason of any breach by the Contractors of any of the terms and conditions of the said contract.

2. We, _____, do hereby (Name of Bank) (Name of Branch) Undertake to pay the amount due and payable under this guarantee without any demur merely on a demand from the Board stating that the amount claimed is due by way of loss or damage caused to or which would be caused to or suffered by the Board by reason of the Contractors failure to perform the said contract. 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 any amount not exceeding Rs. _____ (Rupees_) only.

3. We, _____, undertake to pay to the (Name of Bank and Branch) 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 payments made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.

4. We, _____ further agree with the Board that the (Name of Bank and Branch) guarantee herein contained shall remain in full force and effect during the period that would be taken for performance of the said contract and that it shall continue to be enforceable till all the dues of the Board under or by virtue of the said contract have been fully paid and its claims satisfied or discharged or till the _____ (Name of the user department) of the said certifies that the terms and conditions of the said contract have been fully and properly carried out by the said Contractors and accordingly discharge this guarantee. PROVIDED HOWEVER that the Bank shall be the request of the Board but at the cost of the Contractors, renew or extend this guarantee for such further period or periods as the Board may require from time to time.

5. We, _____ further agree with the Board that the (Name of Bank and Branch) Board 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 contract or to extend the time of performance by the said contract or to extend the time of performance by the said Contractors 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 Contractors and to forebear or enforce any of the terms and conditions relating to the said contract and we shall not be relieved from our liability by reason of any such variation or extensions being granted to the Contractors or for any forbearance, act or omission on the part of the Board or any indulgence shown by the board to the Contractors 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. It is also hereby agreed that the Courts in **Gandhidham/Jamnagar** would have exclusive jurisdiction in respect of claims, if any, under this Guarantee.

8. We, _____ Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Board in writing.

9. Notwithstanding anything contained herein:

(a) Our liability under this Bank Guarantee shall not exceed Rs. _____ (Rupees _____ only);

- (b) This Bank Guarantee shall be valid upto____; and
- (c) We are liable to pay the guarantee amount or any part thereof under this Bank Guaranteeonly and only if you serve upon us a written claim or demand on or before (date of expiry of Guarantee)."

Date_____day of _____20

For (Name of Bank)

(Name)

Signature

SPECIMEN BANK GUARANTEE FOR ADVANCE PAYMENT
(Refer clause no.5.98(iii)Not applicable)
(To be executed on Rs.300/- non-judicial Stamp Paper)

[The bank, as requested by the successful Tenderer, shall fill in this form in accordance with the instruction indicated]

In consideration of the Board of Deendayal Port Authority incorporated by the Major Port AUTHORITIES Act , 2021 (hereinafter called "The Board" which expression shall unless excluded by or repugnant to the context or meaning thereof be deemed to include the Board of Deendayal Port Authority, its successors and assigns) having agreed to release advance payment to (hereinafter called the "contractor")

(Name of the contractor/s)

from the demand under the terms and condition of the contract, vide from the demand under the condition of the contract, vide____'s letter No_____

(Name of the Department)

Date_____made between the contractors and the Board for execution of

_____covered under Tender No._____

_____dated_____ (hereinafter called "the said contract") for the payment of Advance Payment in cash or Lodgement of Government Promissory Loan Notes for the due fulfillment by the said contractors of the terms and condition of the said contract, on production of a _____ bank Guarantee for Rs. (Rupees_____

_____) only we, the (Name of the Bank and _____ Address) _____

_____ (hereinafter

Referred to as "the Bank") a the request of the contractors do hereby undertake to pay to the Boardan amount not exceeding Rs.

_____(Rupees_____) only against any loss or damage caused to or suffered by the Board by reason of any breach by the contractors of any of the terms and conditions of the said contract.

2. We, _____, do hereby (Name of Bank) (Name of Branch)

Undertake to pay the amount due and payable under this guarantee without any demur merely on a demand from the Board starting that the amount claimed is due by way of loss or damage caused to or which would be caused to or suffered by the Board by reason of the contractors failure to perform the said contract. 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 any amount not exceeding Rs.

_____(Rupees_____) only.

3. We, _____, undertake to pay to the (Name of Bank and Branch)

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 there under and the Contractor(s) shall have no claim against us for making such payment.

4. We, _____ further agree with the Board that the (Name of Bank and Branch)
guarantee herein contained shall remain in full force and effect during the period that would be taken for performance of the said contract and that it shall continue to be enforceable till all the dues of the Board under or by virtue of the said contract have been fully paid and its claims satisfied or discharged or till the _____
(Name of the user department)
of the said certifies that the terms and conditions of the said contract have been fully and properly carried out by the said Contractors and accordingly discharge this guarantee. PROVIDED HOWEVER that the Bank shall be the request of the Board but at the cost of the Contractors, renew or extend this guarantee for such further period or periods as the Board may require from time to time.
5. We, _____ further agree with the Board that the (Name of Bank and Branch)
Board 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 contract or to extend the time of performance by the said contract or to extend the time of performance by the said Contractors 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 Contractors and to forebear or enforce any of the terms and conditions relating to the said contract and we shall not be relieved from our liability by reason of any such variation or extensions being granted to the contractors or for any forbearance, act or omission on the part of the Board or any indulgence shown by the board to the Contractor 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. It is also hereby agreed that the Courts in [**Gandhidham/Jamnagar**] would have exclusive jurisdiction in respect of claims, if any, under this Guarantee.
8. We, _____ Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Board in writing.
9. Notwithstanding anything contained herein:
 - (a) Our liability under this Bank Guarantee shall not exceed Rs. _____ (Rupees _____ only);
 - (b) This Bank Guarantee shall be valid up to _____; and

(c) 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_(date of expiry of Guarantee)."

Date_____day_____of 20

For (Name of Bank)

(Name)

Signature

DISPUTES REVIEW BOARD AGREEMENT
(Refer clause no.5.98(ii)Not applicable)

(To be executed on Rs300/- non-judicial Stamp Paper)

THIS AGREEMENT, made and entered into this Day of 20

..... Between..... ("the Employer/ Board") and..... ("the contractor"), and the Disputes Review Board ("the DR Board ") consisting of one/three DR Board Members, (Members from either party, i.e. contractor and Employer/Board)

(1).....

(2).....

(3).....

[Note: Delete whatever is (Notapplicable)]

WITNESSETH, that

WHEREAS, the Employer/Board and the contractor have contracted for the execution of Project name)..... (the "Contract") and WHEREAS, the contract provides for the establishment and operation of the DR Board NOW THEREFORE, the parties hereto agree as follows:

1. The parties agree to the establishment and operation of the DR Board in accordance with this DR Board Agreement.
2. Expect for providing the services required hereunder, the DR Board Members should not give any advice to either party or to the Nodal Officer or his nominee concerning conduct of the works.

The DR Board Members:

- (a) Shall have no financial interest in any party to the contract or the Nodal Officer or his nominee, or a financial interest in the contract, except for payment for services on the DRBoard.

- (b) Shall have had no previous employment by, or financial ties to, any party to the contract, or the Nodal Officer or his nominee, expect for fee based consulting services on other projects, all of which must be disclosed prior to appointment to the DRBoard.
 - (c) Shall have disclosed in writing to the parties prior to signature of this Agreement any all recent or close professional or personal relationships with any director, officer, or employee of any party to the Nodal Officer or his nominee, and any and all prior involvement in the project to which the contract relates;
 - (d) Shall not, while a DR Board Member be employed whether as a consultant or otherwise by either party to the contract, or the Nodal Officer or his nominee, expect as a DR Board Member.
 - (e) Shall not, while a DR Board Member, engage in discussion or make any agreement with any party to the contract, or with the Nodal Officer or his nominee, regarding employment whether as a consultant or otherwise either after the contract is completed or after services as a DRBoard Members.
 - (f) Shall be and remain impartial and independent of the parties and shall disclose in writing to the Employer/Board, the contractor, the Nodal Officer or his nominee, and one another any fact or circumstances which might be such to cause either the Port or the contractor to question the continued existing of the impartiality and independence required of DR Board Members.
3. Except for its participation in the DR Board activities as provided in the contract and in this Agreement none of the Employer / Board, the contractor, the Nodal Officer or his nominee, and one another any fact or circumstances which might be such to cause either the Employer/Board or the contractor to question the continued existence of the impartiality and independence required of DR Board

Members.

4. The contractor shall:
 - a) Furnish to each DR Board Member one copy of all document which the DR Board may request including contract document, progress report, variation orders, and other document, pertinent to the performance of the contract.
 - b) In co-operation with the Employer/Board, co-ordinate the site visits of the DR Board, including conference facilities and secretarial and copying services.
5. The DR Board shall serve throughout the operation of the contract. It shall begin operation following execution of this Agreement, and shall terminate its activities after issuance of the taking over certificate and the DR Board's issuance of its Recommendation on all disputes referred to it.
6. DR Board Member, shall not assign or subcontract any of their work under this Agreement.
7. The DR Board Members are independent and not employees or agents of either the Employer/Board or the Contractor.
8. The DR Board Members are absolved of any personal or professional liability arising from the activities and the Recommendations of the DR Board.
9. Fees and expenses of the DR Bard Member[s] shall be agreed to and shared equally by the Employer/Board and the Contractor. If the DR Board requires special services, such as accounting, data research and the like, both the parties must agree and cost shall be shared by them as mutual agreed.
10. DR Board's site visit:
 - a. The DR Board shall visit the site and meet with representative of the Employer/Both and the contractor and the nodal officer are his nominee at regular intervals, at times of critical construction events, and at the return request of either party. The timing of site filing agreement shall be fixed by the DRBoard.

- b. Site meeting shall consist of an informal discussion of the status construction of the works followed by an inspection of the work, both attended by personal from the employer/Board, the contractor and the nodal officer or his nominee
- c. If request by either parties or the DR Board, the employer/Board will prepare minutes of the meeting and circulate them for comments of the parties and the nodal officer or his nominee.

11. Procedure for disputes referred to the DRBoard:

- a) If either party objects to any action or inaction of the other party or the Nodal Officer or his nominee, the objecting party may file a written Notice of Dispute to the other party with a copy to the Nodal Officer or his nominee stating that it is given pursuant to clause [number] and stating clearly and in detail the basis of the dispute.
- b) The party receiving the Notice of Dispute will consider it and respond in writing within 7 days after receipt.
- c) This response shall be final and conclusive on the subject, unless a written appeal to the response is filed with the responding party within 7 days of receiving the response. Both parties are encouraged to pursue the matter further to attempt to settle the dispute. When it appears that the dispute cannot be resolved without the assistance of the DR Board either party may refer the dispute to the DR Board by written Request for Recommendation to the Board, the other party & the Nodal Officer or his nominee stating that it is made pursuant to [insert relevant clause no.]
- d) The Request for recommendation shall state clearly and detail the specific issues of the dispute to be considered by the DRBoard.
- e) When a dispute is referred to the DR Board, and the DR Board is satisfied that the dispute requires the DR Board's assistance, the DR Board shall decide when to conduct a hearing on dispute. The DR Board may request that written documentation and arguments from both parties be submitted to each DRBoard Members before the

hearing begins. The parties shall submit insofar as possible agreed statements of the relevant facts.

- f) During the hearing, the contractor, the Employer/ Board, the Nodal Officer or his nominee shall each have ample opportunity to be heard and to offer evidence.

The DR Board's Recommendation for resolution of the dispute will be given in writing, to the Employer/ Board, the contractor and the Nodal Officer or his nominee as soon as possible, and in any event not more than 28 days after the DR Board's final hearing on the dispute.

12. Conduct of Hearing:

- a) Normally hearing will be conducted at the sites, but any location that would be more convenient and still provide all required facilities and access to necessary documentation may be utilized by the DR Board. Private sessions of the DR Board may be held at any location convenient to the DR Board.
- b) The Employer/ Board, the Nodal Officer or his nominee and contractor shall have representatives at all hearing.
- c) During the hearing, no DR Board Member shall express any opinion concerning the merit of any facet of the case.
- d) After the hearing are concluded, the DR Board shall meet privately to formulate its Recommendation. All DR Board deliberation shall be conducted in private, with all individual views kept strictly confidential. The DR Board's Recommendations, together with an explanation of its reasoning shall be submitted in writing to both parties and to the Nodal Officer or his nominee. The pertinent contract provision, applicable laws and regulations, and the facts and circumstances involved in the dispute.

The DR Board shall make every effort to reach a unanimous Recommendation. If this proves impossible, the majority shall decide, and the dissenting member may prepare a written minority report for submission to both parties.

[Notes: Delete if it is one member DR Board]

13. If during the contract period, the Employer/ Board and the contractor are of the opinion that the Disputes Review Board is not performing its function properly, the Employer/ Board and the contractor may together disband the Disputes Review Board. In such an event, the disputes shall have referred to Arbitration straightaway.

The Employer/Board and the contractor shall jointly sign a notice specifying that the DR Board shall stand disbanded with effect from the date specified in the notice. The notice shall be posted by a registered letter with AD or delivery of the letter, even if he refuses to do so.-

SPECIMEN FORMAT FOR DECLARATION

(To be executed on bidder's letter head)

To

(Project Title)

Ref: _____

The undersigned, having studied the pre-qualification submission for the above mentioned project, hereby states:

- (a) The information furnished in our bid is true and accurate to the best of my knowledge.
- (b) That in case of being pre-qualified, we acknowledge that the Employer may invite us to participate in due time for the submission of tender on the basis of provisions made in the tender documents to follow.
- (c) When the call for tenders is issued, if the legal, technical or financial conditions, or the contractual capacity of the firm or joint venture changes, we commit ourselves to inform you and acknowledge your sole right to review the pre-qualification made.
- (d) We enclose the entire required pre-qualification data format and all other evaluation.
- (e) We also state that no changes have been made by us in the downloaded tender document and also understand that in the event of any discrepancies observed, the printed tender document No. _____ is full and final for all legal/contractual obligations (delete if not required).

Date:

Place:

Name of the Applicant:

Represented by (Name & Capacity) _____

**SPECIMEN LETTER OF AUTHORITY FROM BANK
FOR ALL BGs**

(To be executed on Bank's Letter Head)

Date: _____

To,

The Board of Deendayal of Port Authority

Dear Sir,

Sub: Our Bank Guarantee No. _____
dated_ For Rs. _____ favouring yourselves issued
_____ on a/c of M/s. _____
(Name of contractor)

.....

We confirm having issued the above mentioned guarantee favouring
yourselves, issued on account of M/s. _____ validity for
expiry up to date _____ and claim expiry date up to _____

We also confirm 1) _____ 2) _____ is/are
empowered to sign such Bank Guarantee on behalf of the Bank and his/their
signatures is/are binding on the Bank.

Name of signature of Bank Officer

**SPECIMEN LETTER OF AUTHORITY FOR
SUBMISSION OF BID**
(To be executed on Rs.300/- non Judicial Stamp Paper)

To
The (PORT Address)

Dear Sir,

We-----

----- do hereby confirm that Shri..... (Name, designation and Address) is/are authorized to represent us to bid, negotiate and conclude the agreement on our behalf with you against tender no ----- and his specimen signature is appended hereto.

We confirm that we shall be bound by all and whatsoever our said signatory shall commit.

We understand that the communication made with him by the Employer/Board shall be deemed to have been done with us in respect of this Tender.

[specimen signature]

Yours faithfully,

Signature:

Name &

Designation:

For & on

behalf of:

PROFORMA OF JOINT VENTURE/CONSORTIUM AGREEMENT

(To be submitted on Non-judicial Stamp Paper of appropriate value)

This Joint Venture /Consortium Agreement is made and entered into on this day of2024 by and between (i) M/s. **(Name of the firm to be filled-in)**....., (ii) M/s.....**(Name of the firm to be filled-in)** , , primarily for the work under the Deendayal Port Authority.

All the partners of the Joint Venture /Consortium hereinafter individually referred to as the parties and collectively as the Joint Venture/Consortium'.

1. Formation of Joint Venture/Consortium

(i) M/s. **(Name of the firm to be filled in)** is engaged in..... (Details of the works undertaken by the party)

(ii) M/s. **(Name of the firm to be filled in)** is engaged in..... (Details of the works undertaken by the party)

(iii)

1.1. On behalf of Board of Authority of Deendayal Port (here in after referred to as—Employer[]), the Chief Engineer, Deendayal Port Authority has invited bids from the experienced, resourceful and bonafide Developers with proven technical and financial capabilities of executing the work **Providing common Approach Road Connectivity For Proposed Green Hydrogen Plots at Padana(Phase-I)**.

1.2. The parties have been exploring together the ways and means of collaboration for the purpose of an offer to be made for the said project of the Deendayal Port Authority and have mutually agreed to enter into a Joint Venture/Consortium Agreement to submit a common bid for the project and to carry out the project works in the event of award of the contract, in association with each other and **(.....Name of Partner to be filled in.....)** shall be the Lead Partner and (i) **(.....Name of Partner to be filled in.....)**, (ii) **(.....Name of Partner to be filled in.....)**, shall be the other partner(s).

NOW THEREFORE IT HAS BEEN AGREED TO BETWEEN THE PARTIES AS FOLLOWS

1.3. The Joint Venture/Consortium will be known as...**(.....Name of JV to be filled in.....)**and shall consist of (i) **(.....Name of the firm to be filled in.....)** , (ii) **(.....Name of the firm to be filled-in.....)** , , parties to the present agreement.

1.4. The recitals are true and correct and form an integral part of this agreement and are representations of the parties to which they relate and have been relied upon by the parties to enter into the present agreement.

- 1.5. Notwithstanding the date of signature of this agreement, its effective date will be the date of submission of bid.
- 1.6. All costs incurred by the parties before the date of award of contract will be borne by the parties concerned. All costs in implementation of this Joint Venture/Consortium Agreement after award of contract till the expiry of this agreement will be borne by the parties as here in after provided.
- 1.7. The Joint Venture/Consortium will be dissolved and this agreement will cease to have effect on completion of this project, maintenance and fulfilment of all other conditions under the contract, upon receipt of payment of all amounts from the Employer and on settlement of accounts between the parties as hereinafter provided.
- 1.8. The contract, if awarded by the Employer, Letter of Acceptance shall be issued in the name of (...**Name of JV/Consortium to be filled in**....) and the Contract shall be signed by legally authorized signatories of all the parties.
- 1.9. All the parties of the JV/Consortium shall be jointly and severally liable during the bidding process and the bid document shall be signed by legally authorized signatory of all the parties.
- 1.10. The financial contribution of each partner to the JV/Consortium operation shall be:
 - (i) **M/s..... (Name of the partner to be filled-in) -.....**
 - (ii) **M/s..... (Name of the partner to be filled-in) -**
 - (iii)
- 1.11. All the parties of the JV/Consortium shall be jointly and severally liable for the execution of the project in accordance with the Contract terms, in the event of award of contract. The delineation of duties, responsibilities and scope of work shall be:
 - a) The Lead Partner shall provide suitable experienced personnel at site, for general planning, site management and equipment operations, during entire period of contract execution.
 - b) (.....**Name of Partner to be filled-in**.....) shall carry out the following works-

 - c) (.....**Name of Partner to be filled-in**) shall carryout the following works
 - d)
- 1.12. The parties hereto agreed that each of them shall duly and properly perform all the functions and all costs related to their respective works.
- 1.13. The parties hereto shall be at liberty to enter into liaison work/correspondence with statutory and local authorities as the circumstances warrant individually or collectively.
- 1.14. It is here by agreed and undertaken that, all the parties are jointly and severally

liable to the –Board of Port of Deendayal for the performance of the contract.

- 1.15. Notwithstanding demarcation or allotment of work between JV/Consortium partners, JV/Consortium each partner shall be liable for non performance of the whole contract irrespective of their demarcation or share of work.
- 1.16. The Lead Partner shall be authorized to act on behalf of the JV/Consortium.
- 1.17. All the correspondences between the Employer and the JV /Consortium shall be routed through the Lead Partner.
- 1.18. The Lead Partner is authorized: (a) to submit bid, negotiate and conclude contract and incur all liabilities therewith on behalf of the partner(s) of the JV /Consortium during the bidding process; and (b) in the event of a successful bid, to incur liabilities and receive instructions for and on behalf of the partner(s) of the JV/Consortium and to carry out the entire execution of the contract including payment, exclusively through Lead Partner.
- 1.19. In the event of default of the Lead Partner, it shall be construed as default of the Developer/Contractor; and Employer shall be entitled to take action under relevant clause(s) of the Department Bid Document and/or Conditions of Contract.
- 1.20. All the parties of the JV/Consortium shall be jointly and severally liable for due performance, recourse/sanctions within the joint venture in the event of default of any partner and arrangements for providing the required indemnities.
- 1.21. The JV/ Consortium shall have a separate JV/Consortium Bank account (distinct from the Bank account of the individual partners) to which individual partners shall contribute their share capital / or working capital. The financial obligation of the consortium shall be discharged through the said JV/ Consortium Bank account only and also all payment received by consortium from the Deendayal Port Authority shall be through that account only.

The parties hereto have mutually agreed to the terms and conditions set forth herein above and have assured each other to duly perform the reciprocal promises and obligations on either side for effective implementation of the JV/Consortium for proper and due completion of the works envisaged, in the event of award of contract to the JV/Consortium and have affixed their signature in this indenture on this theday of.....20...

(i) Signature Name Designation seal & Common seal of the firm

(ii) Signature Name Designation seal & Common seal of the firm

Witness 1

Witness 2

PERFORMA OF POWER OF ATTORNEY FOR LEADMEMBER OF JV/CONSORTIUM

(To be submitted on Non-judicial Stamp Paper of appropriate value)

By this Power-of-Attorney **executed** on **this**day of(month) of 2018, we,

(i) (..... *Name of legally authorized signatory of first partner to be filled in.....*), (ii) (..... *Name of legally authorized signatory of second partner to be filled in*),

.....hereby jointly authorize and agree the Lead Partner, M/s (... *Name of the lead partner to be filled in.....*), (a) to submit bid, negotiate and conclude contract and incur all liabilities therewith on behalf of the partner(s) of the JV /Consortium during the bidding process; and (b) in the event of a successful bid, to incur liabilities and receive instructions for and on behalf of the partner(s) of the JV /Consortium and to carry out the entire execution of the contract including payment for the work of **Strengthening of Berthing Jetty at Off-Shore Oil Terminal, Vadinar** exclusively through Lead Partner.

(i) Signature Name
Designation seal & Common seal
of the firm

(ii) Signature Name
Designation seal & Common seal
of the firm

.....

.....

Signature, name and seal of the certifying authority/Notary Public

JOINT VENTURE PARTNER INFORMATION FORM

[The Tenderer shall fill in this Form in accordance with the instructions indicated below].

Date: *[insert date (as day, month and year) of Tender Submission]*

Tender No.: *[insert number of Tendering process]*

Page _____ of _____ pages

1. Tender's Legal Name: <i>[insert Tenderer's legal name]</i>
2. JV's Party legal name: <i>[insert JV's Party legal name]</i> JV's Legal Lead Partner {insert name and address}
3. JV's Party Country of Registration: <i>[insert JV's Party country of registration and details of registration]</i>
4. JV's Party year of Registration: <i>[insert JV's Party year of registration]</i>
5. JV's Party Legal Address in Country of Registration: <i>[insert JV's Party legal address in country of registration]</i>
6. JV's Party Authorized Representative information Name: <i>[insert name of JV's Party authorized representative]</i> Address: <i>[insert address of JV's Party authorized representative]</i> Telephone/Fax numbers: <i>[insert telephone/fax numbers of JV's Party authorized representative]</i> Email Address: <i>[insert email address of JV's Party authorized representative]</i>
7. Attached are copies of original documents of [check the box(es) of the attached original documents] <input type="checkbox"/> Articles of incorporation or registration of firm named in 2, above, in accordance with tender document. <input type="checkbox"/> In case of government owned entity from India, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with Tender Documents <input type="checkbox"/> <u>PAN Number</u> <input type="checkbox"/> <u>Sales Tax / VAT registration number</u> <input type="checkbox"/> <u>Service Tax Registration Number</u> <input type="checkbox"/> Any other documents required for statutory compliance

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Tenderer]*

Date on _____ day of _____, _____ *[insert date of signing]*

EXCEPTIONS AND DEVIATIONS ((Refer clause no.5.98(ii)) Not applicable)
--

As pointed out in the Tender Call Notice, Bidder may stipulate here exceptions and deviations to the bid conditions, if considered unavoidable.

Sr. No.	Page No. of Bid Document	Clause No. of Bid Document	Subject Deviation

Note: however, the Bidders to note that unacceptable deviations, if any, the bid shall be liable for rejection. Bidder is discouraged to deviate from bid conditions, specifications, delivery schedules, and commercial terms as per the tender document.

Duly authorized to sign this authorization on behalf of: [insert complete name of Tenderer]

Date on_____day of_____,_____ [insert date of signing]

INTEGRITY PACT

Between

Deendayal Port Authority (DPA) hereinafter referred to as **"The Principal"**

and

..... (Name of The bidders and consortium members) hereinafter referred to as **"The Bidder / Contractor"**

Preamble

The Principal intends to award, under laid down organizational procedures, contract(s) / concession(s) for Tender No. The Principal values full compliance with all relevant laws of the land rules, regulations, economic use of resources and of fairness / transparency in its relations with its Bidder(s) and / or Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitors (IEMs), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 - Commitments of the Principal

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - (a) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - (b) The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - (c) The Principal will exclude from the process all known prejudicial persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC / PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder(s) / Contractor(s)

- (1) The Bidder(s) / Contractor(s) commits themselves to take all measures necessary to prevent corruption. The Bidder(s) / Contractor(s) commits themselves to observe the following principles during participation in the tender process and

during the contract execution.

- a. The Bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in tender process or the execution of the contract or to any third person any material or other benefit, which he / she is not legally entitled to, in order to obtain in exchange of advantage of any kind whatsoever during the tender process or during the execution of the contract.
 - b. The Bidder(s) / Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids, or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
 - c. The Bidder(s) / Contractor(s) will not commit any offence, under the relevant Prevention of Corruption Act / Indian Penal Code / PC Act; further the Bidder(s) / Contractor(s) will not use improperly, for purposes of competition, or personal gain, or pass on to others, any information or document provided by the Principal, as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d. The Bidder(s) / Contractor(s) of foreign origin shall disclose the name and address of the Agents / Representatives in India, if any. Similarly, the Bidder(s) / Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s) / Contractor(s). Further, as mentioned in the Guidelines all the payments made to Indian agent / representative have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign Suppliers" is placed at (page Nos. 7-20)
 - e. The Bidder(s) / Contractor(s) will, when presenting their bid, disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries, in connection with the award of the contract.
 - f. Bidder(s) / Contractor(s) who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.
- (2) The Bidder(s) / Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from tender process and exclusion from future contracts.

If the Bidder(s) / Contractor(s), before award or during execution has committed a transgression through a violation of Section-2 above, or in any other form, such as to put their reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s) / Contractor(s), from the tender process, or take action as per the procedure mentioned in the "Guidelines on Banning of business dealings". Copy of the "Guidelines on Banning of business dealings" is placed at (Page No. 7-20).

Section 4 - Compensation for Damages

- (1) If the Principal has disqualified the Bidder(s), from the tender process prior to the award, according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit / Bid Security.
- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor, liquidated damages of the Contract Value or the amount equivalent to Security Deposit / Performance Bank Guarantee, whichever is higher.
- (3) The Bidder(s) agrees and undertakes to pay the said amounts, without protest or demur, subject only to condition that, if the Bidder(s) / Contractor(s) can prove and establish that the termination of the contract, after the contract award has caused no damage or less damage than the amount of the liquidated damages, the Bidder/Contractor shall compensate the principal, only to the extent of the damage in the amount proved.

Section 5 - Previous transgression

- (1) The Bidder declares that, no previous transgressions occurred in the last three years with any other company in any country confirming to the anti-corruption approach or with any other Public Sector Enterprises in India, that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as per the procedure mentioned in "Guidelines on Banning of Business dealing".

Section 6 - Equal treatment of all Bidders / Contractors

- (1) In case of a Joint Venture, all the partners of the Joint Venture will enter into agreement with identical conditions as this on which all Bidders.
- (2) There is no provision of sub-contract in the tender, any violation of the same, Contractor shall be held solely responsible for the same.

Section 7 - Criminal charges against violating Bidders / Contractors

If the principal obtains knowledge of conduct of a Bidder or Contractor or of an employee, or a representative, or an associate of a Bidder or Contractor, which constitutes corruption, or if the Principal has substantive suspicion, in this regard, the Principal will inform the same to the Chief Vigilance Officer (CVO) and the CVO will take further necessary action as deemed fit in accordance with the CVC Manual.

Section 8 - External Independent Monitor

- (1) The Principal appoints Shri Sarkar, IAS (Retd.) and Shri Saurabh Chandra, IAS (Retd.) as Independent External Monitor for this pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- (2) The Monitor is not subject to instructions by the representative of the parties and performs his / her functions neutrally and independently. The Monitor would have access to all Contact documents, whenever required. It will be obligatory for him / her to treat the information and documents of the Bidders / Contractors as confidential. He / she reports to the Chairperson of the Board of the Principal.
- (3) The Bidder(s) / Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Bidder / Contractor will also grant the Monitor, upon his / her request and demonstration of a valid interest, unrestricted and unconditional access to the project documentation. The Monitor is under contractual obligation, to treat the information and documents of the Bidder / Contractor with confidentiality.
- (4) The Monitor is under contractual obligation to treat the information and documents of the Bidder(s) / Contractor(s) with confidentiality. The Monitor has also signed declaration on "Non-Disclosure of Confidential Information" and of "Absence of Conflict of Interest". In case of any conflict of interest arising at a later date, the IEM shall inform Chairman, DPA and recues himself / herself from that case
- (5) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Bidder / Contactor. The parties offer to the Monitor the option to participate in such meetings.
- (6) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he / she will so inform the Management of the Principal and request the management to discontinue, or take corrective action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (7) The Monitor will submit a written report to the Chairperson of the Board of the Principal, within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting

problematic situations.

- (8) If the Monitor has reported to the Chairperson of the Board of the Principal, a substantiated suspicion of an offence under relevant IPC / PC Act and the Chairperson of the Board of the Principal has not, within reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- (9) The word "**Monitor**" would include both singular and plural.

Section 9 - Pact Duration


This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded. Any violation of the same would entail disqualification of the bidder and exclusion from future business dealings.

If any claim is made / lodged during this time, the same shall be binding and continue be valid despite the lapse of this Pact as specified above, unless it is discharged / determined Chairperson of the Principal.

The Pact duration in respect of unsuccessful Bidders shall expire after 6 months of the award of the contract.

Section 10 - Other Provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. Vadinar, Gujarat.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- (3) If the Bidder / Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement, turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- (5) Issues like Warranty / Guarantee etc. shall be outside the purview of IEMs.
- (6) In the event of any contradiction between the Integrity Pact and its Annexure, the Clause in the Integrity Pact will prevail.


(For & on behalf of the Principal)
A. Ramasamy
मुख्य प्रशासन प्रमुख
Chief Operation Manager
दीनदयाल बंदरगाह प्राधिकरण
Deendayal Port Authority
मुख्य कार्यालय, पोर्ट ट्रस्ट विभाग
Office Seal
Terminal Department
वडिनार-361010, जिला: देवभूमि द्वारका (गुजरात)
Vadinar-361010, Dist. Devbhoomi Dwarka (Guj.)

Place: Vadinar

Date: ____/____/20

(For & on behalf of the
Bidder/Contractor)

(Office Seal)

Witness-1: (From principal side)

(Name & Address)

Kumar Ranjan Swain

DOT. VADINAR

DEENDAYAL PORT AUTHORITY

Swain

Witness-2: (From bidder/contractor side)

(Name & Address)

FORMAT OF BID SECURITY DECLARATION FROM BIDDERS
(Applicable for MSME Bidders)
(On Bidders Letter head)

Date: _____

Tender No. _____

To (insert complete name and address of the Employer/Purchaser)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of three years from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

- a. have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- b. having been notified of the acceptance of our Bid by the employer/purchaser during the period of bid validity (i) fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)

in the capacity of (insert legal capacity of person signing the Bid Securing Declaration)

Name: (insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for and on behalf of (insert complete name of Bidder)

Dated on _____ day of _____ (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)